

Community-Engaged Needs Assessment of Deaf American Sign Language Users in Florida, 2018

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Tyler G. James, MS¹ ; Michael M. McKee, MD, MPH²; Meagan K. Sullivan, MPH³; Glenna Ashton, PhD⁴; Stephen J. Hardy, MEd^{4,5}; Yary Santiago, MA^{4,5}; David G. Phillips, MA⁶; and JeeWon Cheong, PhD¹

Abstract

Objectives: Deaf American Sign Language (ASL) users comprise a linguistic and cultural minority group that is understudied and underserved in health education and health care research. We examined differences in health risk behaviors, concerns, and access to health care among Deaf ASL users and hearing English speakers living in Florida.

Methods: We applied community-engaged research methods to develop and administer the first linguistically accessible and contextually tailored community health needs assessment to Deaf ASL users living in Florida. Deaf ASL users (n = 92) were recruited during a 3-month period in summer 2018 and compared with a subset of data on hearing English speakers from the 2018 Florida Behavioral Risk Factor Surveillance System (n = 12 589). We explored prevalence and adjusted odds of health behavior, including substance use and health care use.

Results: Mental health was the top health concern among Deaf participants; 15.5% of participants screened as likely having a depressive disorder. Deaf people were 1.8 times more likely than hearing people to engage in binge drinking during the past month. In addition, 37.2% of participants reported being denied an interpreter in a medical facility in the past 12 months.

Conclusion: This study highlights the need to work with Deaf ASL users to develop context-specific health education and health promotion activities tailored to their linguistic and cultural needs and ensure that they receive accessible health care and health education.

Keywords

deaf, community-engaged research, needs assessment, Florida

Deaf American Sign Language (ASL) users are members of a linguistic and cultural minority group in the United States comprising approximately 250 000 to >500 000 people.¹ Although the onset of hearing loss among deaf ASL users typically occurs before age 3 (prelingual), this community rejects a medicalized view of deafness and adopts a cultural perspective with a shared language, history, and literature.² Therefore, in this article, people in this community are described as “Deaf,” signifying a proper noun.

As a result of widespread language deprivation and communication neglect,^{3–5} Deaf ASL users are predisposed to lower levels of English proficiency, which negatively affects their ability to access English-based health information⁶ and is associated with health inequities. Deaf ASL users are almost 7 times more likely than hearing people to have inadequate health literacy.⁷ Compared with hearing English

¹ Department of Health Education and Behavior, University of Florida, Gainesville, FL, USA

² Department of Family Medicine, University of Michigan, Ann Arbor, MI, USA

³ Florida Disability and Health Program, Department of Health Services Research, Management, and Policy, University of Florida, Gainesville, FL, USA

⁴ Deaf Community Advisory Workgroup, Gainesville, FL, USA

⁵ Department of Speech, Language, and Hearing Sciences, University of Florida, Gainesville, FL, USA

⁶ American Sign Language interpreter, Washington, DC, USA

Corresponding Author:

Tyler G. James, MS, University of Florida, Department of Health Education and Behavior, PO Box 118210, Florida Gym Room 5, Gainesville, FL 32611, USA.

Email: tjames95@ufl.edu

speakers, Deaf ASL users report more health problems, more visits to the emergency department (ED), and fewer visits to primary care physicians.⁸⁻¹⁰ These inequities are caused in part by social disenfranchisement and systemic barriers in the health care system.

When accessing health care, Deaf ASL users typically do not experience concordant communication: many medical providers do not know ASL. This discordant communication contributes to a lower uptake of preventive services.¹¹ Deaf people in the United States have federally protected rights to effective communication, as provided in section 504 of the Rehabilitation Act of 1973,¹² the Americans With Disabilities Act,¹³ and section 1557 of the Affordable Care Act of 2010,¹⁴ which typically takes place through the provision of an ASL/English interpreter (either in person or web based [video remote interpreting]). However, interpreters are not always provided and, when provided, may not always be qualified because of differences by state in licensure requirements. For example, Florida has no mandated qualification standard.

Research on Deaf ASL users throughout the United States, including findings from the Center for Deaf Health Equity at Gallaudet University, indicate that Deaf ASL users experience health inequity.¹⁵⁻¹⁷ However, context-specific literature on the health of Deaf people outside unique settings such as Rochester, New York, is sparse. Rochester, which has a high per-capita population of Deaf ASL users, is uncommon as an area for health care accessibility for Deaf people. Deaf people in Rochester may have higher socioeconomic status than Deaf people in other areas. Furthermore, in Rochester, Deaf people have direct access to culturally and linguistically tailored health care with the opportunity for direct communication with medical and mental health providers who use ASL.^{10,11} These factors are inextricably linked to health outcomes and likely lead to an underestimation of health inequity experienced by the Deaf population. The lack of health behavior data on Deaf ASL users outside accessible contexts impedes the development, adaptation, and implementation of prevention programs to better the health of people most in need of these services.

When considering health education and promotion program development methods (eg, PRECEDE-PROCEED),¹⁸ a central focus is to engage communities through a participatory approach to collect context-specific data and determine local health promotion priorities. Although informative, findings from nationwide samples and other regions provide less specificity than contextually tailored assessments when developing priorities for local and regional Deaf communities. Therefore, we conducted an accessible, community- and context-tailored health needs assessment with the Florida Deaf community. Our primary objective was to compare health care use and health risk behaviors among Deaf ASL users and hearing English speakers in Florida. A secondary objective was to identify the greatest health concerns of the Deaf community.

Methods

Procedures

We developed the Florida Deaf Health pilot survey through a community-engaged research strategy in which we partnered with Deaf community leaders and organizations in Florida, including the Florida Association of the Deaf, regional associations of the Deaf, and the Florida Disability and Health Program. Details on study methods of this survey are described elsewhere.¹⁹ One goal of the current study was to test the feasibility of the translation and recruitment methods in preparation for a larger study. We benchmarked questions for the pilot survey from national surveys (eg, the Behavioral Risk Factor Surveillance System [BRFSS]) and other Deaf health studies.^{20,21} Survey development occurred in 2017 and 2018. After the survey was developed, 1 Deaf ASL interpreter and 1 hearing ASL interpreter (D.G.P.) translated the survey instrument and recruitment materials into ASL through a forward- and naïve back-translation process involving members of the study's Deaf community advisory group and professional Deaf and non-Deaf interpreters. Deaf community advisory group members determined the suitability and comprehension of the translations before use in the survey. (The survey is available in English.)²²

We recruited Deaf people during 3 months in summer 2018 using a snowball sampling method with research team-initiated recruitment through social media, community organization partners, and in-person events. After providing basic information about the study, we screened prospective participants for eligibility, which included the following: (1) self-identifying as Deaf, hard of hearing, DeafBlind (being Deaf with blindness/low vision), DeafPlus (being Deaf with additional disabilities), or hearing impaired; (2) reporting using ASL to communicate; (3) being aged >18; and (4) providing documentation (eg, a government-issued identification or other verification) of residence in Florida. Participants who met these criteria received a password to a web-based survey hosted by Qualtrics Intl. This recruitment process created a sample of 92 Deaf ASL users who lived in Florida.

To compare the health of Deaf people in Florida with hearing people in Florida, we acquired the Florida Department of Health's 2018 BRFSS dataset collected via telephone²³ and created a subset of the data to use as a comparison group (n = 12 589) of hearing English speakers. We categorized respondents who answered no to the item, "Are you deaf or do you have serious difficulty hearing?" and who completed the BRFSS survey in English as hearing English speakers. The University of Florida Institutional Review Board approved all study activities.

Measures

Our study included items on health care access and health risk behavior from the Florida BRFSS, additional

community-relevant questions about health concerns, a depression screener, and items on Deaf-specific demographic characteristics.

Health care access items included health insurance status (dichotomized to yes/no), receipt of a general physical examination (routine checkup) in the past 12 months (yes/no), and being tested for HIV. We included the latter item because the Centers for Disease Control and Prevention recommends that people aged 13-64 get tested for HIV at least once. Deaf ASL users were asked if they had used the ED in the past 12 months and if they had been denied an interpreter at a medical facility in the past 12 months.

The health risk behaviors we measured were current use (past 30 days) of combustible cigarettes, current (past 30 days) binge drinking, overweight or obese body mass index, and a depression screener. Deaf ASL users completed the 2-item Patient Health Questionnaire (PHQ-2), a depression screener originally translated into ASL by the University of Michigan Department of Family Medicine.²¹ The PHQ-2 measures depressive symptoms for the 2 weeks preceding administration; scores range from 0 to 8, and a score ≥ 3 indicates a 75.0% positive predictive value of any depressive disorder.²⁴

Deaf ASL users reported their greatest health concern by responding to an item developed based on the current literature of health inequity and public health priorities for Deaf ASL users. These items included mental health,²⁵ sexual and reproductive health,^{26,27} cardiovascular health,²⁸⁻³⁰ and diabetes and weight management.^{31,32} ASL survey translation included examples and expansion of concepts. For example, mental health concerns included anxiety, depression, and stress management, and sexual or reproductive concerns included sexually transmitted disease/HIV prevention, condom use, and birth control. Respondents either selected 1 health concern from the list or typed in their concern if it was not listed; the first author (T.G.J.) coded open-ended responses into preexisting categories or categorized as a "specific condition" or "multiple condition" concern.

Demographic characteristics measured on both surveys included age, gender (eg, male, female), race, Hispanic/Latino ethnicity, education level, employment status, and annual household income. In addition, Deaf participants were asked questions related to their Deaf identity,²⁰ including the age at which they became Deaf and their experience attending schools for the Deaf.

Data Analysis

The first author (T.G.J.) cleaned and analyzed data using SAS version 9.4 (SAS Institute, Inc). We used frequencies to describe sample composition and greatest health concerns among Deaf participants, and we calculated point prevalence estimates for health access and use and health risk behaviors by group (ie, Deaf ASL users vs hearing English speakers). Because of sample size differences between the 2 groups, we

used Clopper–Pearson exact 95% CIs to provide more conservative intervals.³³ We performed a series of logistic regressions, adjusting for demographic characteristics, to compare the odds of Deaf and hearing adults experiencing the health indicators of interest.

Results

In total, this analysis included 92 Deaf ASL users who responded to the 2018 Florida Deaf Health Survey and 12 589 hearing English speakers who responded to the 2018 Florida BRFSS (Table 1). The mean (range) age of these groups was 43.2 (18-80) in the Deaf group and 55.7 (18-99) in the hearing BRFSS sample. Both groups were predominately female, and most respondents in the Deaf and hearing groups (78.3% and 82.1%, respectively) were White.

Health Care Access and Health Risk Behaviors

We found no difference between Deaf and hearing respondents in the percentage of people reporting health insurance coverage (Table 2). Deaf respondents had lower crude odds of general physical examinations than their hearing counterparts did; however, when controlling for relevant sociodemographic characteristics, including health insurance status, we found no difference (adjusted odds ratio [aOR] = 0.63; 95% CI, 0.37-1.05; Table 3). More than half (55.6%) of Deaf people reported being a patient in the ED during the past 12 months (Table 2). In addition, 37.2% of Deaf ASL users reported being denied an interpreter in a medical facility during the past 12 months, after requesting one.

The greatest difference in the prevalence of health care access and use was observed for HIV testing history, with 57.5% of Deaf adults reporting ever being tested compared with 40.4% of hearing adults. When adjusting for demographic variables, we found no significant difference between Deaf and hearing adults (aOR = 1.34; 95% CI, 0.84-2.13; Table 3).

Nearly 1 in 6 (15.5%; 95% CI, 8.5%-25.0%) Deaf people scored ≥ 3 on the PHQ-2 (Table 4). We found no differences in the proportion of Deaf or hearing respondents reporting current combustible cigarette use. However, 25.0% of Deaf people reported engaging in binge drinking in the past 30 days, which was nearly double the prevalence of hearing people (13.5%). Compared with hearing adults, Deaf adults had higher adjusted odds of binge drinking in the past 30 days, even after adjusting for sociodemographic characteristics (aOR = 1.80).

Greatest Health Concern of Deaf Adults

The most reported health concern among Deaf people was mental health (28.6%; Table 4). Although the ranking of mental health concerns was equal across age groups, we found a higher prevalence of mental health concern among

Table 1. Characteristics of Deaf ASL users and hearing English speakers in a Deaf health needs assessment survey and the Florida BRFSS, Florida, 2018^a

Characteristic	Deaf ASL user sample (n = 92)	Florida BRFSS hearing English-speaking sample (n = 12 589)
Age, mean (SD) [range], y	43.2 (15.0) [18-80]	55.7 (18.5) [18-99]
Gender ^b		
Female	60 (65.2)	7158 (56.9)
Male	32 (34.8)	5427 (43.1)
Race		
White	72 (78.3)	10 132 (82.1)
African American/Black	6 (6.5)	1406 (11.4)
Asian	0	153 (1.2)
Pacific Islander	0	27 (0.2)
American Indian or Alaska Native	1 (1.1)	189 (1.5)
Biracial/multiracial/other	13 (14.1)	436 (3.5)
Hispanic/Latino ethnicity	23 (25.0)	858 (6.9) ^c
Education		
<High school diploma/GED	4 (4.3)	920 (7.3)
High school graduate	15 (16.3)	3786 (30.2)
Some college or technical school	33 (35.9)	3851 (30.7)
College graduate	40 (43.5)	3989 (31.8)
Employed	51 (56.2) ^c	5604 (44.9) ^c
Annual household income, \$		
<15 000	17 (20.5)	1066 (10.2)
15 000-25 000	19 (22.9)	2076 (19.8)
25 000-50 000	24 (28.9)	2885 (27.5)
>50 000	23 (27.7)	4452 (42.5)
Insured	80 (89.9) ^c	10 991 (87.8) ^c
Age became D/HH, y		
Birth	47 (51.6)	NA
<3	30 (33.0)	NA
≥3	14 (15.4)	NA
Deaf education history		
Did not attend school	4 (4.3)	NA
Attended a school for the Deaf	15 (16.3)	NA
Did not attend a school for the Deaf	33 (35.9)	NA
Attended both a school for the Deaf and mainstream school	40 (43.5)	NA

Abbreviations: ASL, American Sign Language; BRFSS, Behavioral Risk Factor Surveillance System; D/HH, deaf and hard of hearing; GED, general education diploma; NA, not applicable.

^aData sources: The Deaf ASL user sample was from the Florida Deaf Health pilot survey conducted in 2018²²; the hearing English-speaker sample was from the 2018 Florida BRFSS.²³ All values are number (percentage) unless otherwise indicated.

^bNonbinary/other gender option was provided on the 2018 Florida Deaf Health pilot survey; however, no respondents selected this option.

^cThe denominator is not the column total; data on some cases were missing.

adults aged 18-29 than among adults aged ≥40 (33.3% vs 25.0%). The second and third most reported health concerns, overall, were weight management and conditions such as joint and muscle pain and cancer. The third most reported health concern among adults aged 18-29 was sexual or reproductive health.

Discussion

Deaf people are widely excluded from mainstream public health promotion activities despite experiencing widespread health inequity. With exception to recent advancements in national data collection,³⁴ most research among Deaf people

Table 2. Prevalence of health-related outcomes among Deaf ASL users and hearing English speakers, Florida, 2018^a

Health behavior	2018 Florida Deaf ASL-user sample	2018 Florida BRFSS hearing English-speaker sample
Have health insurance	89.9 (81.7-95.3)	87.8 (87.2-88.4)
Routine checkup, past 12 mo	72.6 (61.8-81.8)	82.5 (81.8-83.2)
HIV testing history, ever	57.5 (45.9-68.5)	40.4 (39.5-41.3)
Current combustible cigarette smoker, past 30 d	13.1 (6.7-22.2)	17.3 (16.7-18.0)
Binge drinking, past 30 d ^b	25.0 (16.2-35.6)	13.5 (12.9-14.1)
Overweight or obese body mass index	69.5 (58.4-79.2)	66.7 (65.8-67.6)
PHQ-2 score ≥ 3 ^c	15.5 (8.5-25.0)	Not measured
Used emergency department, past 12 mo	55.6 (44.1-66.6)	Not measured
Denied an interpreter at a medical facility, past 12 mo	37.2 (26.5-48.9)	Not measured

Abbreviations: ASL, American Sign Language; BRFSS, Behavioral Risk Factor Surveillance System; PHQ-2, Patient Health Questionnaire–2.

^aAll values are percentage (Clopper–Pearson exact 95% CI). Data sources: The Deaf ASL-user sample was from the Florida Deaf Health pilot survey conducted in 2018²²; the hearing English-speaker sample was from the 2018 Florida BRFSS.²³

^bDefined for males as having ≥ 5 drinks on 1 occasion and for females as having ≥ 4 drinks on 1 occasion. The denominator is the total number in the sample, not the number of people who use alcohol.

^cA score ≥ 3 on the PHQ-2 depression screener indicates a 75.0% positive predictive value of any depressive disorder.²⁴

has sampled from the Rochester area and lacks generalizability to the broader Deaf community. Our study assessed indicators of health risk behavior and health care access and use among Deaf ASL users in Florida, using the community-engaged approach to adhere to health promotion best practice that context-specific information should be obtained before engaging in planning activities.

The greatest health concern reported by Deaf ASL users in Florida was mental health, including stress, anxiety, and depression. Our study found that 15.5% of Deaf respondents scored at risk for depression on the PHQ-2. This prevalence is higher than that reported for the general population aged ≥ 20 (ie, 8.1% from 2013 to 2016).³⁵ These findings demonstrate a need for a call to action. Not only is the prevalence of being at risk for depression among Deaf ASL users in Florida

almost double the prevalence of the general US population³⁵ and, likely, underreported because of potential sensitivity issues with the PHQ-2 in this population, but the management of mental health for Deaf ASL users also differs. Deaf patients face structural barriers to mental health care use including access to mental health treatment in general. For example, in 2018, only 55.5% of mental health treatment facilities in the United States and its territories offered treatment in sign language for Deaf patients.³⁶ Facilities indicating the provision of accessible treatment does not, however, indicate realized language access to Deaf patients who report barriers to communication access throughout the health care system.³⁷⁻³⁹ Florida, like all of the United States, is in need of more mental health professionals who are Deaf who can provide culturally and linguistically appropriate services.

Table 3. Adjusted odds of health characteristics comparing Deaf ASL users with hearing English speakers, Florida, 2018^a

Health characteristic	Crude odds ratio (95% CI)	Adjusted odds ratio (95% CI)
Have health insurance	1.20 (0.60-2.40)	1.67 (0.82-3.40)
Routine checkup, past 12 mo	0.57 (0.35-0.92)	0.63 (0.37-1.05)
HIV testing history, ever	2.02 (1.29-3.15)	1.34 (0.84-2.13)
Current combustible cigarette smoker, past 30 d	0.71 (0.38-1.34)	0.71 (0.37-1.36)
Binge drinking, past 30 d	2.11 (1.28-3.48)	1.80 (1.08-3.01)
Overweight or obese body mass index	1.14 (0.71-1.82)	1.28 (0.79-2.06)

Abbreviation: ASL, American Sign Language.

^aData sources: The Deaf ASL-user sample was from the Florida Deaf Health pilot survey conducted in 2018²²; the hearing English-speaker sample was from the 2018 Florida Behavioral Risk Factor Surveillance System.²³

^bModels adjusted for race (White vs non-White), age, gender, Hispanic ethnicity, employment status, and education history. The outcome model for general physical examination also adjusted for health insurance status.

Table 4. Greatest health concerns of Deaf American Sign Language users, Florida, 2018^a

Health concern	Adults aged 18-39 (n = 36)	Adults aged ≥40 (n = 48)	Total sample (n = 84)
Mental health ^b	12 (33.3)	12 (25.0)	24 (28.6)
Specific condition (eg, joint or muscle pain, cancer)	4 (11.1)	9 (18.8)	13 (15.5)
Weight management (obese or overweight)	7 (19.4)	8 (16.7)	15 (17.9)
No concerns	1 (2.8)	2 (4.2)	3 (3.6)
Concern not specified	0	3 (6.3)	3 (3.6)
Multiple concerns	2 (5.6)	3 (6.3)	5 (6.0)
Sexual or reproductive health	6 (16.7)	0	6 (7.1)
Diabetes prevention or management	1 (2.8)	6 (12.5)	7 (8.3)
Cardiovascular health	3 (8.3)	5 (10.4)	8 (9.5)

^aData source: Florida Deaf Health pilot survey.²² All values are number (percentage).

^bAmerican Sign Language translation included examples/expansion of concepts. Mental health concerns including anxiety, depression, and stress management; sexual or reproductive concerns including sexually transmitted disease/HIV prevention, condom use, and birth control.

Furthermore, following the PRECEDE-PROCEED model's conceptualization of "perceived need," "actual need," and "resources" (and alignment leading to action),¹⁸ agreement between community perceived need and actual need related to mental health is considerable; therefore, more resources must be allocated to improve the quality of life for Deaf ASL users in Florida.

Deaf adults had a higher prevalence and higher aORs of current binge drinking than their hearing counterparts did. This finding indicates that alcohol use, specifically binge drinking, may be a serious problem for this population. Data from 2017 using a national sample of 1271 Deaf adults indicated that 58% of Deaf people used alcohol during the past month and that the frequency of alcohol use increased when participants were in close proximity to a large Deaf community.¹⁷ Given these data, with the well-established increased risk of mental health conditions among Deaf people as a result of language deprivation and communication neglect,^{40,41} it is important to more thoroughly examine the co-occurrence of substance use and mental health conditions among Deaf people in Florida, with special attention to areas of higher Deaf community concentration (eg, Tampa/Clearwater) and to contextual factors including early childhood language development and family communication.

Health care access is a priority in the Deaf health behavior literature.^{10,16,42,43} Our study found some indication of health care access: 57.5% of Deaf people in Florida had ever received an HIV test, higher than that reported among hearing respondents. This finding aligns closely with the current literature indicating that 47.5% (in Rochester)²⁶ to 54.0% (nationally)⁴⁴ of Deaf ASL users have ever been tested for HIV. However, Deaf people may be less likely to use prevention services than hearing people are. It is likely that Deaf patients use primary care services less frequently than hearing people do because of communication barriers¹¹; this

disengagement from primary care services may be partly responsible for the finding that most Deaf participants (55.6%) used ED services during the past 12 months. Although condition dependent, frequent ED use is often associated with barriers to health care access and navigation.^{45,46}

In our study, 37.2% of Deaf people reported having an interpreter request denied in a medical facility during the past 12 months. With the exception of research from the United Kingdom indicating that only 17% of Deaf patient primary care consultations had sign language interpreters,⁴⁷ and recent research from North Carolina indicating a 20% discrepancy between patient preferred- and used-communication modality in health care settings,⁴⁸ this novel finding reported in the peer-reviewed literature affirms that Deaf people continue to experience barriers to health care communication. Refusing to provide communication accommodations for Deaf patients has consequences for patient engagement in health care and patient health literacy; it also has implications for medical ethics and the provision of patient-centered care, shared decision making, and receiving informed consent for diagnostic tests and treatment procedures. It is also a violation of mandates outlined in the Americans With Disabilities Act and other federal laws.¹²⁻¹⁴ The longstanding community experience of being denied an interpreter in health care settings continues despite efforts by community advocates. For example, the Florida Association of the Deaf and the Deaf community at large has advocated for the provision of qualified interpreter services throughout the state, including filing lawsuits against health systems for violating federal law⁴⁹ and collaborating with the Florida Attorney General's Office to collect comprehensive data from Deaf patients when interpreter requests are denied.⁵⁰ Given the importance of accessible health care communication and the existence of Deaf community-led efforts to

improve the provision of interpreter services, patient health education and promotion specialists must work with community members to further support these community efforts and lead to systems change.

Limitations

This study had several limitations. First, we did not have objective measures of the size or demographic composition of the Deaf community in Florida; thus, we were unable to use sampling weights to more accurately estimate point prevalence and 95% CIs. Our sample may not be representative of the Florida Deaf community: the proportion of White respondents and people with higher socioeconomic status (eg, college graduates, employed people) was higher in the survey than in the Florida population. Second, as a methodological pilot study, our study may not have been adequately powered for in-depth analysis of the reported health outcomes, especially for smaller effects; the current results, however, may be used by researchers to estimate effect sizes when conducting power analysis to determine empirical sample size goals. The small sample size paired with the low occurrence of selected health indicators (eg, combustible cigarette use) led to large 95% CIs. Future research should conduct meta-analysis to pool the effects and findings across Deaf health research studies to better understand health inequity in this population. Third, preexisting conditions were not collected from Deaf ASL users; this variable may be associated with health care use and should be adjusted for in future studies. Given these sample limitations, paired with the known limitations of self-report surveys, we may have underestimated the levels of health inequity among Deaf people.

Conclusion

Best practice in health education indicates that we should identify alignment among perceived needs and priorities in the community, needs identified through health services research, and available resources.¹⁸ Historically, state and local priorities in other areas, whether identified by the community or researchers, have largely focused on cardiovascular concerns, weight management, and nutrition.⁵¹⁻⁵³ In Florida, Deaf ASL users reported mental health as their greatest health concern.

Across public health activities, however, the need exists to allocate resources to conduct more extensive surveillance activities and to adapt evidence-based programs for the communities that need them in a linguistically and culturally tailored manner.⁵⁴ Health promotion specialists could partner with Deaf-led community organizations and community clinics to disseminate health information and advocate for more accessible health care settings, especially in mental health and substance use treatment. We also encourage the improvement and expansion of governmental data systems

(eg, BRFSS) to include Deaf people, in their preferred language, so that we may better understand the Deaf community's health achievements and health needs.

This study represents the first published community-engaged health needs assessment survey conducted with Deaf ASL users in Florida and analyzes differences in health behavior among Deaf and hearing people. Findings indicate inequities between Deaf people's health and the health of their hearing English-speaking counterparts in receiving effective communication in health care environments and binge drinking. Furthermore, mental health is the greatest health concern among Deaf people in Florida. These data justify the development of a larger-scale community-engaged research/community-based participatory research project, led by and working with the Florida Deaf community, to further study health inequity and to identify and implement strategies for systems change to improve the health of this population.

Authors' Note

Portions of this study were presented at the Biannual Meeting of the Florida Association of the Deaf in 2019 and Annual Meeting of the Society for Public Health Education in 2020.

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ORCID iD

Tyler G. James, MS  <https://orcid.org/0000-0002-0694-4702>

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