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USE OF INTERNET FOR GENERAL AND DENTAL HEALTH ALONG ACCULTURATION FEATURES IN A SAMPLE OF MEXICAN AMERICANS

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The objectives of this study were to explore self-reported Internet and electronic platforms used to search for and store medical and dental information among people of Mexican origin. A sample of adults self-identified as European American (250) and as Mexican American (255), residing in Central Indiana, answered a one-time survey that included technology use questions and measured acculturation via the Psychological-Behavioral Acculturation Scale. Overall use of information technologies was estimated through an Information and Communication Technology score. Overall, participants with higher scores searched online for general and oral health information at higher rates than those with lower scores. Younger Mexican Americans and those with higher use scores were more likely to search online for general health information, as were those more psychologically and behaviorally acculturated. Interestingly, Mexican Americans were more likely than European Americans to search online for dental health information. All participants demonstrated high interest in accessing and storing their own health information especially on paper format; storage in other places, such as personal computers, smartphones, or USB flash drives, was less endorsed. Most participants would allow spouses access to their health records; however, there were significant differences between both population groups regarding access given to physicians, dentists and other family members, with Mexican Americans reporting more restrictions. Our findings provide initial information on differential use pattern of electronic health resources among Mexican Americans and suggest that new information technologies reach population groups traditionally underserved; such features may help address disparities in general and dental health. *Ethn Dis.* 2017;27(4):443-452; doi:10.18865/ed.27.4.443.

INTRODUCTION

The Internet has quickly become an evolving, interactive resource available to increasing numbers of people.¹ Its use has shown explosive growth worldwide, with a reported 75% of Americans utilizing the Internet as of July 2015. Use is higher among those aged 25-44 years (83%), but adults aged >65 years (56%) are also going online.² A popular use of the Internet is to access health information; of those adults who utilized the Internet, 72% had looked for health-related information online within the previous year.³ Thus, the Internet holds great potential as a tool that can be targeted to aid in disease prevention, promote patient involvement in managing their own health,

and optimize health outcomes.

Increasingly, one of the main ways to access the Internet is via mobile devices, with a vast majority of US adults owning a cell phone (95%) or a smartphone (77%) as of November 2016.⁴ Smartphones, in particular, are commonly used to access health information, with a reported 62% of owners having used their phone to get information online about a health condition in the previous year.⁵ Patterns of use and access to Internet among different segments of the population vary and must be better understood to effectively reach them with health communication initiatives.¹ It has been reported that those more likely to use mobile devices to search for health information include Latinos and African Americans.^{3,6} Interestingly, dispari-

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ties commonly associated with these ethnicities may not be reproduced in matters of ownership and use of mobile technology, opening up the possibility to target these tools to address disparities in other realms, such as access to general and dental health.

High numbers of Latinos own cell phones, including smartphones, and go online from mobile devices at similar and sometimes higher rates than other racial and ethnic groups.^{7,8} Since US Latinos have

oral health goals among people of Mexican origin and compare Information and Communication Technology (ICT) use among Mexican Americans (MAs) and European Americans (EAs). Additionally, this article describes MA and EA participants' preferences for storing and sharing their health records. Our study also sought to examine acculturation and demographic factors affecting use of ICT among MAs.

METHODS

As part of an ongoing larger study that began in 2012 about sociodemographic profile and acculturation of Mexican immigrants among Central Indiana (USA), residents aged >18 years were invited to complete a one-time questionnaire. A sample of 255 people of Mexican descent (generically categorized as MAs) were targeted; as a comparison framework, 250 persons of self-identified European American descent (generically categorized as EAs) were also included. We received ethical approval from Indiana University (IRB 1210009746).

Participation took place separately for both groups; it was voluntary and confidential. Participants were briefed in writing and verbally in Spanish or English about consent aspects, purpose of the study, and their rights and responsibilities. Bilingual help was available as needed for MAs to clarify questions or options. Completion time ranged 20-45 minutes. Participants received US\$25 compensation. Questionnaires were administered

in English or Spanish (according to participant preference) at churches or community organizations.

The questionnaire included items on sociodemographics (Table 1) as well as on information technology use in health matters. To measure acculturation, we used a version of the Psychological-Behavioral Acculturation Scale (P-BAS),¹⁰ previously used in oral health research¹¹ and validated for urban-based MAs in the US Midwest.¹² The questionnaire for MAs was longer as it included behavioral acculturation items in addition to psychological acculturation items. In the P-BAS, the behavioral domain focuses on acquisition of behaviors adaptive to a new environment, while the psychological domain centers on norms, ideologies, beliefs, and attitudes that resemble the mainstream culture.^{13,14} For behavioral acculturation, scores ranged from 0 to 5; the higher the score, the greater the level of acculturation toward the EA pole. For psychological acculturation, values were standardized to have a mean of zero and a standard deviation of one for EAs. Thus, a negative score signifies lower acculturation of the MA, while a positive value indicates higher level of acculturation.

Participants were asked about frequency of Internet visits to search about dental and general health using a 5 point scale ("often," "sometimes," "never," "only after visiting the dentist/doctor," "only before visiting the dentist/doctor"). They were also asked about devices used at least every other day (cell phone without Internet, personal computer, smartphone, hand-held devices with Inter-

The objective of our study was to explore utilization of electronic resources for health purposes and for oral health goals among people of Mexican origin and compare Information and Communication Technology use among Mexican Americans and European Americans.

shown to be early adopters and high users of technology,⁹ this approach holds promise in reaching them to improve health and decrease health disparities, provided it is done in a culturally acceptable way.

The objective of our study was to explore utilization of electronic resources for health purposes and for

Table 1. Distribution of self-reported Internet use to search for general and dental health information, and by Information and communication technology (ICT) score, according to Mexican American demographic characteristics

	Internet searching for general health information				Internet searching for dental health information			ICT score
	Total	Often	Sometimes ^b	Never	Often	Sometimes ^b	Never	Mean (SD)
	N ^a	%	%	%	%	%	%	
Sex			^c					
Male	106	15.7	65.7	18.6	14.7	54.9	30.4	2.2 (1.4)
Female	149	29.5	55.4	15.1	16.4	45.9	37.7	2.4 (1.5)
Level of education			^d					^e
No formal education/ incomplete primary education	45	6.8	61.4	31.8	6.8	50.0	43.2	1.7 (1.2)
Complete primary education	22	21.1	52.6	26.3	21.1	52.6	26.3	1.8 (1.5)
Incomplete secondary/Middle school complete	91	23.3	60.0	16.7	17.8	44.4	37.8	2.3 (1.5)
Secondary education	46	31.1	62.2	6.7	13.3	57.8	28.9	2.1 (1.4)
College education	51	34.0	58.0	8.0	20.0	50.0	30.0	3.2 (1.5)
Marital status								
Single	29	17.2	79.3	3.5	20.7	48.3	31.0	2.8 (1.4)
Married/domestic partnership	203	25.0	57.7	17.3	14.3	50.0	35.7	2.3 (1.5)
Separated/divorced/widow/widower	22	22.7	50.0	27.3	22.7	45.5	31.8	1.9 (1.6)
Income level			^c					^e
≤ \$20,000	79	22.3	63.2	14.5	15.8	60.5	23.7	2.2 (1.5)
\$20,000-\$39,999	76	20.0	61.3	18.7	16.0	41.3	42.7	2.4 (1.6)
\$40,000-\$59,999	16	37.5	43.7	18.8	18.8	62.4	18.8	2.4 (1.5)
≥ \$60,000	12	66.7	33.3	0.0	8.3	50.0	41.7	3.4 (1.3)
No answer	69	19.7	62.1	18.2	16.7	42.4	40.9	2.1 (1.4)
Area								^e
Village/small town	123	19.7	59.0	21.3	15.4	47.9	36.8	1.9 (1.3)
Large town	33	21.2	63.6	15.2	15.2	54.4	30.4	2.1 (1.5)
City/regional capital	98	29.9	58.8	11.3	16.5	49.5	34.0	2.9 (1.5)
Total		23.8	59.7	16.5	15.7	33.7	49.6	2.3 (1.5)

a. Total number on each category may vary from the total due to missing values.
 b. Includes: "only after visiting the dentist/doctor" and "only before visiting the dentist/doctor".
 c. P < .05.
 d. P < .01.
 e. P < .001.

net). Overall device utilization was aggregated in an Information and Communication Technology (ICT) use score whereby a higher score indicated that a participant used devices frequently, and 0 indicated none.

Information on age, sex, marital status, size of the community of origin, and level of education was collected. Size of the community was classified into: "city/regional capital," "large town," and "village/small town." Educational level was

recoded as: "no formal education/incomplete primary education," "complete primary education," "incomplete secondary/middle school complete," secondary education," and "college education."

Statistical Analysis

Sociodemographic, Internet and ICT use variables were analyzed and compared. For nominal or ordinal variables, chi-square analysis was applied. For variables in interval scales,

results were analyzed using one-way analysis of variance (ANOVA) to examine main effects of each independent variable on the dependent variable under study. A significant ANOVA was followed by post-hoc comparisons using Tukey's Honestly Significant Difference test. Finally, data were analyzed using multiple regression with a stepwise procedure to determine relative importance of a set of independent variables on participants' ICT use score. Variables

in the regression equation were: sex, education level, size of community of origin, behavioral acculturation and psychological acculturation. For binary variables (eg, Internet use), these relationships were studied using logistic regression analysis with forward stepwise procedure. Adjusted odds ratios (OR) measured magnitude of the effect of each variable in the final model. Data were examined for violation of the assumptions underlying multivariate methods prior to analysis.¹⁵ Data were analyzed using SPSS V 22.0 (IBM Corp. Released 2013. IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.).

RESULTS

Although some results are reported for both MAs and EAs, the former will be emphasized; EA trends will be used to contrast MA results.

Participants included 255 MAs and 250 EAs with no differences in distribution by sex. The majority of participants were married (79.6% MAs; 83.9% EAs). The EAs were significantly ($P < .001$) older (mean age 51.7 years; ± 14.6) than MAs (mean age 38.5 years; ± 9.8), and significantly more educated ($P < .0001$)

with most (94.3%) having college education. Most MAs (61.7%) were aged < 21 years (age range 18-67 years). As shown in Table 1, 51 MAs (20.0%) had college education, 46 (18.0%) had secondary education, 91 (35.7%) completed middle school, 22 (8.6%) completed primary education and 45 (17.6%) had incomplete primary education or no formal education. For the MAs, mean psychological acculturation score was $-2.5 (\pm 1.0)$, and mean behavioral acculturation score was $2.5 (\pm 0.8)$.

Information and Communication Technology (ICT) use score was significantly higher ($P < .001$) among EAs (mean 3.3; ± 0.9) than MAs (mean 2.3; ± 1.5). Patterns of Internet use to search for dental and general health information and ICT score across MA sociodemographic variables uncovered that score significantly decreased ($P < .001$) both with education level lower than college (3.2 vs 2.3 or less), and as community of origin decreased in size (2.9 for large cities, 2.1 for large towns and 1.9 for villages/small towns). Additionally, MAs with higher income had significantly higher ($P < .05$) scores (3.4) compared with those with low (2.2) or no disclosed income (2.1) (Table 1). Multiple regression analysis revealed that ICT

use scores among MAs were significantly associated with behavioral ($P < .0001$) and psychological acculturation ($P < .007$), as well as size of community of origin ($P < .0001$). These three variables accounted for 21% of variance of the ICT use score (adjusted $R^2 = .21$). The resulting model indicated that, after controlling for other independent variables, MAs with highest ICT use scores came from large cities and had higher acculturation scores (Table 2).

The ICT score was also explored among EAs using multiple linear regression analysis. Only one variable was significantly associated with ICT use after controlling for sex, income, level of education and marital status. The ICT score significantly decreased with age ($P < .001$), explaining 8.9% (adjusted $R^2 = .089$) of the variance.

The majority of MAs searched online for information about general health “sometimes” (56.0%), or “often” (23.8%). Few (16.5%) reported “never” searching for general health information, while the remainder (3.6%) searched “only before or after visiting the doctor.” Regarding dental information, most MAs searched “sometimes” (43.5%) or “often” (15.7%), while 34.7% reported “never” doing this, and few (6%) searched “only before or

Table 2. Final multivariate model identifying Information and Communication Technology (ICT) use score among Mexican Americans

Independent variable	Multiple regression coefficient (B)	Standardized β	P
Size of community of origin (city = 1; other = 0)	.531	.272	.0001
Psychological acculturation	.262	.286	.007
Behavioral acculturation	.531	.167	.0001
Constant	1.280		.005

Adjusted $R^2 = .21$.

Table 3. Mean age and acculturation scores, and ICT score by frequency of Internet use to search for general and dental health information

	Often	Sometimes ^a	Never
Age		^d	
General health information	38.4 (8.9)	37.0 (9.6)	43.9 (10.6)
Dental information	36.2 (9.4)	38.4 (9.5)	39.6 (10.5)
Psychological acculturation		^b	
General health information	-2.3 (1.1)	-2.5 (.9)	-2.8 (.9)
Dental information	-2.5 (1.0)	-2.4 (.9)	-2.5 (1.0)
Behavioral acculturation		^c	
General health information	2.7 (.8)	2.5 (.7) ^b	2.2 (.8)
Dental information	2.8 (.8)	2.5 (.7)	2.4 (.8)
ICT score		^c	
General health information	3.1 (1.4)	2.3 (1.5) ^c	1.3 (1.0)
Dental information	2.8 (1.6)	2.5 (1.5)	2.0 (1.3)

Data are mean (SD). ICT, information and communication technology.
 a. Includes “only after visiting the dentist/doctor” and “only before visiting the dentist/doctor.”
 b. $P < .05$.
 c. $P < .01$.
 d. $P < .001$.

after visiting the dentist.” In subsequent analyses, “only after visiting the dentist/doctor” and “only before visiting the dentist/doctor” were regrouped with “sometimes.”

Age, psychological and behavioral acculturation, and ICT use score were associated with online searches about general health (Table 3). Those MAs who “never” did these searches were significantly older ($P < .001$) than those who searched “sometimes” or “often.” In addition, those who “never” searched for general health information online had significantly lower psychological ($P < .05$) and

behavioral ($P < .01$) acculturation scores compared with those who selected other categories. Participants who reported “never” searching also had significantly lower ICT scores than those who searched “sometimes” or “often” ($P < .001$).

With one exception, none of the independent variables included in the study were associated with consulting online about oral health. The exception was that participants reporting “never” searching online for oral health information had lower ICT scores than those who searched “sometimes” or “often” ($P < .01$) (Table 3). When seeking for

health information online, a majority of MAs reported preference for material only in Spanish (43.5%) or mostly in Spanish (26.9%).

The EAs were more than twice as likely (OR = 2.11; CI 1.47-3.02; $P < .0001$) to have “never” searched the Internet for oral health information (52.8%), compared with MAs (34.7%). On the other hand, EAs were less likely (OR = .30; CI .15-.54; $P < .0001$) to report they “never” searched online for general health information (5.3%), compared with MAs (16.5%). The probability of having used the Internet to search for general and dental information

Table 4. Regression coefficient, adjusted odds ratios and 95% confidence interval for odds ratios for factors predicting having used the Internet to search for general health information among Mexican Americans

	β coefficient	Adjusted ^a odds ratio	95% CI
Level of education			
Secondary (Yes = 1; No = 0)	-1.615	.20	.06 - .72
College (Yes = 1; No = 0)	-1.555	.21	.06 - .76
Age	.073	1.08	1.04 - 1.12
Constant	-4.143		

a. Multivariate logistic regression, adjusting for the other factors shown in the model.

was further explored utilizing a logistic regression analysis (“never” vs “other”) among MAs. After controlling for other independent variables included in the model, level of education and age were significant predictors of having searched online for general health information [$\chi^2(3)=25.9$; $P<.0001$] (Table 4). Those with secondary or college education were less likely to be in the group that “never” searched for information (adjusted OR=.20; 95% CI .06 to .72; and OR=.21; 95% CI .06 to .76). Also, each additional year of age increased the odds to be in the “never” searched group (adjusted OR=1.08; 95% CI 1.04 to 1.12) (Table 4). The variance explained by the full model for being in the “never” searched group was 18.6% (Nagelkerke $R^2=.186$).

When participants were asked about preferences for health record-keeping, the vast majority of MAs (87.8%) and EAs (93.2%) were interested in keeping copies of their own health records ($P<.05$). When those interested were asked how they would store health records, 162 MAs (72.6%) and 156 EAs (67.2%) chose a paper copy, 51 MAs (22.9%) and 63 EAs (27.2%) indicated a USB flash drive, and 23 MAs (10.3%) and 26 EAs (11.2%) chose a smartphone. A significantly larger ($P<.001$) number of EAs (56.0%) than MAs (25.6%) would save records on a personal computer.

All participants were also asked about people they would allow access to their health information. The EAs were significantly more comfortable allowing a spouse to access their records (211 EAs or 84.4% vs

185 MAs or 72.5%; $P<.01$); allowing access to a physician or dentist (183 EAs or 73.2% vs 85 MAs or 33.3%; $P<.001$); or an adult child (120 EAs or 48.0% vs 78 MAs or 30.6%; $P<.001$). Access to a parent would be granted by 79 EAs (31.6%) and 95 MAs (37.3%), while access to a sibling would be given by 70 EAs (28.0%) and 79 MAs (31.0%).

DISCUSSION

Our research offers a cross-sectional exploration into self-reported utilization of Internet and communication technologies to search for and store medical and dental information. It is one of the first evaluations about a large and expanding market of users in the United States for both purposes.

Although main emphasis is on the MA profile, some EA findings are intercalated for contrast. Only bivariate comparisons were attempted because every indication exists that the two groups were dissimilar, despite being recruited from the same locations (largely churches). Such dissimilarities can be suggestive of how the two groups overlap and distinguish themselves in real life: age, educational attainment, income, and so on.

Findings will be discussed in three segments: the overall use of Internet and communication technologies aggregated in the ICT score; the patterns of Internet searches for general and dental health; and the stated preferences to maintain and share electronic health (e-health) records.

Use of Internet and Communication Technologies

The ability to use, and the actual utilization of the Internet and digital tools to access information as measured by the ICT score was significantly higher in EAs compared with MAs, likely moderated by socioeconomic level, geographic location, literacy, Internet access, technology skills, education and income; factors known to impact Internet and communication technology use.^{16,17} Such differentiation is further supported by our findings that MAs with higher income, higher education attainment, and originating from larger urban locations had higher ICT scores. These findings resemble previous reports, both for primary care randomly selected patients¹⁸ and Latino patients in New York.¹⁹

It seems accurate to characterize the “digital divide” heavily publicized in the early 2000s as a shrinking, evolving lag as new generations come of age. Such evolution appears to be linked among our MA cohort with proxies for higher education and income, and being conversant with traits of the US environment (Tables 1 and 2). While the identity and purpose of household members using communication technologies and accessing the Internet remains to be established, reasonable assumptions are that more consistent or skilled users are younger Latinos, those born in the United States and possessing better English language skills, and individuals pursuing formal education that makes Internet use a necessity.

The overarching issue remains disentangling the relative role of

variables likely to overlap and represent confluent dimensions; ie, what the National Telecommunications & Information Administration calls 'citizenship' (a proxy variable for country of origin, citizenship and/or documented status),¹⁶ and what we chose to identify as two dimensions of acculturation. We believe the measures for behavioral and psychological acculturation – recently validated for the US Midwest where our data collection occurred– help place in context the scenario whereby MAs with better instrumental resources to address life in the United States, or better adoption of US cultural perspectives, are higher users and utilize more online communication technologies.

Patterns of Internet Searches for General and Dental Health

Among MAs, age, education level, behavioral and psychological acculturation, income, and ICT use score were associated with online searching for general health information. Younger MAs were more likely to search, perhaps indicating increased interest or health awareness as well as higher device use. Older participants and those with lower behavioral and psychological acculturation scores were significantly less likely to have conducted these searches; such findings are consistent with reports of older foreign-born Latinos with lower education levels using less Internet and communication technologies than others.²⁰ Participants with higher education (secondary or college) were more likely to state they searched online for general health information, simi-

lar to previous reports.²¹ Acculturation level was also associated with information-seeking. More acculturated individuals were significantly more likely to search online for general health information indicating they are closer to mainstream culture values orientation (psychological acculturation), and have adopted more observable aspects of the host

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culture (behavioral acculturation). There is a further need to survey Latinos from different nationalities and regions to account for diversity in acculturation level, culture, attitudes and beliefs about illness and health professionals, access to health care, and English language proficiency,

since these factors can affect health information-seeking and receptivity to health messages.⁹ Socioeconomic level was also associated with self-reported information-seeking behaviors, with higher income MAs searching for general health information online more often than those of lower incomes, as recently reported for other populations.²¹ Those who never searched for oral health information online had lower ICT scores, while those exposed to more ICT searched for both general and oral health information at higher rates. Greater access afforded by having more devices likely makes individuals more apt to perform such searches; level of comfort with technology or skill level very possibly affect information-seeking frequency.

All participants reported seeking health information online at rates consistent or higher than national rates.³ Few reported never searching for general health information; while many more reported never searching for dental health information. However, more than half of participants did search for dental information, suggesting that Internet use for this purpose may be increasing, as previous reports stated lower rates of oral health online searches (5%-16%).^{22,23} Though there was no specific question about this, it could be that participants were undergoing dental treatment at the time of the survey. Internet use to seek for dental information was found higher among those attending dental clinics and receiving treatment; this trend is likely due to a perceived need to better understand specific dental diagnoses and procedures.²⁴ Regarding

oral health queries, EAs were significantly less likely to search for such information online. One explanation for this result is that having adequate access to care and being able to personally consult a dentist lead to seeing no need to research dental issues online. Alternatively, the majority of MAs did search online for dental issues, perhaps to find information about dental problems before deciding to pay for a dental visit or care.

Almost three-fourths of MAs reported seeking for health information mostly in Spanish; consistent with previously reported technology use pattern that focuses on content offered in Spanish,⁹ especially among less-aculturated individuals.²⁵ This has implications in the ability to reach this population as this group also reports not encountering oral health messages in the media, much less in Spanish.²⁶

Preferences Regarding Electronic Health Records

The progression of electronic health records offers great opportunities for sharing health information between health professionals and patients, theoretically permitting easy tracking, coordination and management of individuals' health. It also enables sustainability and increased efficiency in service delivery and access to preventive medicine. Participants in our study demonstrated high interest in accessing their own health information. This finding has important consequences regarding engagement and empowerment in health matters. Participants also showed high preference for storing personal health information on pa-

per format. Storage in other places, like personal computers, smartphones, or USB flash drives, was less frequently endorsed. Differences between EAs and MAs may be due to a lag in adoption of technology for information storage or misgivings about online confidentiality.

A health care system that is coordinated and allows storage of health information in a single record will only be useful if individuals allow sharing of the information. Regarding access to their health information, the majority of EAs and MAs would grant access to their spouses. However, there were significant differences on access given to physicians or dentists as well as other members of their family, with MAs reporting more restrictions. Specific strategies will be necessary to increase the use and acceptance of these technologies. A better and in-depth understanding of these decisions among different population groups is required to ensure the most effective response to present and future challenges.

It is noteworthy that our findings, though useful, only provide partial information on MAs' attitudes and experiences toward electronic health records. There are several reasons to include acculturation and cultural beliefs and attitudes about electronic health approaches, as there might still be groups in these communities that are unable or have not attempted to access electronic health information and electronic records. While our study offers one of the first contrasts between patterns of online seeking of general and dental health informa-

tion, one of its limitations is that it is only across one group of EAs and one nationality of origin Latinos. Other limitations include: use of a convenience sample; lack of follow-up questions to ascertain reasons for behaviors; being a cross-sectional design that precludes drawing conclusions about causality; and the possibility that some participants may have felt compelled to improve their ICT use following a pro-social bias, or possibly to exaggerate or underemphasize level of education or income. The propensity of participants to answer with what they consider desirable answers was minimized by surveys being anonymous. Studies on different Latino nationalities are needed to identify subgroups that may or may not be effectively reached via technology. Additionally, given the speed at which technological trends change, some of the results of this study may not be permanent. However, there is no reason to anticipate that Internet use has decreased. Its use to seek for general or oral health information might actually have increased since the time this study ended.

CONCLUSION

Advancements in recent years have led to massive adoption and use of ICT by the general population, as well as the development of electronic health tools beyond simply Internet-based applications. Rising numbers of people of all ages and diverse demographic profiles are adopting ICT and becoming increasingly adept at searching

for health information. Results of this study indicate that many, but not all MAs are using ICT. Any attempt to deliver digital health ideally requires that members of the community have equal access to computers, Internet and ICT. Our results seem to indicate that the digital divide remains along several dimensions, that some members of the community may be experiencing difficulties accessing ICT, and that among MAs these differences appear mediated by acculturation level. Realization of the full potential of ICT for health promotion and education will require a more complete understanding of people's preferences, access patterns, and usage to attain desired goals.

In our study we found that the frequency of utilization of Internet and communication technologies as measured by the ICT score was closely associated with higher socioeconomic status and better acculturation to life in the United States. Higher ICT scores must be considered in the context not only of life in the United States, but also as shaped by determinants much earlier in the life of some MAs, such as a larger size of their community of origin, and their educational attainment. Secondly, the finding that MAs are likely to search for dental health information online holds promise in terms of using the Internet as a communication tool able to reach a population typically underserved and often lacking access to conventional dental health services. Finally, outreach initiatives must be designed with culturally appropriate considerations in mind.

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CONFLICT OF INTEREST

No conflicts of interest to report.

AUTHOR CONTRIBUTIONS

Research concept and design: Maupomé, Mariño; Acquisition of data: Aguirre, Maupomé; Data analysis and interpretation: Mariño, Medina-Solís, Aguirre, Maupomé; Manuscript draft: Aguirre, Maupomé, Mariño, Medina-Solís; Statistical expertise: Mariño, Medina-Solís, Maupomé; Acquisition of funding: Maupomé. Administrative: Aguirre, Maupomé; Supervision: Maupomé

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