# Exploring Health-Seeking Behavior among Diverse Ethnic Subgroups within the Black Population in the United States and Canada: A Cross-Sectional Study

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*Article*

# Exploring Health-Seeking Behavior Among Diverse Ethnic Subgroups within the Black Population in the United States and Canada: A Cross-Sectional Study

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**Abstract:** The Black population, often treated as ethnically homogenous, faces a constant challenge in accessing and utilizing healthcare services. This study examines the intragroup differences in health-seeking behavior among the multiple ethnic subgroups that comprise the Black community. A cross-sectional study was conducted among 239 adults ≥18 years who self-identified as Black in the United States and Canada. A multiple logistic regression model was fitted to evaluate the relationship between health-seeking behaviors and ethnic origin controlling for selected social and health related factors. The mean age of participants was 38.6 years, 31% were male, and 20% were unemployed. Sixty-one percent reported very good or excellent health status, and 59.7% reported not being treated for chronic disease at the time of the survey. Aging (OR=1.05, CI:1.01–1.09) and being female (OR= 0.30, CI: 0.14–0.65) were associated with favorable health-seeking behaviors. Compared with participants who had earned high school diplomas only, those who reported having earned graduate degrees were 75% less likely to have engaged in favorable health-seeking behavior (OR=0.25, 95% CI: 0.07–0.86). In the Black community of our sample, regardless of ethnic origins or country of birth, the factors associated with health-seeking behavior were age, gender, and educational attainment.

**Keywords:** African American; African; Caribbean; healthcare utilization; ethnic disparities; health-seeking behavior; intragroup difference; black populations; ethnic subgroups

## 1. Introduction

Health-seeking behavior involves a social process that is influenced not just by one's own personal views and standards but also by those of others via interactions with social networks [1]. Health-seeking behavior, which unsurprisingly has a direct impact on health status, includes the process of selecting a specific health treatment and broader patterns of decision-making behavior [2,3]. Other studies have revealed that health-seeking behavior is influenced by a diverse set of gender, social, cultural, and economic factors as well as disease patterns [4]. It is vital that we properly understand the impact of demographic and health factors on health-seeking behavior [5].

Racial and ethnic disparities in health-services utilization and access to healthcare in the United States has posed a constant challenge. Many studies have shown that racial and ethnic minorities make fewer physician visits, lack regular primary care providers, and are less likely to seek health screenings [6-8]. In particular, among ethnic minorities, Black people are more likely to use emergency rooms as a regular source of healthcare and to delay care to avoid out-of-pocket costs

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(e.g., deductibles), and are less likely to receive outpatient neurology visits or to use behavioral health services, outpatient musculoskeletal care, or ophthalmology healthcare services [9-13].

Among the Black population, African immigrants underutilize healthcare for various reasons. Common factors that hinder healthcare utilization in this subpopulation have been the cost of medical treatment, lack of insurance, having no access to free clinics, and language barriers [14-16]. Haitians reported underutilization of healthcare services because of a cultural stigma surrounding mental health issues and mistrust of Western medicine [14]. Caribbean men report enabling factors such as adequate income, gainful employment, marital status, and health insurance in addition to factors such as mental health status as the most significant determinants of their willingness to utilize their usual sources of health care [17]. With specific reference to gender within the Black community, studies have shown that women are less likely to be screened for depression and less likely to receive subsequent care while men were less likely to receive mental health care [18]. Black men often delay seeking outpatient care or preventive health screenings because of medical mistrust, lack of insurance, and lack of access to the care [8]. In addition, Black women, compared to their Caucasian counterparts, are more likely to receive poor medical care, undergo unnecessary procedures, and experience discrimination when accessing medical care [19].

Healthcare utilization is linked to access to insurance, and the Affordable Care Act (ACA) has reduced disparities in healthcare utilization by making health insurance more affordable in the US [20,21]. Studies have, however, reported that after the ACA was implemented, certain racial/ethnic and gender-specific groups such as Black women and men have continued to experience increased rates of unmet needs and continue to comprise the most disadvantaged groups [22]. Another study that investigated the association between ACA enrollment, deductibles, healthcare utilization, and clinical outcomes for HIV patients found that Black and Hispanic individuals living with HIV experienced suboptimal HIV outcomes [23]. Thus, these mixed results highlight the need to examine healthcare utilization patterns among specific subgroups of racial and ethnic minorities. Past research has shown that healthcare utilization is lower in the Black community; however, only a few studies have explored the relationship between social determinants of health, health-seeking behavior, and healthcare utilization among specific subgroups in the Black community, including African, Afro-Caribbean, and other Black-identified groups [24,25]. Thus, our study contributes to filling this knowledge gap by examining how racial, ethnic, cultural, and social identities shape health seeking behavior among African Americans, Afro-Caribbeans, and people of African descent in the United States and Canada. In particular, the study examines the determinants of health-seeking behavior among several key subgroups in the Black community in the United States and Canada.

## 2. Methods

### *Data Collection/Study Design*

We sourced our data from the RHealth study, a multiyear cross-sectional study of Afro-Caribbean, African American, Afro-Canadian, and African respondents. A total of n=293 Black-identifying respondents from the United States and Canada were recruited between 2017 and 2022 with a 2-year COVID pause. To be eligible for this study, participants were required to be over the age of 18 years, be able to read, write, and understand English, and to identify as Black.

Multiple recruitment methods, such as neighborhood canvasing, word of mouth, community events, and snowball sampling were used to identify a diverse sample of respondents. Eligible participants were then provided with a QR Code that linked them directly to an online self-administered survey with an access code. An informed-consent form was provided online, describing the purpose of the study and compensation for participation. Participants who completed the online survey received an email with a link to access a $20 dollar gift card. This study was approved by the institutional review board at the University of Washington and received exempt status as it involves low or minimal risk to respondents.

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*Outcome Variable*

The outcome variable of interest was health-seeking behavior. Health-seeking behavior was classified based on participants' responses to the question, "In the last 12 months, did you make an appointment for your health care at a doctor's office or clinic as soon as you thought you needed it?" The responses options were "never," "sometimes," "usually," and "always." The outcome variable was further dichotomized into favorable health-seeking behavior—seeking care "usually/always" when needed; and non-favorable health-seeking behavior—seeking care "sometimes/never" when needed.

*Exposure Variables*

Ethnic origin was self-reported and classified as "Black American," "Black African," "Black Caribbean," or "Black Canadian."

Country of birth was assessed based on whether participants were born in the US/Canada or not and was dichotomized as "yes" or "no."

*Other Variables*

Gender was defined as "female" or "male." Age was included as a continuous variable. Education was classified as "high school/GED or less," "some college," "bachelor's degree," and "graduate degree." Annual household income was categorized as <$40,000, $40,000–$59,999, $60,000–$89,999, and ≥ $90,000. Marital status was defined as "married/living with a partner," "never married," or "separated/widowed/divorced." Employment was categorized as "employed" or "unemployed" regardless of employment type. Health status was the self-reported perception of a respondent's health and was categorized as "poor," "fair," "good," "very good," or "excellent." The variable was later reclassified into "poor/fair," "good," and "very good/excellent." Chronic disease included being treated for any of the following chronic conditions: heart disease, high blood pressure, diabetes, anemia or blood disease, arthritis, or chronic back pain. The variable was later dichotomized as "yes" or "no." Insurance was reported as "no insurance," "commercial," "Medicaid," "Medicare," "Canadian Medicare," "supplemental/private," or "both Canadian Medicare and supplemental." The variable was later reclassified as "insured" or "uninsured." If participants were Canadian, the insurance response was assigned "insured" because of the universal healthcare system in the country.

*Statistical Analyses*

The sociodemographic characteristics of the sample were described, stratifying responses by health-seeking behavior, using means (± SD) for continuous variables and chi square ($\chi$) analyses for categorical variables. Logistic regression was used to assess the odds that health-seeking behavior was exhibited in the sample population. Odds ratios were used to measure associations between exposure by group and the outcome of interest (health-seeking behavior). A Hosmer-Lemeshow test was conducted to test the fit of the model. A Hosmer-Lemeshow statistic with a significance value greater than 0.05 indicates that a model adequately fits the data. Statistical significance was considered at $P<0.05$ for all statistical analyses. Analysis was performed with IBM Corp. Release 2021. IBM SPSS Statistics for Windows, Version 28.0. Armonk, NY: IBM Corp.

## 3. Results

A total of 239 participants from the United States and Canada were included in the study. The mean age of all participants was 38.6 years (±15.6) and 69.4% were women. The majority of the participants identified as Black American (58.9%). In our sample, 33.6% reported having earned bachelor's degrees, 26.2% reported having completed some college, and 21.0% reported having earned graduate degrees. More than three-fourths of the participants were employed (80.1%), 44.3% were never married, and 31.9% reported a household income of less than $40,000. More than half (60.7%) reported good or excellent health status, and 59.7% reported not having been diagnosed with a chronic disease. Most of the participants were born in either the United States or Canada (72.5%).

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The majority (91.7%) of the participants who responded the insurance question reported having some kind of insurance/healthcare coverage. In the univariable analysis, statistically significant difference in health-seeking behavior was observed by age, gender, income, employment status, insurance, having at least one chronic disease. The non-favorable and favorable outcome variables of the various sociodemographic factors are listed in Table 1.

**Table 1.** Baseline Characteristics of Survey Respondents by Health-seeking Behavior.

| | | Unfavorable n(%) | Favorable n(%) | Chi-squared P-value |
|---|---|---|---|---|
| Age, Years (n=239) | Mean (SD) | 33.86 (10.9) | 42.07 (±17.8) | **<.001** |
| Gender (n=222) | Female | 53 (54.6) | 101 (80.8) | **<.001** |
| | Male | 44 (45.1) | 24 (19.2) | |
| Ethnic Group (n=234) | African American | 59 (57.3) | 79 (60.3) | .104 |
| | Black Caribbean | 12 (11.7) | 24 (18.3) | |
| | Black African | 27 (26.2) | 19 (14.5) | |
| | Black Canadian | 5 (4.8) | 9 (6.9) | |
| Country (n=227) | USA | 73 (82.0) | 116 (84.1) | .688 |
| | Canada | 16 (18.0) | 22 (15.9) | |
| Born in US or Canada (N=233) | No | 27 (26.5) | 37 (28.2) | .763 |
| | Yes | 75 (73.5) | 94 (71.8) | |
| Educational Status (n=229) | High School/GED or less | 25 (24.3) | 19 (15.1) | .180 |
| | Some College | 28 (27.2) | 32 (25.4) | |
| | Bachelor's degree | 28 (27.2) | 49 (38.9) | |
| | Graduate degree | 22 (21.3) | 26 (20.6) | |
| Household Income (n=226) | < $39,999 | 42 (41.1) | 30 (24.2) | **.018** |
| | $40,000–$59,999 | 23 (22.6) | 27 (21.7) | |
| | $60,000–$89,999 | 23 (22.6) | 34 (27.4) | |
| | $90,000 or more | 14 (13.7) | 33 (26.6) | |
| Marital Status (n=226) | Never Married | 50 (49.0) | 50 (40.3) | .321 |
| | Separated/Divorced/Widowed | 11 (10.8) | 20 (16.1) | |
| | Married | 41 (40.2) | 54 (43.6) | |
| Employment Status (n=231) | Unemployed | 10 (9.7) | 36 (28.1) | **<.001** |
| | Employed | 93 (90.3) | 92 (71.9) | |
| Insurance (n=156) | No | 12 (15.4) | 1 (1.3) | **.001** |
| | Yes | 66 (84.6) | 77 (98.7) | |
| Self-rated Health (n=224) | Very Good/Excellent | 67 (67.7) | 69 (55.2) | .163 |
| | Poor/Fair | 12 (12.1) | 20 (16.0) | |
| | Good | 20 (20.0) | 36 (28.8) | |
| Chronic Disease* (n=154) | No | 52 (70.3) | 40 (50.0) | **.010** |
| | Yes | 22 (29.7) | 40 (50.0) | |

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Data are shown as n (%) except when indicated otherwise. M: mean; SD: Standard Deviation. Bold: Chi square. P<0.05. *Chronic disease includes being treated for any of the following chronic conditions: heart disease, high blood pressure, diabetes, anemia or blood disease, arthritis, or chronic back pain.

*Health-Seeking Behavior*

**Table 2** presents multivariate regression analysis of health-seeking behavior by several demographic, social determinants, and perceived health status variables. Women were 3 times more likely to engaging in favorable health-seeking behavior (OR=3.09, 95%CI:1.47 – 6.47) compared with men. Aging was associated with higher likelihood of seeking medical care. We found that, for every one-year increase in age, there is a .03 increase in health-seeking behavior (OR=1.03, 95% CI= 1.01-1.06).

**Table 2.** Logistic regression analyses of the association of Health-Seeking Behavior with sociodemographic and health related factors (N=199).

| | Health-Seeking Behavior (N=199) | |
|---|---|---|
| Characteristics | **OR (95%Cl)** | **P-value** |
| Survey Country | | |
| US | (Ref) | |
| Canada | 0.79 (.15-4.10) | .792 |
| Ethnic Group | | |
| Black American | (Ref) | |
| Black Caribbean | 1.05 (0.29-3.73) | .944 |
| Black African | 0.71 (0.24-2.11) | .536 |
| Black Canadian | 1.73 (0.21-14.23) | .608 |
| Age | 1.03 (1.01-1.06) | **.029** |
| Gender | | |
| Male | (Ref) | |
| Female | 3.09 (1.47 – 6.47) | **.003** |
| Employed | | |
| Yes | | |
| No | 3.46 (1.35 – 8.90) | 0.10 |
| Education | | |
| Graduate | (Ref) | |
| Bachelor's degree | 3.57 (1.38-9.23) | **.009** |
| Some College | 2.48 (0.89-6.93) | .084 |
| High School/GED or less | 3.80 (1.07 – 13.4) | **.038** |
| Household Income | | |
| <40,000 | (Ref) | |
| $40,000-$59,999 | 1.85 (0.74 – 4.61) | .186 |
| $60,000-$89,999 | 1.80 (0.74 – 4.36) | .192 |
| ≥ $90,000 | 2.78 (0.75 – 8.11) | .062 |
| Self-Reported Health | | |

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| | | |
|---|---|---|
| Very Good/Excellent | (Ref) | |
| Good | 1.75 (0.79 – 3.87) | .167 |
| Poor/Fair | 1.71 (0.68 – 4.30) | .258 |
| Born in US or Canada | | |
| No | (Ref) | |
| Yes | 1.43 (0.47 – 4.37) | .527 |

[a]Reference group: unemployed [b]Reference group: not born in US [c]Reference group: no chronic disease Bold: p<0.05; OR, Odds Ratio; CI, Confidence Interval.

Educational level was inversely related to health-seeking behavior in our sample. Compared with participants who reported earning graduate degrees, those who reported having earned bachelor's degrees and those with high school diploma or less were over three times more likely to exhibit positive health-seeking behavior, OR=3.57, 95% CI: 1.38-9.23 and OR=3.80, 95% CI:1.07–13.4), respectively. Similarly, unemployed individuals were more inclined to seek care compared to their employed counterparts, OR=3.46, CI: 1.35 – 8.90, although this relationship did not attain statistical significance. The variable "being treated for chronic illnesses" was omitted from the full multivariable regression model due to high collinearity with self-rated health. Nevertheless, there was no statistically significant relationship observed between self-rated health and health-seeking behavior. In a sensitivity analysis, being treated for chronic diseases did not exhibit an association with health-seeking behavior. Additionally, no statistically significant association were found between ethnic origin, or place of birth, household income, self-rated health, and health-seeking behavior controlling for all other covariates.

## 4. Discussion

In this study, we sought to identify factors associated with health-seeking behavior of the Black population in the United States and Canada, disaggregating the Black racial category based on ethnic origin and place of birth. Health-seeking behavior, defined as the actions people take to enhance or preserve their health including seeking medical care, is often used as a proxy to understand how individuals engage with healthcare systems in the context of their socio-cultural, economic, and demographic circumstances [26]. Our study highlights three major findings. First, we found that in our sample, a person's ethnic origin did not predict whether that person has engaged in favorable health-seeking behavior. Second, Black men were more likely to have unfavorable health seeking behavior than Black women across diverse ethnic Blacks. Third, those with lesser education were more likely to have a favorable health seeking behavior than more educated individuals. Compared to Black people with graduate degrees, those with bachelor's and high school or less were more likely to seek care when needed.

Although cultural factors shape perceptions of health and the importance placed on seeking medical care, we did not find differences in health seeking behavior based on ethnic origins in our sample. Previous research indicated that in the Black American population, health-seeking behavior is influenced by sociocultural factors, income, and a general distrust of the US healthcare system [27]. A review conducted by Omenka et al. reveals underutilization of healthcare services among the Black community of African origin, which can be attributed to factors such as traditional beliefs, linguistic discordance, cultural competence challenges, the intricacies of the US healthcare system, and a lack of trust in the US system [28]. Concerning the Caribbean population, despite assumptions that the causes of health disparities within this group mirror those in other immigrant populations, few existing studies either support or contradict this assumption. Notably, in a study investigating ethnic descent and the risk of hypertension, participants with hypertension among the Afro-Caribbean group exhibited higher healthcare utilization compared to those in any other racial group [29]. In our sample, we also did not find country of origin to be associated with health seeking behavior. Findings presented by Carlisle (2012) suggest that how researchers categorize immigrants carries

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significant implications and underscores the importance of comparing health characteristics between native-born and foreign-born immigrants [30].

Our study revealed that Black women were three times more likely than Black men to have engaged in favorable health-seeking behavior, and this finding is consistent with those reported in numerous studies that demonstrate a wider gender disparity in the United States [32,33]. According to the Centers for Disease Control and Prevention (CDC), men are at greater risk of death than women in every age group, experiencing 1.6 times higher mortality for all causes, 1.8 times higher mortality for heart diseases, 1.4 times higher mortality for cancers, and 2.4 times higher mortality for accidents [34]. These statistics and disparities are even worse in men of color [35]. Furthermore, in our study we found a relationship between age and health-seeking behavior. As one ages, one is more likely to engage in favorable health-seeking behavior. The Institute of Medicine has found a relationship between older adults and high rates of chronic disease when this age group is compared with younger adults, which supports our findings [36]. In our study, however, we did not find a significant relationship between chronic disease and health-seeking behavior, which could be due to the fact that our sample population was relatively young (the mean age was 38 years).

Finally, education can play a great role in the utilization of healthcare services. However, in our sample, we found that respondents who reported having earned graduate degrees were less likely to seek healthcare services than those with only high school educations. This trend does not align with results reported in the existing literature, where a positive association between education and health-seeking has been found [37]. A study by Van der Vlegel et al. (2021) found no significant correlation between education level and healthcare usage, but when broken down into services received by type, they found that patients in the lower education group seemed slightly more likely to seek outpatient rehabilitation care and psychological care and slightly less likely to seek physical therapy than patients in the higher educational group [38]. Mirowsky and Ross reported that education forms a unique dimension of social statistics, which makes it very important to health [39]. Additionally, Ross and Wu (1995) reported that high educational attainment improves health directly while also improving health indirectly through healthier work and economic conditions, superior social psychological resources, and healthier lifestyles [40]. Overall, educated individuals are more likely to form healthier habits and therefore require fewer visits to healthcare providers, which might explain the relationship we found in our study.

The interplay between insurance and health-seeking behavior is intricate. While insurance provides financial coverage for medical expenses, various factors may influence the timing and how individuals seek healthcare services. In our univariate analysis, a statistically significant relationship between insurance and health-seeking behavior was observed. However, it is important to note that our insurance variable exhibits substantial missing data, and a majority of respondents who answered the question reported having insurance. Also, participants from Canada are universally covered by health insurance. This might introduce bias into our insurance data, potentially resulting in an overrepresentation of individuals with insurance in our sample. Consequently, we have excluded insurance from the multiple regression analysis. However, our findings indicate that being from Canada or the US did not exhibit a significant association with health-seeking behavior.

This study balances strengths against limitations. One of the strengths of this study is that we collected surveys from a variety of ethnic subpopulations that comprise the Black community across the United States and Canada. Thus, we were able to identify the differences in health-seeking behavior within the group. However, our analysis was limited by missing data to some extent. For example, we were unable to analyze insurance variables in our regression model because of the small sample of individuals who responded to the insurance question. We also used convenience sampling, which limits the generalizability of our results [41]. In addition, this study relies on self-reported data, which could be subject to social desirability bias, but in terms of general health measures such data have been found to be helpful for understanding health status in particular [41].

## 5. Conclusions

This cross-sectional study investigated intragroup differences in health-seeking behavior among various ethnic subgroups within the Black population in the United States and Canada. The findings revealed that, irrespective of ethnic origins or country of birth, age, gender, and educational attainment were significant factors associated with health-seeking behavior in the Black community. Future studies should address barriers to healthcare utilization, especially exploring additional social determinants of health variables to address barriers to healthcare utilization.

## References


1. Mackian, S., Bedri, N., & Lovel, H. (2004). Up the garden path and over the edge: where might health-seeking behaviour take us? *Health Policy and Planning, 19*(3), 137-146.
2. Jackson, M. D., Coombs, M. P., Wright, B. E., Carney, A. A., Lewis-Fuller, E., & Reizo, M. (2004, April). Self-reported non-communicable chronic diseases and health-seeking behaviour in rural Jamaica, following a health promotion intervention: A preliminary report. In *International Congress Series* (Vol. 1267, pp. 59-68). Elsevier.
3. Shaikh, B. T., & Hatcher, J. (2005). Health seeking behaviour and health service utilization in Pakistan: challenging the policy makers. *Journal of Public Health, 27*(1), 49-54.
4. Hiebert, B., Leipert, B., Regan, S., & Burkell, J. (2018). Rural men's health, health information seeking, and gender identities: A conceptual theoretical review of the literature. *American Journal of Men's Health, 12*(4), 863-876.
5. Chen, P. H., Huang, S. M., Lai, J. C. Y., & Lin, W. L. (2022). Determinants of health-seeking behavior toward Chinese or Western medicine in Taiwan: An analysis of biobank research database. *Complementary Therapies in Clinical Practice, 48*, 101592.
6. Mueller KJ, Patil K, Boilesen E. The role of uninsurance and race in healthcare utilization by rural minorities. Health Serv Res. 1998 Aug;33(3 Pt 1):597-610. PMID: 9685124; PMCID: PMC1070278.
7. Richardson, L. D., & Norris, M. (2010). Access to Health and Health Care: How Race and Ethnicity Matter: ACCESS TO HEALTH AND HEALTH CARE. *Mount Sinai Journal of Medicine: A Journal of Translational and Personalized Medicine, 77*(2), 166–177. https://doi.org/10.1002/msj.20174
8. Powell, W., Richmond, J., Mohottige, D., Yen, I., Joslyn, A., & Corbie-Smith, G. (2019). Medical Mistrust, Racism, and Delays in Preventive Health Screening Among African-American Men. *Behavioral Medicine, 45*(2), 102–117. https://doi.org/10.1080/08964289.2019.1585327
9. Coughlin, S. S., Chen, J., & Cortes, J. E. (2021). Health care access and utilization among adult cancer survivors: Results from the National Institutes of Health "All of Us" Research Program. *Cancer Medicine, 10*(11), 3646–3654. https://doi.org/10.1002/cam4.3924
10. Saadi, A., Himmelstein, D. U., Woolhandler, S., & Mejia, N. I. (2017). Racial disparities in neurologic health care access and utilization in the United States. *Neurology, 88*(24), 2268–2275. https://doi.org/10.1212/WNL.0000000000004025
11. Heun-Johnson, H., Menchine, M., Axeen, S., Lung, K., Claudius, I., Wright, T., & Seabury, S. A. (2021). Association Between Race/Ethnicity and Disparities in Health Care Use Before First-Episode Psychosis Among Privately Insured Young Patients. *JAMA Psychiatry, 78*(3), 311. https://doi.org/10.1001/jamapsychiatry.2020.3995
12. Rabah, N. M., Knusel, K. D., Khan, H. A., & Marcus, R. E. (2020). Are There Nationwide Socioeconomic and Demographic Disparities in the Use of Outpatient Orthopaedic Services? *Clinical Orthopaedics & Related Research, 478*(5), 979–989. https://doi.org/10.1097/CORR.0000000000001168
13. Rasendran, C., Tye, G., Knusel, K., & Singh, R. P. (2020). Demographic and Socioeconomic Differences in Outpatient Ophthalmology Utilization in the United States. *American Journal of Ophthalmology, 218*, 156–163. https://doi.org/10.1016/j.ajo.2020.05.022
14. Allen, J. D., Mars, D. R., Tom, L., Apollon, G., Hilaire, D., Iralien, G., Cloutier, L. B., Sheets, M. M., & Zamor, R. (2013). Health Beliefs, Attitudes and Service Utilization among Haitians. *Journal of Health Care for the Poor and Underserved, 24*(1), 106–119. https://doi.org/10.1353/hpu.2013.0015
15. Adekeye, O. A., Adesuyi, B. F., & Takon, J. G. (2018). Barriers to Healthcare among African Immigrants in Georgia, USA. *Journal of Immigrant and Minority Health, 20*(1), 188–193. https://doi.org/10.1007/s10903-017-0549-9
16. Douangmala, C. S., Hayden, S. A., Young, L. E., Rho, J., & Schnepper, L. L. (2012). Factors Influencing Healthcare Utilization Within a Free Community Clinic. *Journal of Immigrant and Minority Health, 14*(4), 698–705. https://doi.org/10.1007/s10903-011-9565-3
17. Hammond WP, Mohottige D, Chantala K, Hastings JF, Neighbors HW, Snowden L. Determinants of usual source of care disparities among African American and Caribbean Black men: findings from the National

Survey of American Life. J Health Care Poor Underserved. 2011 Feb;22(1):157-75. doi: 10.1353/hpu.2011.0016. PMID: 21317513; PMCID: PMC3062470.

18. Hahm, H. C., Cook, B. L., Ault-Brutus, A., & Alegría, M. (2015). Intersection of race-ethnicity and gender in depression care: screening, access, and minimally adequate treatment. *Psychiatric services (Washington, D.C.), 66*(3), 258–264. https://doi.org/10.1176/appi.ps.201400116
19. Prather, C., Fuller, T.R., Jeffries, W. L.t., Marshall, K.J., Howell, A.V., Belyue Umole, A., & King, W. (2018). Racism, African American women, and their sexual and reproductive health: A review of historical and contemporary evidence and implications for health equity. *HealthEquity, 2*(1), 249–259. https://doi.org/10.1089/heq.2017.0045
20. Chen, J., Vargas-Bustamante, A., Mortensen, K., & Ortega, A. N. (2016). Racial and Ethnic Disparities in Health Care Access and Utilization Under the Affordable Care Act. *Medical Care, 54*(2), 140–146. https://doi.org/10.1097/MLR.0000000000000467
21. White-Means, S., & Osmani, A. (2018). Affordable Care Act and Disparities in Health Services Utilization among Ethnic Minority Breast Cancer Survivors: Evidence from Longitudinal Medical Expenditure Panel Surveys 2008–2015. *International Journal of Environmental Research and Public Health, 15*(9), 1860. https://doi.org/10.3390/ijerph15091860
22. Manuel, J. I. (2018). Racial/Ethnic and Gender Disparities in Health Care Use and Access. *Health Services Research, 53*(3), 1407–1429. https://doi.org/10.1111/1475-6773.12705
23. Satre, D. D., Parthasarathy, S., Silverberg, M. J., Horberg, M., Young-Wolff, K. C., Williams, E. C., Volberding, P., & Campbell, C. I. (2020). Health care utilization and HIV clinical outcomes among newly enrolled patients following Affordable Care Act implementation in a California integrated health system: A longitudinal study. *BMC Health Services Research, 20*(1), 1030. https://doi.org/10.1186/s12913-020-05856-5
24. Ortaliza, J., McGough, M., Wager, E., Claxton, G., & Amin, K. A. (2022, July 5). How do health expenditures vary across the population? Peterson-KFF Health System Tracker. https://www.healthsystemtracker.org/chart-collection/health-expenditures-vary-across-population/#Proportion%20of%20individuals%20by%20health%20status,%202019
25. Cazeau-Bandoo, S. I., & Ho, I. K. (2022). The role of structural gendered racism in effective healthcare utilization among Black American women with herpes simplex virus. *Journal of Prevention and Health Promotion, 3*(1), 3-29.
26. Shaikh B. T. (2008). Understanding social determinants of health seeking behaviours, providing a rational framework for health policy and systems development. *JPMA. The Journal of the Pakistan Medical Association, 58*(1), 33–36.
27. Bailey E. J. (1987). Sociocultural factors and health careseeking behavior among black Americans. *Journal of the National Medical Association, 79*(4), 389–392.
28. Omenka, O. I., Watson, D. P., & Hendrie, H. C. (2020). Understanding the healthcare experiences and needs of African immigrants in the United States: a scoping review. *BMC Public Health, 20*(1), 27. https://doi.org/10.1186/s12889-019-8127-9
29. Chaturvedi, N., Bulpitt, C. J., Leggetter, S., Schiff, R., Nihoyannopoulos, P., Strain, W. D., Shore, A. C., & Rajkumar, C. (2004). Ethnic differences in vascular stiffness and relations to hypertensive target organ damage. *Journal of Hypertension, 22*(9), 1731–1737. https://doi.org/10.1097/00004872-200409000-00017
30. Carlisle, S. K. (2012). Nativity differences in chronic health conditions between nationally representative samples of Asian American, Latino American, and Afro-Caribbean American respondents. *Journal of Immigrant and Minority Health, 14*, 903-911.
31. Commodore-Mensah, Y., Matthie, N., Wells, J., B Dunbar, S., Himmelfarb, C. D., Cooper, L. A., & Chandler, R. D. (2018). African Americans, African immigrants, and Afro-Caribbeans differ in social determinants of hypertension and diabetes: evidence from the National Health Interview Survey. *Journal of Racial and Ethnic Health Disparities, 5*, 995-1002.
32. Read, J. N. G., Emerson, M. O., & Tarlov, A. (2005). Implications of black immigrant health for US racial disparities in health. *Journal of Immigrant Health, 7*, 205-212.
33. Vaidya, V., Partha, G., & Karmakar, M. (2012). Gender differences in utilization of preventive care services in the United States. *Journal of Women's Health, 21*(2), 140–145. https://doi.org/10.1089/jwh.2011.2876
34. Courtenay W. H. (2000). Constructions of masculinity and their influence on men's well-being: a theory of gender and health. *Social Science & Medicine, 50*(10), 1385–1401. https://doi.org/10.1016/s0277-9536(99)00390-1
35. Centers for Disease Control and Prevention (CDC), National Center for Health Statistics. Health, United States, 2006 With Chartbook on Trends in the Health of Americans. Atlanta, GA: CDC; 2006.
36. Garfield, C. F., Isacco, A., & Rogers, T. E. (2008). A review of men's health and masculinity. *American Journal of Lifestyle Medicine, 2*(6), 474-487.
37. Institute of Medicine (US) Committee on the Future Health Care Workforce for Older Americans. Retooling for an Aging America: Building the Health Care Workforce. Washington (DC): National Academies Press

(US); 2008. 2, Health Status and Health Care Service Utilization. Available from: https://www.ncbi.nlm.nih.gov/books/NBK215400/

38. van der Vlegel, M., Spronk, I., Oude Groeniger, J., Toet, H., Panneman, M. J. M., Polinder, S., & Haagsma, J. A. (2021). Health care utilization and health-related quality of life of injury patients: comparison of educational groups. *BMC Health Services Research*, *21*(1), 988. https://doi.org/10.1186/s12913-021-06913-3
39. Mirowsky, J., & Ross, C. E. (2003). Education, social status, and health. Aldine de Gruyter.
40. Ross, C. E., & Wu, C. (1995). The links between education and health. *American Sociological Review*, *60*(5), 719. https://ezproxy.uttyler.edu/login?url=https://www.proquest.com/scholarly-journals/links-between-education-health/docview/218816876/se-2
41. Jager, J., Putnick, D. L., & Bornstein, M. H. (2017). II. More than Just Convenient: The Scientific Merits of Homogeneous Convenience Samples. *Monographs of the Society for Research in Child Development*, *82*(2), 13–30. https://doi.org/10.1111/mono.12296