Abstract

Difficulties of the hearing impaired have increased due to COVID-19, leading to lack of inclusiveness along with the breakdown of their mental, physical, and social health. The study objective was to assess the challenges faced by the deaf and hearing-impaired people during COVID-19 by a literature review. Literature search was done using keywords such as “challenges” OR “barriers” and “COVID-19” OR “Deaf” OR “Hearing Impaired” OR “Communication” on PubMed and Google Scholar from November 2019 to June 2020. The challenges faced were lack of information, face mask making communication difficult, social distancing affecting their physical, mental health, stigma and barriers related to the health-care system. Strategies included use of technology, help from sign language instructors, and preparedness of health-care settings for the hearing disabled. System strengthening, telemedicine, and policy amendments can be the pillars to build up the support system for the hearing impaired to protect them from COVID-19.

Keywords: Challenges, COVID-19, hearing impaired

Introduction

The difficulties of the 466 million deaf and hearing-impaired persons in the world to adjust as per their needs have now increased due to the overwhelming COVID-19 pandemic.[1] They face a dual struggle to accommodate themselves in the world designed around hearing, compounded by COVID-19, leading to lack of inclusiveness along with breakdown of their mental, physical, and social health.

Disabling hearing loss refers to hearing loss >40 decibels (dB) in better hearing ear in adults and hearing loss >30 dB in better hearing ear in children. People who are hard of hearing usually communicate through spoken or sign language, and can benefit from assistive devices such as hearing aids, cochlear implants, and technology such as captioning, m-health, and loop system.[1,2,3]

This review was done to find out the challenges faced by the deaf and hearing-impaired people during the COVID-19 pandemic. It also highlights strategies which should be undertaken to make these deaf and hearing-impaired more inclusive in the currently masked world of COVID-19.

Methods

The literature was searched using the following keywords: “challenges” OR “barriers” AND “COVID-19” OR “Deaf” OR “Hearing Impaired” OR “sign language” OR “Mask” OR “Communication” on PubMed and Google Scholar from November 2019 to June 2020. Open-access national and international health agency websites were searched for relevant information related to statistical data of hearing disability, hearing aids, and the COVID-19 pandemic. These websites include World Health Organization, Lancet Commission to address the global burden of hearing loss, Ministry of Health and Family Welfare, and the Department of Empowerment of Persons with Disabilities in the Ministry of Social Justice and Empowerment.

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RESULTS
Challenges and strategies for addressal of the hearing impaired during the COVID pandemic

Lack of information

Hearing impaired and deaf persons are deprived of accurate and reliable information on COVID-19 due to lack of availability of sign language specialists during lockdown and inability to comprehend lip reading due to masks in direct communication. The public should be aware of recognition, reporting, and containment of COVID-19 to bring the pandemic under control.

Lack of proper sign language

A universal signing vocabulary does not exist for the new SARS-CoV-2 virus. Sign language is the first language understood by the deaf community. As per different levels of understanding, written language does not convey information and can perpetuate misinformation leading to misguided actions.\[4\] Fifteen or more different sign languages, without scientific validity, are currently used to explain novel coronavirus in COVID-19-affected countries. During the COVID-19 era, touching the face and the mouth is discouraged to prevent the transmission of coronavirus. Due to this, the essence of sign language is lost, missing important information.\[4\] The general population dealing with the deaf community is unaware of the sign language except for few close contacts and instructors. The frontline warriors providing essential services do not have time to learn a new language for helping the deaf community.\[5,6\]

Sign language interpreters, familiar with the new vocabulary for the SARS-CoV-2 virus, should be there at all press releases and official government announcements regarding the pandemic. This will help the deaf and hearing-impaired population to understand the current scenario of the pandemic and preventive measures against the disease.

The sign language interpreter at press conferences is often the only person without a face covering because he/she uses his/her lips and facial expression when signing for the deaf and the hard-of-hearing community.\[7,8,9,10,11\] It is recommended that a transparent screen may be provisioned for ensuring safety and providing unobstructed view to the hearing impaired to facilitate understanding of lip reading.

Deaf leaders and skilled interpreters approved by the deaf community can work together to provide “live interpretations” of news on their personal social media platforms.\[12,13,14\]

Lack of communication with deaf children at home

In the Indian setting, deaf children from residential deaf schools were sent home due to the lockdown amid the COVID-19 pandemic. Majority of the parents are unable to fully communicate with their deaf children because they are not fluent in sign language. It is likely that these children are experiencing confusion, anxiety, and depression due to the coronavirus scare and the absence of familiar environment due to the lockdown.\[12\]

Appropriate arrangements should be made for deaf instructors and sign language interpreters in schools who can conduct sign language classes on weekends for parents. They can provide guidance to the children’s parents and children on how they could be prepared mentally and emotionally to deal with the pandemic. This can help the deaf students to continue the study at home. Instructors can train parents for using additional visual resources with their deaf children such as reading storybooks or doing hands-on activities using sign language.\[13\]

Facemask – a challenge for communication

The new norm in the COVID-19 pandemic is wearing facemasks to prevent disease transmission. As a result of this preventive measure, the deaf and hearing-impaired people feel excluded from the world. Deaf people who rely on sign language still need facial expressions for full understanding of what is being communicated, and those with hearing aids or cochlear implants during rehabilitation rely on lip reading to better understand what is being heard. Anyone with hearing impairment will have difficulty with muffled speech due to facemask.\[14\] Thus, covering of face by mask can cut down on the ability to connect, especially with the hearing-impaired or deaf community.\[7,8,9\]

Facial masks worn by essential service workers, health functionaries, and public service providers pose a barrier for the hearing impaired in getting essential services such as groceries, health care, and essential public services.\[15\]

People should be made aware of the availability of surgical masks with see-through window panel showing the wearer’s mouth. Innovations are being provided through YouTube channels to create do-it-yourself masks with clear windows. These masks should be monitored for cost-effectiveness by the government.\[15\]

Social distancing – a barrier for physical and mental health

The 6-feet recommendation for physical distancing during the pandemic poses a problem for the hard-to-hear population due to inaudible voice, resulting in social isolation and mental health implications.

The deaf and hearing impaired may not understand the verbal communication by the next person and hence may not reply to them, thereby creating a feeling of social isolation.\[5\] A companion or a family member, familiar with the sign language, should be there as much as possible who will help in required situations to act as a mediator.

Mental health counselors should provide online mental health counseling along with captions and without mask for lip reading by the deaf and hearing impaired patients.

To avoid confusion on telephonic conversations due to hearing impaired and deaf persons used to schedule necessary appointments, shop for grocery and attend important meetings in person to avoid confusion through telephonic conversations due to hearing impairment. However, due to the lockdown and
social distancing in the COVID-19 era, all activities need to be
done through phones or online, which is affecting the social,
mental, and work profiles of the deaf and hearing impaired.[5,8]

**Stigma and discrimination as a barrier**

Hearing-impaired individuals are often isolated on the grounds
of old age, lack of hearing, hearing aid use, and sign language.
They are unable to participate in conversations due to stigma,
making them feel lonely, unexpressed, and socially marginalized.
This results in chronic stress and depression.[16,17] During the
pandemic, lack of information, using face mask, and inaccessible
health care for the hearing impaired can add on to the preexisting
stress, making their mental health more vulnerable.

**Barriers related to health-care system**

Hearing-impaired and deaf population face challenge due
to lack of consultation with health-care providers, including
testing for hearing as facilities are overwhelmed with
COVID-19 and other emergency conditions, which leads to
least priority given to the problems of addressing the hearing
impaired. Further, there are restrictions on getting an interpreter
or a family member to accompany them to health facility due
to the lockdown measures. All these can lead to confusion and
stress on the hearing impaired.

Assistive devices used by the deaf and hearing-impaired need
constant maintenance. Many people who wear hearing aids
have damaged their devices or lost them because most masks
are worn behind the ears.[17,8] The lack of availability of services
for fitting and maintaining these devices and lack of batteries
are preexisting barriers in many low-income settings.[13] Due to
the stringent lockdown imposed during the COVID pandemic,
these services are shut, causing extreme inconvenience to the
users.

Donning and doffing for personal protective equipment (PPE)
kits worn by health-care workers has standard protocols,
which makes it difficult for health-care workers to doff the
PPE for communication to address the problems of the hearing
impaired. The long waiting hours in health-care facilities
dissuade the hearing-impaired from seeking consultations.[6]

**Policy implications**

The government should come up with guidelines for
communication with the health-care workers during the
COVID-19 pandemic. A list of COVID-19 resources that are
available for deaf and hearing-impaired individuals should
be provided including linkage to health-care facilities for
emergency consultations.[9]

Videos regarding basic information, signs, symptoms,
preventive and control measures of COVID-19 at home
should be published in sign language by the government for
hearing-impaired and deaf population.[18,19]

A COVID-19 hotline should be started for the deaf community
by telephonic and user-friendly links on the Internet for
obtaining appropriate and timely information from health-care
workers.[9]

There has been no preparation to provide accessible services to
deaf patients in hospitals or during doctor visits. Deaf leaders
and interpreters have to work together to create a community
list of interpreters who are willing to volunteer their interpreting
services. Through this effort, the interpreters can interpret video
calls between medical staff and deaf consumers.[5]

The global production of hearing aids meets <10% of the global
need and <3% of developing countries’ needs.[1] Efforts should
be made by national governments in increasing the production
and maintenance of assistive devices. Governments along
with welfare associations should work upon to start some
centers for pickup and repairs during the lockdown due to the
pandemic so that the deaf community can have their device
in working order.[4]

Newer innovations such as video conferencing, an interface
to connect people through the Internet along with m-health,
are emerging as potential measures for communication
and these have to be tailored to the needs of the hearing
impaired. Captioning services are often lacking during video
meetings which need to be incorporated as an integral part of
communication.

Use of technology where an operator transcribes the calls or
texts of the hearing impaired can help them to communicate
with the outer world.[5,6]

In 2017, the 70th World Health Assembly adopted a resolution
on the prevention of deafness and hearing loss. This resolution
calls upon the Member States to integrate strategies for ear and
hearing care within the framework of their primary health-care
systems, under the umbrella of universal health coverage.[20,21]
This resolution can serve as a platform during the pandemic
for the reforms related to deaf and hearing-impaired people.

**Conclusion**

Compassion, empowerment, and inclusiveness are the need of
the hour in these times. In this pandemic, system strengthening,
tele-medicine, policy amendments, and capacity building can
be the pillars to build up the support system for the deaf
and hearing impaired to protect them from COVID-19. Now the
time has come to tie up technology, humanity, health, and the
hearing disabled together to combat the COVID-19 pandemic.

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There are no conflicts of interest.

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