Mini Review

iMedPub Journals
www.imedpub.com

DOI: 10.36648/2572-5610.4.4.75

Insights in Biomedicine
ISSN 2572-5610

2020
Vol.5 No.3:11

Ethnic Disparities in Knowledge of COVID-19

Mikhail N* and Wali S

Department of Medicine, OLIVE-View-UCLA Medical Center, Sylmar, CA, USA

***Corresponding author:** Nasser Mikhail

nmikhail@dhs.lacounty.gov

Department of Medicine, OLIVE-View-UCLA Medical Center, Sylmar, CA, USA.

Tel: +1-818-3643205

Citation: Mikhail N, Wali S (2020) Ethnic Disparities in Knowledge of COVID-19. Insights Biomed Vol.5 No.3:11

Abstract

Background: Differences in extent of knowledge about coronavirus disease 2019 (COVID-19) caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) may contribute to ethnic disparities in morbidity and mortality of this disease.

Objective: To review the latest data that reflect ethnic differences in testing patterns, knowledge and practice measures with respect to COVID-19 in the USA.

Methods: Review of English literature by search of electronic databases: Pub/MEDLINE until July 24, 2020. Search terms included COVID-19, testing, knowledge, practice, beliefs, ethnicity, African Americans, Hispanics, and Asians. Retrospective studies, surveys, and pertinent reviews are included. Pre-print articles, not yet peer-reviewed, are also carefully reviewed.

Results: There are clear ethnic differences in COVID-19 regarding testing behavior. African American patients and Hispanics are more likely than Whites to be tested for COVID-19, and to have positive results. African American patients get tested for COVID-19 more frequently in the emergency department or as inpatients rather than in the ambulatory setting. Multiple surveys showed knowledge deficit regarding COVID-19 (e.g. fomite spread and main symptoms) among African Americans and Hispanics compared with Whites. However, African Americans and Hispanics may practice better measures for prevention of COVID-19 such as face masking and avoid large gatherings.

Conclusion: Correction of knowledge deficit related to COVID-19 among African Americans and Hispanics should be urgently addressed as it may contribute to excess burden of this disease among all ethnic/racial groups.

Keywords: COVID-19; Testing; Knowledge; Prevention; Ethnicity; African Americans; Hispanics; Asians

Received: July 10, 2020; **Accepted:** July 24, 2020; **Published:** July 31, 2020

Introduction

Ethnic minorities are disproportionately affected by COVID-19. The reasons for these disparities were discussed in many reviews [1-3]. Overall, ethnic minority groups have high burden of co-morbidities (diabetes, obesity, cardiovascular diseases, asthma), unfavorable socioeconomic factors, and structural racism [1-3]. Another problem that may contribute to ethnic disparities in prevalence, morbidity and mortality due to COVID-19 may be the extent of awareness and knowledge about several aspects of this new disease such as testing, prevention, and symptoms. The purpose of this mini-review is to describe ethnic differences in the USA in testing patterns, knowledge, and practice measures related to COVID-19 based on data derived from studies and surveys that addressed this issue. Regarding the terminology of racial/ethnic group (e.g. Hispanics versus Latinos), we used the same terminology as it appears in the corresponding reference.

Literature Review

Ethnic disparities in testing

In a large study from the department of Veterans Affairs (VA) including close to 6 million veterans, testing rates were higher among Blacks (16.4/1000) and Hispanics (12.2/1000), than Whites (9.0/1000) [4]. The proportions of positive test followed the same pattern: 15.2% among Blacks, 11.7% among Hispanics, and 5.8% among Whites [4]. Likewise, an internet survey of 979 young sample (mean age 37 years, 47% women) showed the

© Under License of Creative Commons Attribution 3.0 License

highest frequency of testing among African Americans followed by Hispanics, then Whites, and finally Asians [5]. Indeed, the odds of African Americans getting tested was 2.49 (95% CI, 1.56-3.98) compared with Whites and 2.75 (95% CI, 1.18-6.39) compared with Asians [5]. The higher frequency of testing for COVID-19 among African Americans and Hispanics may due to over concern knowing that this disease disproportionately affects minorities. In support of this concept, the results of the survey conducted by Jones et al. showing that Black and Hispanic participants were more likely than Whites to suspect that they were infected with COVID-19 [6]. Interestingly, there is evidence that the location of testing may be affected by ethnicity. For instance, African Americans were less likely than other ethnic/racial groups to be tested as outpatients. Thus, in one study from Northern California, a smaller percentage of African Americans (29.9%) were tested in an ambulatory setting compared with Whites (56.0%), Asians (60.0%), and Hispanics (53.8%) [6]. On the other hand, the majority of black patients get testing in hospitals, either in the emergency department (37.8%) or as inpatients (32.3%) [6]. Likewise, in another study from Louisiana, percentage of black individuals who had testing in the emergency department was approximately double that of white patients, 65.3% vs 38.0% [7]. The latter observation suggests that minorities present to the hospitals at a late stage with more advanced disease. The reasons for the delay of African Americans in seeking medical care are not fully investigated. Possible factors include difficulty to access places of testing close to their neighborhood, mistrust of medical providers, and insufficient knowledge about COVID-19, as mentioned below.

Ethnic disparities in knowledge about COVID-19

One of the most consistent finding reported in different surveys conducted in the USA was the defective knowledge about COVID-19 among African Americans and Hispanics. Jones et al. conducted an internet survey between March 27-April 1st that included 1,435 participants (41% Whites, 38% Hispanics, 11% Blacks, 6% others) [8]. These investigators found higher proportions of Whites (30.7%) and Asians (25.0%) answered all 14 questions scale questions about COVID-19 as compared with only 19.7% of Hispanics and 15.8% of Blacks [8].

In a nationally representative survey conducted by internet, Alsan et al. evaluated knowledge about COVID-19 in 5,198 individuals (72% Whites, 16% Blacks, 12% Hispanics) [9]. Compared with white respondents, African American respondents were 9.4 percentage points (95% CI, -13.1 to -5.7) less likely, and Hispanic respondents were 8.4% less likely (95% CI, -8.9 to -0.77) to understand fomite spread of COVID-19 [9]. Moreover, African American respondents were 10.8 percentage points (95% CI, -14.1 to -7.5%) less likely than white respondents to know the main symptoms of COVID-19 [9].

Another survey that examined racial disparities in knowledge, attitudes, and practices related to COVID-19 was a telephone survey conducted by Alobuia et al. between March 11-15, 2020. This survey included a nationally representative sample of 1,216 individuals (64% Whites, 12% Blacks, 16% Hispanics, 8% Asians or multiracial) [10]. Again, non-White respondents had low knowledge about COVID-19 compared with White participants, 58% versus 30%, *P*<0.01), and low attitude scores (52% versus 27%, *P*<0.001). One of the earliest surveys was conducted by telephone in Chicago area during the beginning of the epidemic from March 13 through March 20 [11]. This survey, funded by National Institutes of Health Projects, included ethnically diverse 630 subjects (62.1% Whites, 32.3% Blacks), mean age 62 years) with at least one chronic medical condition [11]. Compared with Whites, black respondents were more likely to be not worried about getting coronavirus (risk ratio, 1.45, 95% CI, 1.07-1.98), and believed they were not likely to get sick from the coronavirus (risk ratio 1.99, 95% CI, 1.35-2.93) [11].

These latter results seem in contradiction with those of the VA study mentioned earlier showing increased frequency of testing for COVID-19 among African Americans [4]. Nevertheless, such discrepancy suggests that beliefs regarding COVID-19 may vary even within the same ethnic group.

Ethnic disparities in preventive measures of COVID-19

Face covering: Face covering proved very useful in prevention of infection by (SARS-CoV-2) [12]. Available data showed that Blacks and Hispanics may be compliant with face covering. Thus, Fisher et al. conducted 2 identical internet surveys 1 month apart on 2 different samples; approximately 500 persons each sample [13]. The first survey was conducted April 7-9 only few days after the release of the first national recommendation for use of cloth face coverings, and the second survey was conducted one month later during the period of May 11-13 [13]. In the first survey, the prevalence of use of cloth covering was reported by 77.3% of Hispanics, 74.4% of non-Hispanic Blacks, and by only 54.3% of Whites [13]. In the second survey, frequency of use increased further among Blacks from 74.4% to 82.3%, stayed almost unchanged among Hispanics from 77.3% to 76.2%, but markedly increased among Whites from 54.3% to 75.1% [13]. These data are in general agreement with another survey showing that African Americans and Asians more frequently wore a face mask compared with Whites, odds ratios 1.81 (95% CI, 1.26-2.59), and 2.47 (95% CI, 1.65-3.69), respectively [5].

Other practices for COVID-19 prevention

In the survey conducted by Alobuia et al. non-Whites participants (i.e. Blacks, Hispanics, Asians and multi-racial) were more likely than Whites to have high practice scores for disease prevention (e.g. avoid large gatherings, cancel travel plans) 81% versus 59%, *P*<0.001) [10]. In the survey conducted by Alsan et al. Hispanic respondents reported washing their hands in a 24-hour period more frequently than white respondents, 1.8 times more; 95% CI, 0.3 to 3.2 times, *P*=0.02) [9]. In addition, African American respondents were more likely than white respondents to leave the house frequently (0.93 times more, 95% CI, 0.5 to 1.4 times, *P*<0.001) [9].

Conclusion and Current Needs

Available data suggest that African Americans and Hispanics tend to get tested for COVID-19 and to practice preventive measures more frequently than Whites. There is strong evidence that there is inadequate and possibly inaccurate knowledge about COVID-19 among racial and ethnic minorities in the USA. Certainly, this knowledge deficit may potentially contribute to the delay in presentation of minorities to the hospitals to seek timely treatment with subsequent disproportionate hospitalizations and deaths. There is urgent need to reach ethnic minorities in their own neighborhood to promote education about COVID-19. The teaching materials should be delivered in a simple way and updated periodically as the pandemics evolve. In addition, ways of teaching should be tailored taking in account the background culture and language of each minority group. It is the time to take serious actions to remedy health inequities and eliminate any knowledge gaps related to COVID-19 among minorities in the USA health care system.

Conflict of Interest

The authors have no conflict of interest to disclose.

References

1 Wilder JM (2020) The disproportionate impact of COVID-19 on racial and ethnic minorities in the United States. Clin Infect Dis 71: 2-4.

2 Tai DBG, Shah A, Doubeni CA (2020) The disproportionate impact of COVID-19 on racial and ethnic minorities in the United States. Clin Infect Dis 71: 2-4.

3 Mikhail N, Wali S (2020) Inequalities in diabetes in the USA. Arch Diab Obes 2: 235-240.

4 Rentsch CT, Kidwai KF, Tate JP (2020) COVID-19 by race and ethnicity: A national cohort study of 6 million United States veterans.

5 Li S, Feng B, Liao W, Pan W (2020) Internet use, risk awareness, and demographic characteristics associated with engagement in preventive behaviors and testing: cross-sectional survey on COVID-19 in the United States. J Med Internet Res 22: e19782.

6 Azar KMJ, Shen Z, Romanelli RJ (2020) Disparities in outcomes among COVID-19 patients in a large health care system in California. Health Aff 39: 1253-1262.

7 Price-Haywood EG, Burton J, Fort D, Seoane L (2020) Hospitalization and mortality among black patients and white patients with COVID-19. N Engl J Med 382: 2534-2543.

8 Jones J, Sullivan PS, Sanchez TS (2020) Similarities and differences in COVID-19 awareness, concern, and symptoms by race and ethnicity in the United States: Cross sectional survey. J Med Internet Res 22: e20001.

9 Alsan M, Stantcheva S, Yang D, Cutler D (2020) Disparities in coronavirus 2019 reported incidence, knowledge and behavior among US adults. JAMA Netw Open 3: e2012403.

10 Alobuia WM, Dalva BNP, Forrester JD (2020) Racial disparities in knowledge, attitudes, and practices related to COVID-19 in the USA. J Public Health 42: 1-6.

11 Wolf MS, Serper M, Opsanick L (2020) Awareness, attitudes, and actions, related to COVID-19 among adults with chronic conditions at the onset of the US outbreak. A cross-sectional survey. Ann Intern Med 173: 100-109.

12 Chu DK, Akl EA, Duda S (2020) Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: A systematic review and meta-analysis. Lancet 395: 1973-1987.

13 Fisher KA, Barile JP, Guerin RJ (2020) Factors associated with cloth face covering use among adults during the COVID-19 pandemic–United States, April and May 2020. MMWR 69: 933-937.

© Under License of Creative Commons Attribution 3.0 License