Fall December 2, 2021

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Margaret Harris
Angela Ekwonye, *St. Catherine University*
Leso Munala
Heather Buesseler
Mary O. Hearst

Original Research

Journal of Primary Care & Community Health
Volume 12: 1–7

DOI: 10.1177/21501327211056595
journals.sagepub.com/home/jpc
SAGE

Exploring Knowledge, Prevention Methods, and Prevention Barriers of COVID-19 Among Somali, Karen, and Latinx Community Members in Minneapolis, Minnesota, USA

Margaret Harris[1], Angela Ekwonye[1], Leso Munala[1], Heather Buesseler[1], and Mary O. Hearst[1]

Abstract

Background: As the COVID-19 pandemic has unfolded, understanding the virus and necessary measures to prevent infection have evolved. While effective preventative measures for COVID-19 have been identified, there are also identifiable barriers to implementation. **Objective:** Explore the access to information, knowledge, and prevention methods and barriers of COVID-19 among Somali, Karen, and Latinx immigrant community members in Minneapolis, Minnesota, USA through analysis of in-depth interviews. **Methods:** Data were collected through 32 interviews via phone, video conference on a computer, or in-person with Somali, Karen, and Latinx adults to understand the experiences during the COVID-19 pandemic in each group's native language. All participants were over the age of 18, and identified as Somali, Karen, and Latinx refugee or immigrant. Interview protocol contained 9 main questions including probes. Data were analyzed through use of the qualitative analysis software, Atlas.ti using phenomenology. **Results:** A total of 32 adults were interviewed (Somali = 12, Karen = 10, and Latinx = 10). One-third were in person and the remainder were remote. The average age recorded was 37 years (range 20-66 years), 43.8% males and 56.3% females. Somali, Karen, and Latinx respondents consistently had accurate knowledge about COVID-19 and were attentive to finding trustworthy information. Information was available in Somali, Karen, and Latinx written language, although Karen elders who are not literate would benefit more from video messaging. Knowledge of preventive measures was consistent; however, barriers included access, working in front-line positions, and living in high density housing. **Conclusion:** Exploring the impact of COVID-19 on Somali, Karen, and Latinx community members in Minneapolis, MN is advantageous in removing identified barriers and disparities in health. The results of this study highlight the need for increased efforts to address barriers in the prevention of COVID-19, as well as future pandemics for immigrant and refugee populations.

Keywords

COVID-19, prevention, barriers, impact, immigrants, refugees, pandemic

Dates received: 27 August 2021; revised: 11 October 2021; accepted: 12 October 2021.

Introduction

As the COVID-19 pandemic has unfolded, inequities in disease risk and burden has been higher among populations of color. Specifically, among immigrant and refugee populations of color, communities, there is added uncertainty in the manner in which they received information and were able to engage in prevention activities because of language barriers, employment and housing conditions, and access prevention measures (citations). The purpose of this study was to conduct in-depth interviews of Karen (Burmese refugees), Latinx (non-binary language), and Somali immigrant to understand the participant knowledge and sources

[1]St. Catherine University, St. Paul, MN, USA

Corresponding Author:
Mary O. Hearst, St. Catherine University, 2004 Randolph Avenue, St. Paul, MN 55105, USA.
Email: mohearst@stkate.edu

of knowledge about COVID-19, prevention approaches and barriers to COVID-19 prevention. This manuscript will present the findings from a phenomenological analysis and present recommended next steps.

Background

One of the striking features emerging from the Coronavirus disease (COVID-19) pandemic was the early recognition of inequities for populations of color in vulnerability to contracting the disease and increased likelihood of death due to COVID-19.[1] The causes of this inequity are complex, ranging from a history of mistrust of the medical institution,[2] reduced access to health care services,[3] housing and employment conditions,[4-7] and greater likelihood of preexisting conditions,[6] all stemming from systemic racism.[8] Specifically, among immigrant and refugee populations of color communities, there is added uncertainty in the manner in which they received information and were able to engage in prevention activities because of language barriers, employment and housing conditions, and access prevention measures.[9] COVID-19 is an infectious disease caused by SARS-CoV-2,[10] which spreads from person to person primarily through respiratory droplets.[11] The rates of COVID-19 incidence and mortality varied widely in Minnesota, USA and nationally.[12] As of July 21, 2021, the Minnesota age-adjusted case incidence rates per 100 000 population of COVID-19 infection were 7742 among Asians; 11 821 among Black, and 17 867 among Latinx, compared to 8519 among whites.[5] Mortality rates due to COVID-19 were over twice as high among Black, Asian, and Latinx communities compared to whites.[5,12] Within each of the categories is vast heterogeneity, yet data is not available for subpopulations such as Somali immigrants, Karen (Burmese refugees), and Latinx (non-binary term) sub-populations.

COVID-19 is most easily spread in crowded places, close-contact settings, and confined and enclosed spaces with poor ventilation.[10] The Centers for Disease Control and Prevention (CDC) recommended prevention measures, including maintaining a distance of 6 ft from others, cover one's nose and mouth with a mask when around others, frequently wash hands with soap and water, avoid crowded indoor spaces, stay home and isolate when others are sick, and routinely clean and disinfect frequently touched surfaces.[13]

Yet, a higher proportion of immigrants and refugees live and work in situations that limit their ability to implement these prevention measures.[5] In fact, 2 of the most common theories for the disproportionate burden of disease for populations of color include the differences in pre-existing chronic disease conditions and the ability to engage in social distancing.[6] The pre-existing chronic disease conditions arise from inequities in exposure to the social determinants of health, including working conditions, unemployment, access to essential goods and services, housing, and access to healthcare.[4] The ability to engage in social distancing is predicated on one's living and working conditions. Populations of color are more likely to live in crowded, urban environments, and be employed in public-facing occupations that have been deemed 'essential' whereby social distancing has been rendered more difficult or even impossible.[7] Among the immigrant and refugee communities, there is the further barrier of language and cultural practices that may impact knowledge of and exposure to COVID-19.

The purpose of this paper is to add to the existing information of inequities in COVID-19 knowledge, practices, and barriers for populations of color, specifically 3 immigrant and refugee populations living in the Minneapolis/St. Paul Metropolitan Area. The 3 communities are Somali, Karen, and Latinx immigrants. The findings will provide insight into some of the causes of health inequities observed and inform community and government leadership on strategies for the future.

Methods

Purposive and snowball sampling was chosen to recruit adults from the Somali, Karen, and Latinx refugee and immigrant groups for this cross-sectional descriptive study conducted in September and October, 2020. Participants were approached by trained interviewers from the respective group with proficiency in English and Somali, Karen languages or Spanish in collaboration with local health facilities, religious institutions, culturally specific organizations and other personal contacts. Participants could refer the interviewer to another potential contact. Only 1 member per household was interviewed. Recruitment efforts aimed to include both men and women, and to include young adults, middle aged adults, and older adults.

Interviewers were trained in conducting in-depth interviews over 3 sessions. The full interviews included 9 questions with prompts. An interview guide was developed to support the interviewers with procedures and suggested prompts for each question. For this analysis, interviewers asked about the participants' experience in the previous 4 to 6 months on the following topics: (a) Knowledge of COVID-19; (b) Sources utilized for information on COVID-19; (c) COVID-19 prevention measures; (d) COVID-19 prevention barriers; (e) Risk surrounding infection by COVID-19; and (f) Shelter-in-place experience.

Each participant was read the study description, asked questions and then consented to participate in the interview. Each participant was offered a $50 gift card for completing the interview. Interviews were conducted over the phone, by video conference on a computer, or in person, practicing COVID-19 precautions, and recorded using a digital device with permission. Interviews were translated as needed and

transcribed. Each interview lasted between 30 and 60 min. The St. Catherine University Institutional Review Board approved this research.

Data Analysis

Transcribed and translated interviews were analyzed using qualitative data analysis software (Atlas.ti). Colaizzi's[14] descriptive phenomenological method was utilized in in an exhaustive description exploring the knowledge, prevention methods, and prevention barriers of COVID-19 among Somali, Karen, and Latinx community members. Descriptive phenomenology has been utilized to understand the experiences of individuals in a particular context.[15-18] The emphasis in this type of phenomenology is in describing universal beliefs and views of a person as a representative of the world in which they live.[19] The analysis of the transcripts was initiated as the transcription of each interview is concluded in order to incorporate insights from earlier interviews to the ongoing data collection.

After all transcripts were read, a coding scheme was developed. The transcripts were then coded and the data was reconstructed into themes and patterns. The identified themes and patterns were further interpreted and the findings were checked with the interviewers. For each question, a disaggregated analysis by immigrant/refugee sub-group was done to ascertain unique experiences reported. The following codes were identified: COVID stressors, COVID info, COVID perceptions, prevention measures, and prevention barriers. Reports were created and were analyzed for trends, patterns, occurrences of codes, and emerging themes. Creation of memos for each report to further explore and summarize the findings for each code across the transcripts were completed.

Results

A total of 32 participants were interviewed for this analysis (Somali = 12, Karen = 10, Latinx = 10). One-third of the interviews (n = 8) were conducted in-person and the remainder were conducted remotely. The average age recorded was 37 years (range 20-66 years). There were 14 (43.8%) males and 18 (56.3%) females interviewed.

Participants shared where they received their information (Information Channels) and how they judged whether or not the information was accurate (Trustworthiness of Sources). Participants also shared the availability of the information in their native language (Language) and their general understanding of COVID-19 (Knowledge). Based on the information that was received, participants described prevention measures (Prevention Methods) and barriers that exist to their ability to prevent spreading or contracting COVID-19 (Barriers to Optimal Prevention).

Information Channels

Identified channels of information on COVID-19 were via the internet and social media sites including Facebook, Twitter, and Instagram. Other common sources of information were from their workplace, community experts, including governmental and non-governmental organizations, professors at school, and media from their country of origin.

> *"However, social media has been really helpful during this time. . ." [SOM_11]*

> *"Sometimes, I hear about it from my professors when I speak with them. Sometimes, I watch it on the media such as CNN and CDC." [KAR_08]*

> *"I am from Mexico so sometimes I look in the news from Mexico to see what information they have over there and it is different from the one here and the United States." [LAT_09]*

Trustworthiness of Sources

It was acknowledged that information obtained from internet sources and social media portals needed to be from trustworthy organizations. Trustworthy sources included the WHO, CDC, and the MN Department of Health, while trustworthy experts included Dr. Fauci and those from the Governor's office.

> *"If the mayor or the governor of the state says something, then obviously those announcements I pay attention to." [SOM_11]*

> *"[The] CDC and then the World Health Organization, they . . . have like professional workers. . .in the public health field and they . . . [do] a lot of research related to COVID so they are knowledgeable. So that's why I trust them." [KAR_06]*

Several participants also spoke about non-trustworthy sources or when to be careful or limit social media. It was agreed that it is important to verify information by using official websites, comparing and contrasting messages, and completing your own research.

> *"You can't just believe everything. Especially on social media." [KAR_09]*

> *"I see this information on Facebook. I don't know if that's trustworthy or not. I don't believe it is true but it is the only information I have." [LAT_05]*

Language

Among most participants, it was expressed that there was accessibility to information on COVID-19 in their native

language. However, among the Karen participants, it was shared that readily available information on COVID-19 in Karen across various channels would be helpful for Karen elders because the elders are not all literate in English or their native language.

"[Karen elder] education is not that much and they don't believe me. . . . they should also teach them with pictures and other things. They should also teach them in Karen so they can understand. "[KAR_01]

"Both languages. If anyone wanted to receive training in Somali, they were trained in Somali language. . ." [SOM_01]

Knowledge

Many participants accurately described the most common symptoms of COVID-19, which included fever, congestion, loss of smell and taste, and a cough while recognizing that symptoms varied and pre-existing conditions put you at a higher risk of complications. The method of transmission was consistently stated as airborne, but some participants noted the method of transmission seemed to have changed over time.

But the symptoms . . . varies from person to person. Some people [did not] have any symptoms at all. . .a carrier of the disease and while others just have a headache or . . .not able to smell or taste but while others. . .have to go to ICU. . . [KAR_09]

And if you have underlying medical conditions like diabetes or like, asthma or what have you any breathing issues or if you're a certain age demographic, you pose a higher risk [SOM_11]

Prevention Method

Messages around prevention behaviors were consistent among all participants, which included social distance, washing hands, and wearing a mask. Several spoke of implementing additional hygiene measures, such as changing clothes or showering after coming home from work or public encounters, more frequent clothes washing, wiping down surfaces, like their phones and cars and avoiding door handles. Still others changed their purchasing behaviors, such as using online food delivery services, to avoid going to public places.

". . .washing your hands is actually like the most important part. . ." [KAR_06]

"we're dealing with a pandemic that requires social distancing and self-quarantining." [SOM_01]

"when I go home I take off all my clothes and shower to make sure I am safe" [LAT_06]

Barriers to Optimal Prevention

Two barriers to successfully implementing preventative measures included participant's living situation and encounters with others in a public setting. Karen and Somali participants described the fear of infection and transmission due to large, multi-generational households. Participants expressed fear surrounding infection from other family members who were leaving the household for work or travel, concern for older and higher risk family members, as well as ability to properly quarantine/isolate at home due to limited space/financial flexibility for those not infected to stay elsewhere.

"Over the summer, I was at home with my family, and there are 11 people in the house. I was very stressed out during the summer just thinking about it because I know that my dad always goes to work, and if one person brings it back to my family, my mom and grandma will be at risk." [KAR_05]

"Sometimes it's hard to avoid getting the virus especially when one of the family members has the disease and everyone is in the same house using the same toilet. . . .also quarantining inside the house is some of the things that make it difficult." [SOM_01]

Participants discussed the difficulty in maintaining the recommended 6 ft. distance from others in highly trafficked public areas, such as grocery stores and public transport and prevention in the workplace. Some participants shared concerns of safety in the workplace.

"And it is even difficult because when it comes to grocery stores, there's no 6feet social distance in every area." [KAR_04]

"Now everybody's kind of becoming lax about it. . . I see people not wearing masks or they're walking around with their masks down." [SOM_05]

"Well my job that I have make me very vulnerable I work with homeless and they have been in contact with all their people probably been exposed." [LAT_04]

Participants shared that preventative measures in the workplace were similar to what was being suggested among the general population and are more rigorously enforced, including mandatory temperature checks, providing gloves, and testing. Some employers used virtual engagements with clients or additional cleaning measures after meeting with clients. Participants were largely "essential workers," employed in places including health facilities, warehouses, group homes, grocery stores, schools, and restaurants.

"However, at my work since the beginning of the pandemic they have set strict rules, such as . . . weekly tests as well as

you can't enter the building without wearing a mask. Additionally, your temperature will also be checked to see if you have a fever. Therefore, then I hear some of the workers that are sent home, are told that they have a fever or if they test positive they are told to stay home for two-weeks." [SOM_09]

Lack of resources such as masks, disinfectant, and hand sanitizer were cited as a barrier to successfully carrying out COVID-19 preventative behaviors. It was shared that at the start of the pandemic, lack of access to supplies was the primary issue, whereas now it is the financial burden of participants to purchase masks, disinfectant, and sanitizer.

"When I think about my students. . .families that can't really afford those necessities. . . I can't tell them to take these precautions and measurements if they don't have the means to do" [SOM_12]

"although is very expensive this is spending money and disinfecting supplies and masks" [LAT_01]

Discussion

This paper presents findings from interviews with Somali, Karen, and Latinx community members in Minneapolis/St. Paul Metropolitan Area, MN and the participants' knowledge and practices related to COVID-19. The study found that the Somali, Karen, and Latinx participants received their information on COVID-19 from the internet and social media with a keen awareness of the trustworthiness of the source. The participants consistently and accurately described the symptoms of COVID-19 and the recommended strategies to prevent the spread of the virus to others.

Participants reported that their workplaces practiced strong COVID-19 prevention measures, including testing. The challenges to COVID-19 knowledge and prevention included Karen elders lack of literacy in English or native language; household crowding resulting in limited social distance options, in particular when essential workers are traveling between the house and work; and availability of supplies (early pandemic) and cost (mid-pandemic). While research has been done on the relationship between COVID-19 and racial/ethnic disparities, through the shared experiences of Somali, Karen, and Latinx community members in Minneapolis, MN, additional understanding of the experiences of immigrants and refugees during COVID-19 have been identified.

Behavior surrounding COVID-19 begins with understanding of COVID-19. Within this study, participants' knowledge of COVID-19, as well as sources and channels utilized to self-educate on COVID-19 were explored. While participants shared that there was accessibility to information on COVID-19 in their native language, participants noted the importance of information that is reliable and trustworthy. Misinformation has become rampant in social and network media[20] and researchers are calling for an increased effort to combat misinformation and publicity be given to relevant research findings.[21] Social media is an important source of information and provides a platform for both trustworthy and misinformation.[22] In the current study, social media was noted as a vital source of information. Participants recommended that, particularly among the Karen elderly, alternative modes of delivery through social media, such as videos in the Karen language, will improve their access to timely and relevant information. Native language literacy should not be assumed when disseminating information to immigrant communities.[23] There appears to be consistency in where the participants in this study sought information compared to other literature on the topic.[24]

Research has demonstrated that the most effective strategy to prevent infection by COVID-19 is social distancing.[25] The ability to socially distance while working from home and telecommuting are issues of privilege.[26] As noted in the interviews, social distancing does not accommodate high occupancy housing or essential workers who are continuing to work in the community and risking transmission back at home. Immigrants are more likely to live in large, multigenerational family groups or with multiple roommates with higher potential for infection and transmission. Nearly 29% of Asian, 27% of Hispanic, and 26% of Black Americans live in multigenerational households, a practice that is particularly common in those who are foreign-born.[27] While there is limited research that has explored multigenerational households and the relationship to COVID-19 mortality, a study conducted in the U.K. found that adults over the age of 65 years living in multi-generational homes who were from an ethnic minority group, with the exception of Chinese, were at greater risk of COVID-19-related death than those from the white population.[28]

Furthermore, persons of color and people living in low-income households are more likely to work in industries that have remained open during nonessential business closures.[29] About 70% of refugees and 78% of Black refugees are essential workers.[30] Additionally, in all but 8 US states, the foreign-born share of the essential workforce equals or exceeds that of all foreign-born workers, indicating that immigrant essential workers are disproportionately represented in the labor force.[30] These estimates do not include U.S.-born children of these immigrants.[31] More than 1 in 10 workers in Minnesota is an immigrant, together making up a vital part of the state's labor force in a range of industries.[32] Moreover, across the U.S., fewer than one-third of workers can do their jobs from home, putting the rest of the labor force at higher risk of COVID-19 and underscoring the critical role of workplace safety in preventing spread.[33] Participants in this study indicated that they and their family members worked as essential works and their employers were providing personal protective equipment and

other workplace safety measures. Two repeated challenges were that many people lived-in high-density households which increased the risk of people going to and from work with no option to social distance in the home. This challenge of high-density households, and multi-generational households, has been previously noted causing increased exposure risk and limits the ability for quarantining within a family.[29]

Thus, consider the aggregate of a higher burden of at-risk comorbidities, the pernicious effects of adverse social determinants of health, and the absence of privilege that does not allow a reprieve from work without dire consequences for a person's sustenance, does not allow safe practices, and does not allow for 6-ft distancing.[26] The CDC has made recommendations to combat this issue of privilege and known barriers in the prevention of COVID-19.[34,35] It has been recommended that state, tribal, local, and territorial governments have suggested that access to hotels for self-quarantine and isolation be provided, explore options to provide free or low-cost internet as means for telehealth, protect renters from eviction, expanding childcare service options, and increase public transportation services to reduce crowding.[34,35] Understanding the barriers to implementing preventative measures not only for COVID-19, but for all disease and illnesses, are beneficial in the promotion of health equity and address the social determinants of health. Studies are needed to understand the influence of state and local mitigation policies on differences in health services utilization and health outcomes, the role of community-level protective factors and interventions in mitigating the adverse consequences of the sector disruptions caused by the outbreak, the influence of COVID-19-related racism and other types of discrimination, and the role of social determinants of health in influencing preventive health behaviors.[7]

Limitations

This study has several limitations. First, the sample size is small and not randomly selected, thus responses cannot be considered representative of the larger population. Unique interviewers were used for each population to represent each culture and language; therefore, the interview quality may have varied between interviewers resulting in a different depth of content. Knowledge and reality are socially constructed; therefore, our findings are one of many possible interpretations of how participants experienced COVID-19. To protect against interpretation bias, summaries of the analysis were shared with the interviewees to verify the content was consistent and meaning present.

Disparities exist when looking at all diseases; however, this pandemic has once again brought issues of inequity and resource scarcity to the forefront.[36]

The intricacies of poverty, limited access to healthcare, limited English language and cultural proficiency, and fear of legal repercussions place immigrant and refugee communities within the US at high risk for acquiring SARS-CoV-2 and developing severe COVID-19.[37] The findings of this study suggest a need to attend to the unique needs of immigrant and refugee populations including access to information in multiple formats and languages, attentive to literacy particularly the elders and to be attentive to options for work and housing situations. Importantly, an examination of the structural bias that place populations of color at a disadvantage and at higher risk. Further research and resources must be directed toward broader understanding of the impact faced by immigrant and refugee populations as well as strategies to reduce barriers now and in the future.

Author Contributions

Conception of study idea: MH and HB; Design: MH, HB, LM, AE, and EK; Data collection: EK and HI; Data analysis: MH and HB; Manuscript idea: MH, MH, and HB; Manuscript preparation: MH, MH, HB, LM, AE, EK, and HI

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: GHR Innovative Scholars program and Academic Professional Development Committee funding through St. Catherine University.

ORCID iD

Mary O. Hearst https://orcid.org/0000-0002-9068-827X

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