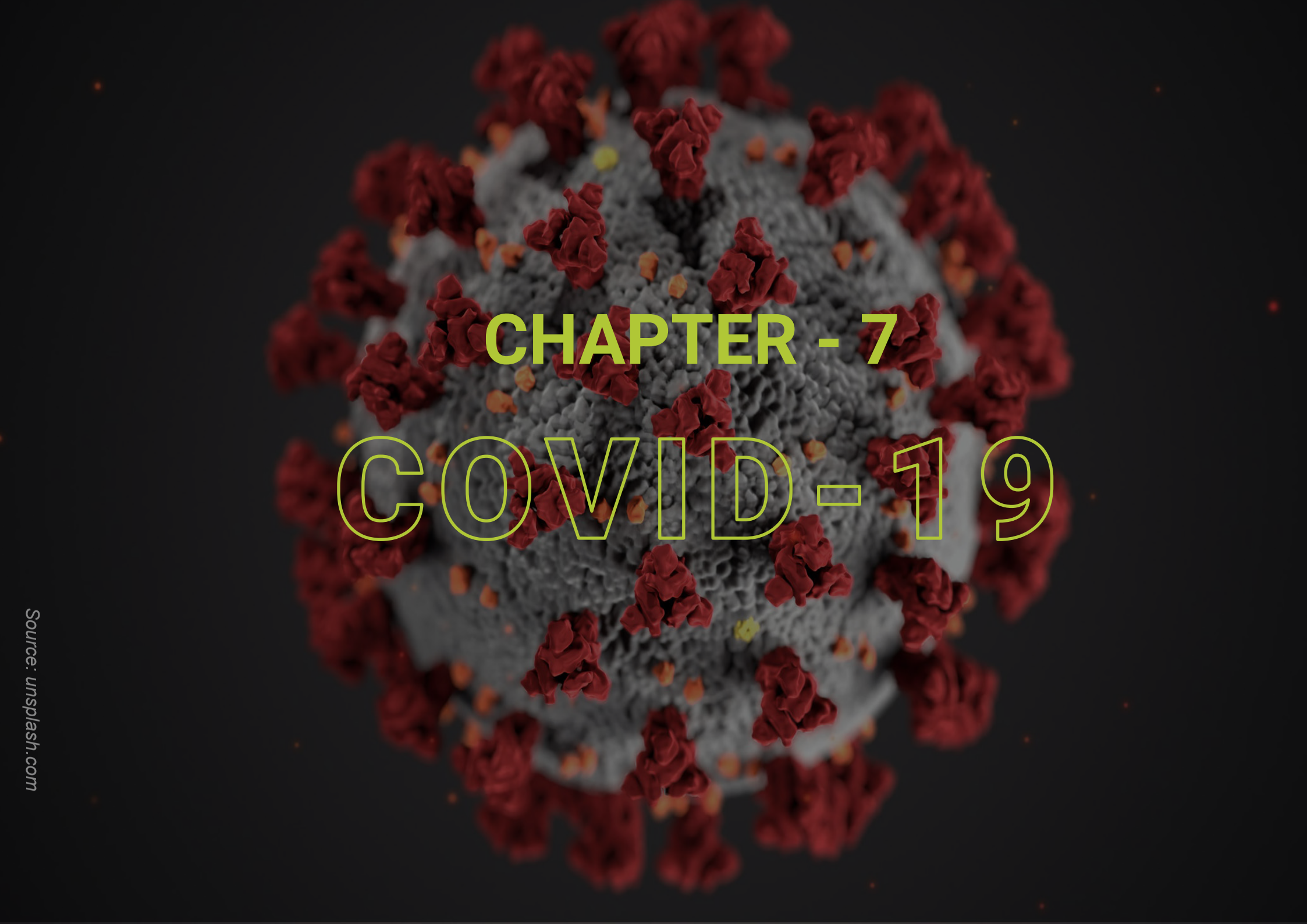


CHAPTER - 7

COVID-19

Source: unsplash.com

7.1. Literature Review

Coronavirus refers to a large family of viruses known to affect birds and mammals, including humans (Desk, Home: WHO | Coronavirus (COVID-19) Disease, n.d.)[90]. The recent disease, COVID-19, that first appeared in China in December 2019, is caused by a type of coronavirus. There are hundreds of coronaviruses but only seven are known to affect human beings. Four out of the seven (229E, NL63, OC43, HKU1) are known to only cause mild cold or flu-like symptoms. The remaining three coronaviruses pose serious risks to humans.

Currently, SARS-CoV-2 has caused a global pandemic affecting most countries in the world. The transmission occurs predominantly from human contact, or one who has contracted the virus through small droplets from the infected person's nose or mouth. In this context, it has been recommended to maintain at least one-metre distance between individuals. The most common symptoms include fever, dry cough, and tiredness[90]. Less common symptoms include pains, nasal congestion, headache, conjunctivitis, sore throat, diarrhoea, loss of taste or smell, or a rash on skin or discolouration of fingers or toes. Most people (about 80%) recover from the disease without needing hospital treatment. Around one of five people who gets COVID-19 becomes seriously ill and develops difficulty breathing. Older people and those with inherent medical problems like high blood pressure, heart and lung problems, diabetes, or cancer are at higher risk of developing serious illness.

While pandemics are not a novel phenomenon, COVID-19 is the first pandemic in history where social media and technology have been leveraged to connect, inform, and engage people. The simultaneous spread of the pandemic along with the infodemic has caused an unprecedented outbreak across the world and India is no exception to this. Like the virus mutations, misinformation has also manifested over time since the beginning of the pandemic. In the Indian context, the misinformation can be categorised into six broad themes including:

1 *Symptoms and causes of the virus:* Several symptoms (mild and serious) were labelled as COVID-19. For instance, common flu symptoms such as headache or runny nose were not labelled as COVID-19, making people either anxious or very lenient about the symptoms.

2 The internet has seen the dawn of several COVID-19 cures including drinking hot garlic or lemon water and even alcohol. This also led to a section of people relying on these magical cures instead of seeking proper and timely medical treatment (Reddy, 2020)[91] (Mandadi, 2021)[92].

3 There has been a significant share of misinformation on the origin and the spread of the virus. Shocking images and videos were shared linking them to the COVID-19 burden in different countries, which were untrue.

4 Medical authorities and governments were also not immune to misinformation given that official logos were misused to propagate false information including fake government orders on lockdowns, timings, cures, etc. (Sripada, 2021)[93].

5 Conspiracy theories on how COVID-19 is a human-made pandemic to depopulate the world or that the virus will make minority communities impotent and thereby regulate their population, Chinese military scam, 5G technology caused the second wave in India, and other bizarre theories have floated around (Kalidoss, 2021)[94].

6 The final theme includes vaccine hesitancy since the beginning of the vaccine rollout. While in the beginning, people including frontline workers were sceptical of the vaccine timelines and its efficacy, several states in India struggled with low turnouts. Over the last four months, owing to the misinformation circulating on social media, people have either moved to a wait-and-watch approach or have rejected the vaccine. The reasons for hesitancy/refusal include social media content (unscientific cures, conspiracy theories, rumours, fake news), anecdotal (word-of-mouth, past experiences), rumours in case of digital divide in rural India, sense of invincibility, lack of safety around vaccination centres, serious consequences post inoculation including impotence and death, religious reasons, choice of vaccines, changing guidelines of the gap between the doses, etc.

Health authorities including the World Health Organization (WHO) and the Ministry of Health & Family Welfare of India have developed timely information, education and communication material on handling the COVID-19 crisis including strategies adopted from the international framework. These include wearing masks and practising social distancing, among other things. However, there lacked a robust risk communication plan excluding vulnerable communities, migrant labour, sex workers, and others. This chapter focuses on the importance of a robust risk communication plan and the role of stakeholders in communicating and navigating the misinformation crisis.

7.2. Common Myths and Misconceptions

MYTH: 01 **Camphor, hot boiled garlic, lemon and baking soda mixture, rinsing nose with saline water, etc. can cure COVID-19.**

FACT: There is no scientific evidence to prove that any of these mixtures or ingredients can kill SARS-CoV-2. As of today, there is no mixture/medicine to prevent or cure COVID-19 (Kalidoss, Factly, 2021)[95].

MYTH: 02 | **Non-human DNA will be introduced into our bodies which will, in turn, enable humans to pick up certain animal traits.**

FACT: There is no scientific evidence that the mRNA vaccine will introduce non-human/ animal-like traits in human bodies.

MYTH: 03 | **COVID-19 vaccine contains pig fat/pork gelatine, thus dissuading Muslim population from taking the vaccine since they consider it haram.**

FACT: Gelatine derived from pigs is used in some live vaccines as a stabiliser to protect live viruses against the extreme temperatures, but the COVID-19 vaccines developed and approved in India do not contain any pig fat.

MYTH: 04 | **Women should avoid COVID-19 vaccination during their menstrual cycle.**

FACT: Ministry of Health & Family welfare did not say anything regarding the vaccination of women during their menstrual cycle under the contraindications (conditions that suggest one should not take the vaccine) section, which implies women can get vaccinated during their periods. International health agencies like WHO have also not suggested that menstruating women should not take the COVID-19 vaccine.

MYTH: 05 | **WHO has accepted an Indian student's home remedy as COVID-19 cure.**

FACT: There is no authentic information that an Indian student from Pondicherry University has found a cure for COVID-19. The WHO website clearly states that, to date, there are no medicines that can prevent or treat COVID-19.

MYTH: 06 | **One can check for COVID-19 by holding their breath for 10 seconds or longer without coughing or feeling discomfort.**

FACT: According to the CDC, you can have the coronavirus and have no symptoms and can also transmit the virus before showing any symptoms. As per the WHO, "the most common symptoms of COVID-19 are dry cough, tiredness and fever". (Desk, WHO: Advice for the public, n.d.)[96]

MYTH: 07 | **COVID-19 vaccine causes infertility in men and women.**

FACT: The vaccine trials are also being tracked by the WHO and it has found that none of the COVID-19 vaccines differentiate between males and females.

MYTH: 08 | **Hand dryers and UV disinfection lamps are effective in killing the coronavirus.**

FACT: According to the WHO, "hand dryers are not effective in killing the coronavirus. UV lamps should not be used to sterilize hands or other areas of skin as UV radiation can cause skin irritation. To protect yourself against the new coronavirus, you should frequently clean your hands with soap and water or an alcohol-based hand rub." (Desk, WHO: Advice for the public, n.d.)[96]

MYTH: 09 | **Extreme hot showers or baths prevent COVID-19.**

FACT: According to the WHO, "your normal body temperature remains around 36.5°C to 37°C, regardless of the temperature of your bath or shower. In fact, taking a hot bath with extremely hot water can be harmful, as it can burn you." (Desk, WHO: Advice for the public, n.d.)[96]

MYTH: 10 | **Drinking alcohol can prevent COVID-19.**

FACT: According to the WHO, "drinking alcohol does not protect you against COVID-19 and can be dangerous. Frequent or excessive alcohol consumption can increase your risk of health problems." (Desk, WHO: Advice for the public, n.d.)[96]

7.3. Case Study- Vaccine Hesitancy in Rural India

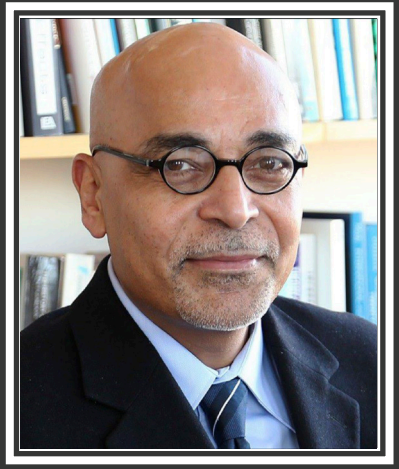
A video from Uttar Pradesh's Etawah district surfaced where an old woman was seen hiding behind a drum fearing COVID-19 vaccination, showing how real vaccine hesitancy is in the rural belts of the country. The elderly woman in the video is seen ducking and hiding behind the drum while healthcare workers and family members try to persuade her. The saga continued until the healthcare workers convinced her to come out from her hiding place under the premise that she will not be injected with the COVID-19 vaccine.

Similar stories were heard from other villages in Uttar Pradesh where villagers fell prey to misinformation that healthcare workers would inject people with poison instead of the COVID-19 vaccine. In May 2021, residents of Barbanki village in Uttar Pradesh fled their homes and jumped into the Sarayu river when healthcare workers and officials went to vaccinate the village.

> *The residents of Barbanki village in Uttar Pradesh fled their homes and jumped into the Sarayu river when healthcare workers and officials went to vaccinate the village. (**Live Mint**)*

Owing to the misinformation about COVID-19 vaccines being poisonous, villagers jumped into the river to avoid the vaccination campaign. Owing to poor and unclear communication, the ripple effects of vaccine hesitancy are especially seen in the rural and tribal-dominant regions and among the minority communities. Analogous resistant stories were observed across the country. Abuses were hurled at doctors and healthcare workers in the states of Bihar and Madhya Pradesh. In Indore in MP, stones were pelted at doctors while in Bihar, residents shut the doors to their houses to resist vaccination. The reluctance to vaccines includes believing unfounded rumours of vaccination inducing infertility, impotence or death. This is a classic instance of how fears, myths and rumours have translated into real-time and large-scale hesitancy and a dip in the vaccination uptake.

7.4. Expert Speaks



PROF. K. VISWANATH

He is Lee Kum Kee Professor of Health Communication in the Department of Social and Behavioural Sciences at the Harvard T. H. Chan School of Public Health (HSPH). He is also the Director of Harvard Chan India Research Center and the founding Director of DF/HCC's Enhancing Communications for Health Outcomes (ECHO) Laboratory. Dr Viswanath's work, drawing from literature in communication science, social epidemiology, and social and health behaviour sciences, focuses on translational communication science to influence public health policy and practice.

01 India does not have an anti-vaccine movement like the kind seen in the United States or Europe. However, there is a lot of vaccine hesitancy manifesting now. And this is mostly due to the uncertainties around COVID-19. So, as an expert who has worked with vaccine hesitancy issues in the United States, how do you suggest we address this uncertainty and hesitancy, and how do we build trust and confidence in the public?

Prof. Viswanath: Let us disentangle that notion. If you can look at it, there are roughly three groups. There is one group of people about whom we don't have to worry; they are what we call vaccine compliant, they are the first to go out and get it. We just have to reinforce what they have done, encourage them, and get them into a clinic. Then there is the anti-vaccine group, that does not accept any convincing. I think this is a group that is determined not to get vaccination. The third group is what we call fence sitters. This is the group with doubts and can lean on to either side. Therefore, what I suggest is, let us figure out what are the underlying bases for those who are hesitating even when they get a chance. Is it just complacency? If it is complacency, we should make it easy for them to get it so that they run out of excuses. Let me give you an example, once adequate number of doses are available in India, we can say, I will give it to you in your workplace. So, you don't have an excuse to say I have to go to a clinic and get it. I will give it to you in your place, I may have a mobile van, I will come to your neighbourhood, your apartment complex, and administer to everybody. We can do that; India has done it. The complacency part can be addressed. And then the misinformation part could be of two types. One type is it doesn't really matter, because you get it anyway. And for that, the message is that it matters. Because even the number of people who end up getting it is much smaller than people who are not vaccinated. Even if you get it, vaccination will reduce hospitalisation and severity. It will help you. And then there is the hesistant group, which trusts rumours, myths and folklore, and that's a group we must observe very carefully, and see what these rumours and myths are, and then provide adequate information to continuously promote conscious thinking. You can't force them, but you can promote conscious thinking about how baseless the rumours and myths are. And we need to find out whom they trust as sources. Is it the doctors? Is it actors and other celebrities? In our case, I would argue that it is our neighbours and friends and family. Because that's where the most powerful persuasion is. Family members, neighbours and colleagues, and doctors (who are always trusted) can push them towards vaccination. That's the strategy.

02

As of today, there is ample literature and, in fact, there's information overload around COVID-19. And the research continues to evolve by the day as we speak. So, how can this evolving research be effectively communicated to people?

Prof. Viswanath: This is possibly one of the most difficult questions to answer and the reason is, we always communicate and when you talk about communication of risk, it is always about communication of uncertainty. And you are talking in terms of probability, if you don't do it, you are likely to get it. That is a term we use, and people have difficulty understanding or internalising probability. I always give my favourite example, which is very simple. If I see dark clouds in the sky, I'll take my umbrella with me. I calculate the probability by my prior experience, which is that dark clouds means it might rain. Why don't I play safe? It may not rain, but I played safe, right? So that's how you calculate your uncertainty and we have always done that. But I think with COVID-19, it's been tough because, number one, the knowledge is changing every day, every week. Take the delta variant: we were getting very comfortable here in the United States, and we were looking at India and wondering what's happening in India? Why is it spreading so fast? Is it because they have opened too soon? Is it because they are complacent? And then when it has spread across the world, we are realising that this is a completely different strain, much more viral and much more serious. So, we are learning, that's one challenge. The second challenge with COVID-19 is, if you remember, we did not know anything in January of 2020. Seventeen months later, we know a lot. In every other scientific topic, you take two years, 10 years, 15 years, 20 years, to learn about those topics. All of this has been happening in 17 months, and there have been, I think, something like 150,000 publications, right? Millions of posts, and that's the information overload. And so, people are having trouble coping with it.

So, how do you communicate uncertainty? This is my recommendation. One, we know something we know. We stick to those facts we know for sure. We take credible sources, like healthcare professionals, politicians and decision makers, and journalists are extremely important here too. Two, we have to be transparent in saying what we don't know. It's very important to tell people what we don't know. That's when people start trusting you because you're being honest with them. You're saying this is what we know, this is what we don't know, this is what we recommend, and we will update you, complete transparency, that is not hiding anything. Also, providing information about what we know and don't know through credible sources such as healthcare professionals, journalists, and other decision makers including politicians will go a long way in reducing misinformation. Now, it's extremely important to do that, and journalists have a critical role to play in this.

03

Vernacular media journalists are important stakeholders in effective public communication. But there is a lot of contradictory information also available on the internet. So how should they sift the facts and and report the unknown, all while remaining a credible source?

Prof. Viswanath: When 10 studies are published over 10 months, six of them agree with findings and four of them may not agree because that's the way science works. Science is a self-correcting mechanism. I can go to the Journal of American Medical Association and say there is a new article that has come out, which says drug x seems to be effective. That's great. Okay, so what is the lay person or the non-technical person's understanding of the drug? What is the trial? Who is funding the trial? What are the data saying? You don't have to know sophisticated statistics, what you need to know is something about the design of that study. Is it just one study? Is it two studies? Is it 10 studies? Just because one study is reporting something, doesn't mean those findings are durable. Tomorrow there will be another study which will disprove that. So, you might want to wait for four or five studies. Even on WhatsApp, I see lay people spreading information on some drug that has proven to be effective. No, don't rely on one study alone. To know something about the design principles of research, go to these reliable sources, and look at what is the consensus in the sources, so they might contradict each other, but if there is an overall consensus, you report on that.

04

How should the stakeholders in health communication come together and adopt strategies/best practices?

Prof. Viswanath: One of the best practices is information surveillance systems. Unfortunately, the governments have not been doing a good job. I want a communication system around risk and disease. Our communication systems are built for the 20th century environment but what we have is a 21st century problem. Therefore, the first thing we need to do is bring our communication systems in the government into the 21st century media ecosystem. And number two, I think we really need to train reporters: we must invest in reporters on science, communications, communication of science and health. It is easy to blame the journalists for getting one story wrong, one fact wrong, but the question you have to ask is, how have you helped the journalist to get it right, especially if they are running around, writing three or four stories a day? So, we have to have a system in place, and the skills in place. The government has to have a communication system that is suitable for 21st century, to build systems with

the media, capabilities and capacities. And then we have systems that we have to provide to healthcare providers. Most of them don't know how to communicate, they're not expected to communicate. You need to provide the healthcare providers the systems and support to enable proper engagement with the public/patients. Then we must work with NGOs; NGOs are very critical, because they are working in the trenches. How do you provide help to them so that they can communicate risk in a reliable way? So, it is imperative that we work with all stakeholders; it is not one group's problem.

05

We are often influenced by the people around us, but misinformation has seeped into our households and our daily lives in the online and offline worlds. What is the way forward to combat this misinformation?

Prof. Viswanath: We have published a few papers in which we found that in every group, there is one person, or at least two people whom we call health information mavens. What we mean by that is this is a group of people who are somehow anxious, who feel like they should share information with everybody around them. Every family has one, every networker group has these mavens. The more interesting part of this is that these mavens are no more knowledgeable than the information you see and that is the problem. Therefore, the first thing is to ask questions: Who is the source? Where did they get this information? Who has funded the trial? etc. If you're buying a product, you do a lot of research, especially if it's an expensive product. If you're buying a car in India, a scooter or a washing machine or refrigerator, you ask around. You don't just go by ads. You ask friends, you go to the showroom, you ask a ton of questions, you bargain with them. If you're going to do that for a for a product, don't you want to do that for health information that affects you? Also, media organisations, communication and public information departments in the government, hospitals, healthcare providers, NGOs are all part of the system that must work together for communication to be effective.

7.5. Conclusion

Like the novel coronavirus, there is no cure for misinformation yet, since we are more reactive in sharing it than proactive in curbing its spread by nipping it in the bud. As seen above, the rampant misinformation including false cures, rumours, and conspiracy theories has the potential to adversely affect the efficacy of containment strategies; in this case, for example, it has manifested as vaccine hesitancy. Also, a widespread attitude observed in India is a sense of invincibility, i.e., one would not be affected by COVID-19, thus distorting their risk perception towards the disease. Misinformation coupled with the delta variant resulted in a deadly second wave that included severe cases requiring hospitalisation, higher mortality rates, disease burden, and eventual economic fallout. With the information overload on COVID-19, especially with contradicting information and misinformation, a recent study by Uscinski et al reinstates the proclivity to reject information from experts and also due to psychological predisposition (Dr Meghan McGinty, 2020)[97].

For instance, given the diversity and distinct topography of the country and the varied reasons behind vaccine hesitancy, there is no one-size-fits-all solution. It is imperative to curate and adopt local solutions through the concerted efforts of community stakeholders including the local government from District Collectors to the Panchayats, civil society organisations, teachers, healthcare workers (doctors, nurses, ASHA workers), local influencers, etc. However, one must be careful in devising local strategies, especially in the case of vaccine hesitancy, which has behavioural and psychological aspects to it. For instance, while incentivisation or compulsion of vaccines appear to be feasible, it will only further erode the trust in the efficacy of vaccines and institutions. Similarly, social media giants like Facebook, Twitter and Instagram have been at the forefront, especially in curbing COVID-19 misinformation through: collaborating with fact-checkers to identify contextual and regional misinformation; identify some of the 'famous' fake experts and take the necessary action to halt the spread of misinformation; and direct official authorities towards COVID-19 and vaccine-related news on these platforms. As discussed above, it is not the role of one stakeholder but many such as the individual, family, local government, state and national governments, media, expert authorities, and health officials, all of whom have a huge role to play in strategising health messaging and combating misinformation.

While there is no one-stop solution to the deep-rooted problem, a starting point for an individual is to be more educated: not believing a piece of information that is too good to be true and identifying the fact instead of an emotion in any given information. It is important

to believe only in science since it is evidence-based but believe it with a pinch of salt. As Prof. Vishwanth says, "science is a self-correcting mechanism", especially since information is evolving in nature on a subject like COVID-19. When in doubt, seek the help of fact-checking agencies and engage with them to know more about credible sources, authenticity and understanding the methodology to sift the fact from the information overload. An effective practice is to pause before sharing, an added layer of responsibility before sharing and consuming information to build resistance against misinformation. It is highly suggested to seek information only from credible health authorities and, in the case of COVID-19, continue to wear masks, practise social distancing, and get inoculated against both COVID-19 and the prevalent misinformation.