A qualitative enquiry into strategic and operational responses to Covid-19 challenges in South Asia

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The Covid-19 epidemic is a public health emergency of international concern. It poses a massive risk for the human race across the planet, calling for the need to take measures at the local, regional, national, and global levels. South Asian countries stand more vulnerable to the pandemic due to their dense population, poor infrastructure, and low surveillance system. This paper aims to understand the challenges from the Covid-19 pandemic for South Asia; and investigates the strategic and operational responses to this pandemic by policymakers and healthcare professionals, respectively, in South Asia. The study uses interviews and opinions of policymakers and doctors, from the South Asian region, involved in tackling the Covid-19 crisis. The qualitative analysis is performed on these interviews and opinions by using NVivo 12 software. The findings indicate that policymakers and healthcare providers across South Asia have been showing efficient teamwork while dealing with this pandemic. The healthcare administrators being at the operational level, convey the challenges they face to the policymakers who then respond to them at a strategic level.

1 | INTRODUCTION

The outbreak of Covid-19 has imposed a major infliction across the globe, calling for measures at the local, regional, national, and global levels. South Asian countries stand more vulnerable to the pandemic due to their high population, poor infrastructure, and low surveillance system. On April 30, 2020, the South Asia region confirmed 54,021 cases of novel coronavirus with a death toll of 2088.

Each of the South Asian countries has taken meticulous steps by following social distancing and travel restrictions. India, being the largest country of South Asia, has taken the lead by calling the SAARC (The South Asian Association for Regional Cooperation) nations to act unanimously by setting up an emergency fund in defense against the Covid-19. The idea has been backed by all SAARC nations with a further proposal for the establishment of the Integrated Disease Surveillance Portal. On its own, India is following a two-directional approach by observing lockdown and ramping up the healthcare infrastructure. However, policymakers and health care administrators are striving hard due to the limited testing infrastructure for Covid-19 cases. They are looking up to epidemiologists for real-time case reporting to install policies at large. The longer incubation period and reproduction value, RO of 2.2 render policymakers exposed to a higher rate of asymptomatic positive Covid-19 cases and community spread at a very high speed.

The ultimate goal of policymakers and health care professionals lies in the containment of novel coronavirus to mitigate the fearful economic and psychological effects. Primarily, we focus on two research objectives. One, we aim to understand the challenges from the Covid-19 pandemic for South Asia; and Two, we investigate the strategic and operational responses to this pandemic by policymakers and healthcare professionals, respectively, in South Asia. In dealing with the policy interventions with an aim to limit the loss of human capital in the region due to this pandemic, our findings are classified at strategic and operational levels. At the strategic level, we analyse the strategies being employed by policymakers; while at operational levels, we investigate the actions being taken by health administrators. Our analysis covers various parameters such as surveillance and contact tracing (virus carriers); travel restrictions and evacuations of the citizens abroad; research activities for understanding the health care emergencies and long-term economic consequences; diagnostics,
isolation, and quarantine methods and facilities; clinical management of patients; training and safety of health care providers; creation of SAARC emergency fund; trade and economy insulation; and other awareness activities. By doing so, we make both theoretical and practical contributions. Theoretically, we contribute to the body of knowledge in diverse fields of pandemic and disaster management, health policy, public policy, and sociology (Hadjimanolis & Boustras, 2013; Jain, Leka, & Zwetsloot, 2018). In practical terms, we inform the governments across the world on dealing with pandemics at both strategic and operational levels.

The paper is organised as follows: Section 1 introduces the rationale behind this study; Section 2 reviews the related literature; Section 3 discusses the methodology; Section 4 highlights the findings and the development on policymaking front; Section 5 presents the policy implications and Section 6 concludes.

## 2 | LITERATURE REVIEW

The contagion of Covid-19 arising from Wuhan City, China has spread it wings throughout the world. In the past, various diseases have emerged in different corners of the world with viruses such as Ebola virus, avian H7N9, SARS-CoV, or MERS-CoV and major pathogens as Ebola, Zika, Nipah, and coronaviruses (CoV) (Dhama et al., 2020). However, Covid-19 has created an alarming public health emergency situation as its estimated spread and reproduction value, R naught, (R0) is 2.2 (Casella, Rajnik, Cuomo, Dulebohn, & Di Napoli, 2020). Higher competence rate of Covid-19 (human-to-human) transmission dictates the policymakers for finding problem-centric and scalable solutions, so as to decrease the value of R0 to less than 1. However, tackling Covid-19 contagion remains a challenge for policy-makers, especially because the transmission rate is misleading due to such factors as an unclear mechanism of transmission, the gestation period of virus till its clinical symptomatic manifestation, and false-negative cases (Casella et al., 2020).

In line with Moore et al.’s (2008) framework (considering surveillance, quality, and timeliness as pillars) for pandemic preparedness, policy-makers and medical administrators need to have more streamlined preventive measures in the first go. Baekkeskov (2016) advocated science-led policy-making based on epistemic deliberation and ideational trajectories, where the former relates to the translation of new information into policy, and the latter projects the path dependency and change of trajectory after assimilation of new information during pandemic 2009 H1N1flu. Based on past studies, the current situation demands more novelty in dealing with Covid-19. The pre-emptive measures to be learnt from SARS emergency, followed by H1N1 influenza pandemic suggest the transcending nature of pandemics and imposition of travel and trade restrictions in the interest of global public health (Mackey & Liang, 2012). However, reinforcement of strict policy measures for the containment of Covid-19 pandemic requires strong epidemiological evidence in terms of confirmed reported and unreported (suspect, probable, undiagnosed) cases, which may lead to a community spread in more populous regions of the world. This makes SAARC countries more vulnerable due to huge population, poor infrastructure, and lack of health care professionals. Policymakers across the South-Asian region have started to work in unison for adjudicating a more diligent approach in dealing with Covid-19.

Through this paper, we study the role of policymakers and health care administrators in controlling the pandemic. The important point to bring out here is the significant role of epidemiologists and health care workers to provide essential data regarding the spread of novel coronavirus. There are key unknown factors causing problems for the mitigation efforts of policymakers. These include case fatality rate (CFR), which is 0.3-1% in this case, secondly, the incubation period of Covid-19 being 5–6 days, a large number of asymptomatic cases, duration of an infectious period lasting for more than 10 days (Anderson, Heesterbeek, Klinkenberg, & Hollingsworth, 2020). Anderson et al. (2020, p.934) opine that “minimising morbidity and associated mortality, avoiding an epidemic peak that overwhels health-care services, keeping the effects on the economy within manageable levels, and flattening the epidemic curve to wait for vaccine development and manufacture on the scale and antiviral drug therapies” are the key challenges for policymakers during this pandemic. Governments have suggested restrictions on travel, mass-gatherings, maintaining social distancing, self-quarantine measures, keeping up with hand hygiene, and so on.

## 3 | METHODOLOGY

Our study uses the interviews and opinions of doctors and policymakers, from the South Asian region, involved in tackling the Covid-19 crisis. For this purpose, interviews of 8 SAARC leaders (Table 1) and 7 healthcare workers to provide essential data regarding the spread of novel coronavirus.
professionals (Table 2) were textually analysed with the help of NVivo 12, a qualitative analysis software (Godau, 2004). The input data of SAARC leaders were taken from the video conference meeting, which was held on March 15, 2020 as initiated by Mr. Narender Modi, PM of India to propose a COVID-19 emergency fund. This study shall be textually analysing the transcribed interviews of different government leaders, policymakers, doctors, and scientists who have played an active role in laying the important administrative measures during the outbreak. Before importing the data, we transcribed the audio-visual interviews of SAARC leaders, whereas the remaining interviews of Healthcare professionals are directly picked from blogs, newspaper articles, and other social media platforms. All the interviews are kept in English language to maintain the uniformity and are further structured in order to separate the interviewee and interviewer texts. These interviews were analysed to identify common themes.

Figure 1 exhibits the frequently used words in the video conference meeting of SAARC leaders.

Table 2

| S.No. | Name                  | Designation                                                                 | Code |
|-------|-----------------------|------------------------------------------------------------------------------|------|
| 1     | Dr. Randeep Guleria   | Director, all India Institute of Medical Sciences, India                      | RG   |
| 2     | Dr. Balram Bhargav    | Head, Indian Council of Medical Research, India                              | BB   |
| 3     | Dr. Priya Abraham     | Director, National Institute of virology, India                             | PA   |
| 4     | Dr. Giridhar R. Babu | Professor and head, life course epidemiology, Public Health Foundation of India | GRB  |
| 5     | Dr. Harsh Vardhan     | Ministry of health and family welfare, India                                | HV   |
| 6     | Dr. Ravi Wankhedkar   | Ex-president, Indian medical association, India                             | RW   |
| 7     | Dr. George Gao        | Head, Center for Disease Control and Prevention, China                      | GG   |

The transcribed text derived from the video conference of SAARC leaders is grouped for determining the words based on the frequently used words or phrases from the transcribed text of the SAARC leaders to understand the measures being taken and the commonality amongst those.

Table 3 shows the word frequency table of 20 most frequently repeated words (including synonyms) by the SAARC leaders.

Figure 2 presents the frequently used words in the interviews of healthcare professionals.

Table 4 shows the word frequency table of 20 most frequently repeated words (including synonyms) by healthcare professionals.

4 | FINDINGS

Our results analyse the strategic responses to the pandemic, being planned by the policymakers, and the operational responses being
delivered by the doctors. We divide this section into two parts to discuss the findings concerned with strategic and operational responses.

### 4.1 Strategic responses to Covid-19 in South Asia

Figure 3 gives a pictorial presentation of the strategic responses to Covid-19 in South Asia, being planned by the policymakers. The challenges and responses are both the parent and child nodes. Figure 3 is followed by the discussion of various themes observed by analysing the text of transcribed interviews of SAARC leaders.

The SAARC leaders conducted a video conferencing on March 15, 2020 to discuss what is the current situation in their respective countries, how the nations are responding to the Covid-19 crisis, and how can they together fight against it. Their discussion, when analysed, leads us to the following seven themes:

#### 4.1.1 Surveillance and tracing

The rising rate of transmission of Covid-19 creates an alarming situation in the South Asian region, and hence it is necessary to put the citizens of the country on surveillance and tracing. Some important annotations were observed in this regard. Most of the SAARC leaders

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**TABLE 3** Word Frequency table for SAARC leaders

| S No. | Word       | Count | Weighted percentage (%) |
|-------|------------|-------|-------------------------|
| 1     | Quarantine | 34    | 2.47                    |
| 2     | Health     | 27    | 2.26                    |
| 3     | Facilities | 24    | 1.84                    |
| 4     | National   | 31    | 1.84                    |
| 5     | Medical    | 21    | 1.76                    |
| 6     | Government | 26    | 1.48                    |
| 7     | Essential  | 21    | 1.41                    |
| 8     | Public     | 24    | 1.32                    |
| 9     | Hospitals  | 15    | 1.26                    |
| 10    | Contribute | 16    | 1.23                    |
| 11    | Emergency  | 20    | 1.19                    |
| 12    | Help       | 13    | 1.05                    |
| 13    | Spread     | 14    | 1.03                    |
| 14    | People     | 12    | 1.00                    |
| 15    | Tourist    | 12    | 1.00                    |
| 16    | Regional   | 13    | 0.93                    |
| 17    | Development| 17    | 0.92                    |
| 18    | Disease    | 11    | 0.92                    |
| 19    | Surveillance| 11   | 0.92                   |
| 20    | Saarc      | 11    | 0.92                    |
agreed and have followed strict surveillance on the activities of the citizens.

“We have set up an integrated disease surveillance portal to better trace possible virus carriers and the people they contacted...share this surveillance software with SAARC partners and training on using this” (NM).

“...appropriate measures are being taken through a systematic consultative review process, the national disaster management authority has been mandated to lead the interagency effort and command and control centers have been established at the federal and provincial levels effective coordination and surveillance at all levels” (ZM).

**TABLE 4** Word frequency table for healthcare professionals

| S No. | Word    | Count | Weighted percentage (%) |
|-------|---------|-------|-------------------------|
| 1     | Testing | 95    | 5.29                    |
| 2     | Transmission | 71    | 3.23                    |
| 3     | People | 40    | 2.62                    |
| 4     | Government | 40    | 2.33                    |
| 5     | Isolation | 32    | 2.01                    |
| 6     | Community | 37    | 1.94                    |
| 7     | Time | 28    | 1.83                    |
| 8     | Screening | 36    | 1.78                    |
| 9     | Hospitals | 22    | 1.44                    |
| 10    | Contact | 24    | 1.40                    |
| 11    | Infected | 36    | 1.21                    |
| 12    | Laboratories | 17    | 1.11                    |
| 13    | Travel | 15    | 0.98                    |
| 14    | Vaccine | 17    | 0.98                    |
| 15    | Samples | 19    | 0.94                    |
| 16    | Person | 17    | 0.88                    |
| 17    | Airports | 13    | 0.85                    |
| 18    | Lockdown | 13    | 0.85                    |
| 19    | Facilities | 13    | 0.81                    |
| 20    | Droplets | 11    | 0.72                    |

**4.1.2 | Travel restrictions and evacuations**

As the Covid-19 has spread due to international travels, various countries in the initial months made screening points mandatory, at the sea and airports, for tracing any infected persons. The SAARC leaders made provisions, for the same, for their respective nations.

“We started screening entry into India from mid-January itself, while also gradually increasing restrictions on travel. The step-by-step approach has helped avoid panic.” (NM).

“...health screening measures at entry points by member states. We are following WHO guidelines and implement exit health screening for travelers in the region to avoid cross-border spread.” (ZM).

Many citizens had traveled internationally for different purposes like education, business, tourism, etc. and got stuck at Covid infected countries, so there was a need to evacuate them and bring them to their own country.

“We also responded to the call of our people abroad. We evacuated nearly 1400 Indians from different countries. We have now built up a protocol for such evacuations, including carrying out testing by our mobile teams deployed abroad.” (NM).

“Before evacuating, the Afghans from Wuhan they would undergo screening procedure for infection. Only those who pass the screening will be eligible for evacuation. This should minimize the risk of infection within Afghanistan.” (AG).

“There was a requirement to evacuate 34 Sri Lankan students and their families back to Sri Lanka, this was done by the national Sri Lanka airlines which flew from Colombo to Wuhan and back to Colombo with all 34 passengers. Another 750 Sri Lankans were studying in various universities in different provinces of China and the government facilities, they were returned to Sri Lanka.” (GR).

The governments also started restricting travel by canceling visa appointments and eventually curbing airline services, nationally and internationally.

“We have restricted international movements, visa on arrival facility for all foreigners and non-residents, movement of third-country nationals via land rules has been suspected, a health certificate is
made mandatory to obtain visa from Nepalese Missions abroad for essential travels to Nepal.” (KPSO).

“China and Italy are the most severely affected countries of the virus and they are also the number one and number three source markets for Maldives tourists since the beginning of February in the case of China and March in the case of Italy arrivals from these two countries have been restricted.” (IMS).

4.1.3 | Isolation and quarantine facilities

To avoid the transmission, the infected patients have to be kept in isolation and the ones who are suspected or have the potential to get infected must be quarantined for a few hours or weeks as instructed by the doctors. All the SAARC leaders have made necessary arrangements to isolate or quarantine their respective citizens. Since these countries are densely populated, it becomes a challenge to provide such facilities to the masses.

“We have made special efforts to reach out to vulnerable groups...we have developed protocols for each stage of managing this pandemic: quarantine and management of isolation facilities...The Ministry of Defence has set up seven more quarantine facilities for Covid-19 patients recently.” (NM).

“There are provisions for self-quarantine for certain categories of travelers we are strengthening quarantine facilities in all provinces hospitals and arranged isolations.” (KPSO).

“We managed to send all the contact users and surveillance team to their respective places and inform them of the importance of house quarantine...and bring them to the formerly identified quarantine facilities.” (LT).

4.1.4 | Diagnostics, training, and safety of healthcare providers

Due to the sudden outbreak of Covid-19, there falls a shortage of expertise and medical arrangements, but still, in a short span of time, nations have coped up to take measures in case of diagnostics and treatments. South Asian policymakers have been working in close coordination with each other for a collective response.

“We could create a common framework for telemedicine for diagnosis of related issues and as advances take place how to be able to coordinate.” (AG).

“...extremely costly and puts enormous pressure on an overstretched team of healthcare workers, for tertiary hospitals in the regions are currently under development, shortage of healthcare professionals in general and shortage of specialist doctors...” (IMS).

“We have kept four newly built hospitals in Dhaka dedicated exclusively to deal with public scientist patients. We have also earmarked separate beds in every hospital in all the districts to treat Covid-19 patients, a few vacant buildings have been identified where makeshift hospitals can be established.” (SH).

The doctors, nurses, and other healthcare providers are the ones, testing or treating such patients, it is the utmost priority to keep them

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**FIGURE 4** Project map for healthcare administrators

[Diagram of healthcare administration with categories for Testing, Tracing, Treatment, Spread, and Precautions.]
safe from this virus by providing PPEs, masks, etc. The nations are facing a challenge due to the sudden requirement of these things.

“We are assembling a rapid response team of doctors and specialists in India along with testing kits and other equipment, they will be on standby to be placed at your disposal if required.” (NM).

“We have stockpiles of testing kits, infrared thermometers, isolation gowns, and masks. Students and teachers of the Faculty of Pharmacy at the University of Dhaka have started making low-cost hand sanitizers due to market shortages in the wake of coronavirus fears.” (SH).

“The health workers are being provided with personal protection equipment and the necessary incentives to motivate them. We need to ensure a smooth supply of essential medical equipment and sanitary materials in the region.” (KPSO).

4.1.5 | Research activities

During these difficult times, SAARC leaders have joined hands to share their resources, expertise, and disseminate information to deal with this disease. They have proposed strategies regarding the same, for quick response and treatment of this newfangled virus.

“We could create a common research platform to coordinate research on controlling epidemic disease within our South Asian region. We propose to have e-health platform which will serve to be a multipurpose vehicle to further discuss and conduct activities such as online training for emergency response personnel, knowledge partnerships, sharing of expertise in disease surveillance, etc.” (NM).

“To ensure rapid response and sharing of experience and expert expertise, we should create space for closer cooperation between the health emergency agencies to ensure that the countries in SAARC have unhindered exchanges of information about the virus and best practices.” (IMS).

4.1.6 | Awareness activities

While tracing, testing, and treating the patients, parallel awareness activities for the whole nation is of due importance. For this, the government has responded to alert everyone about the symptoms, precautions, self-quarantine, etc. through social media, podcasts, celebrity endorsing.

“The department of health started giving out health warnings and advice on precautionary measures needed to be followed for prevention of the spread of the virus. This is done through mass media, press briefings, bulletins, etc.” (GR).

“We have also undertaken massive awareness-raising campaigns everywhere in Bangladesh through all available media including social media...” (SH).

Most of the South Asian countries have implemented actions to curb social gatherings so that transmission of coronavirus is curtailed. For this purpose, all schools, universities, large events like summits, conferences, weddings, etc. are postponed until further notice.

“To restrict social gatherings, we have advanced the usual April school holidays to commence from 11th March, further we have closed all universities and other educational institutes also with the aim of minimizing social interaction” (GR).

“We have to open to our people to avoid attending mass gatherings and other large-scale events” (KPSO).

4.1.7 | Impact on trade and economy

Dealing with the widespread of Covid-19, sealing the national boundaries, locking down the non-essential economic activities have affected the trade and economy of every country adversely—nationally and internationally. The PMs and the Presidents also exchanged thoughts on their respective trade and economic situations.

“We can insulate our internal trade and our local value chains from its impact, this can help to prevent such infections from spreading across our region and allows us to keep our internal moments free.” (NM).

“Any significant decline in tourist arrivals has a ripple effect on the Maldives economy...Maldives will be looking at a shortfall in government revenues between USD 135.9 million and USD 446.6 million this year.” (IMS).

“Covid-19 will cause great disruptions to the global economy, and Bhutan will not be an exception. The economic repercussions will not just impact a select few sectors, but each and every one of us.” (LT).

4.2 | Operational responses to Covid-19 in South Asia

Figure 4 exhibits the operational responses to Covid-19 in South Asia, being delivered by the healthcare administrators.

The healthcare administrators whose interviews are analysed textually, belong to renowned public health-related organisations and institutions (as outlined in Section 3 of this paper) and have been interviewed repeatedly to understand the challenges in coronavirus causes, symptoms, treatments, precautions, etc. and respond accordingly. Analysing their interview has led to the following 5 themes:

4.2.1 | Testing

The questions were related to who should get tested for coronavirus? People with symptoms or without symptoms. Each interviewee agreed that since testing kits are limited, so only symptomatic cases should be tested. The availability and implementation of the tests was the challenge in the preliminary weeks. Initially, the case was defined as the ones who had traveled abroad in the last 14 days, especially to a country where an outbreak of novel coronavirus is happening, or had close contact with a laboratory-confirmed case of Covid-19.
"No indiscriminate testing for Covid-19, testing only symptomatic people in India. 80 percent of the people will experience cold-like fever and they will recover. 20 percent may experience cough, cold, fever, and 5 percent get admitted to the hospital are given supportive treatment and in some cases, new medicines are being given." (BB).

While an interviewee argued that asymptomatic may also have equal chances of getting infected by the virus. "By testing only possible cases, we might miss many of those who are asymptomatic during screening. The best strategy is to test among the SARI (severely affected respiratory infections) admitted in the hospitals and the OPDs (outpatient departments) of these areas." (GRB).

While developing the testing infrastructure, few interviewees gave their expert opinion on the current situation, the process of testing, and the time consumed by the testing process.

"The testing time for each sample was close to 12–14 hours. Currently, the testing time for each sample is a maximum of four hours. We have a screening assay and also additional real-time PCR assays to confirm the presence of the virus." (PA).

"The test for the coronavirus uses a nucleic acid amplification-based assay called polymerase chain reaction (PCR) and a more sensitive form called real-time polymerase chain reaction (RT-PCR)." (BB).

The other experts also mentioned the status of the infrastructure for conducting the Covid-19 tests, the availability of hospitals, beds, ventilators, etc. and also the involvement of the private sector for the same.

"We are ready, we have isolated wards (AIIMS India) in place...we have to convert ICUs and wards into facilities to manage a large number of patients, prepare isolation rooms, special care. We have an adequate number of labs in the country to detect the virus, screening facilities are sufficient, quarantine establishments are working 24x7 at full capacity to treat those afflicted..." (RG).

"We have conducted 15,000–17,000 tests so far. We have the capacity to conduct 10,000 tests per day. It means that we can conduct 50,000-70,000 per week. The central government on Saturday recommended that the maximum charge for each Covid-19 test by private laboratories should not exceed ₹4,500." (BB).

"51 VRDLs (testing labs), with a plan to further support and equip yet another 56 VRDLs have been set all across this country" (PA).

"Around 17,500 beds are available at various government facilities at the central and state government level. Further, around 14,000 quarantine beds have also been made available. The facility for collection and testing of clinical samples has been established in 51 laboratories across the country. Additionally, 56 Laboratories have been identified as sample collection centers." (HV).

"Regular 'contact surveillance' has been initiated across the country for all cases having travel history from Covid-19-affected countries and for people having contact with such persons and/or having symptoms." (HV).

"Before the travel restrictions were imposed and even afterward, there are many who might have been tested negative (in incubation period) or missed by the system. They should be tracked and every symptomatic patient should be tested." (GRB).

There were certain shortfalls of thermal screening at such ports which caused missing out the cases—(a) The individual might be in the incubation period, which may result in a passenger being asymptomatic at that moment, or (b) The individual might have taken anti-fever medicine to suppress fever during travel.

4.2.4 | Source and stage of spread

The novel virus has left all the medical institutions into a race against time. With the growing rate of virus spread and deaths of the infected patients, discovering drugs and vaccines are of the utmost importance, to cure these patients. Until now, there are no foolproof or scientific tested drugs or vaccines available in the market. All the interviewees agree that it will take at least a year to develop a vaccine.

"Some drugs which were used to fight H1N1 and also HIV-related drugs are being tried. As of now, though we have isolated the virus, it will take more than a year to develop a vaccine." (RG).

"India is the fifth country to have isolated the virus from patient samples...SARS-COV2 strain matches 98.99 percent with the Wuhan strain, this will help expedite the development of drugs, vaccines, and rapid diagnostic kits in the country. The ICMR is working closely with the Serum Institute of India to develop a vaccine." (BB).

"We are using both monkeys and transgenic mice that have ACE2, the human receptor for the virus. The mouse model is widely used in China for drug and vaccine assessment...I can tell you that our monkey model works. Many scientists consider Remdesivir to be the most promising drug now being tested." (GG).

"A worldwide trial called 'solidarity trial' is going on across the globe. It's a new study, led by WHO and partners which will compare treatments across the world in order to find what is most effective in fighting the coronavirus...four major countries Russia, China, Germany, and the USA are working overtime for finding and developing a vaccine for the virus." (RW).

4.2.2 | Tracing and screening

Tracing surveillance should be stringent as the infected patient must have spent time or shared space with many other people—family, colleagues, etc. The persons coming from Covid-infected countries were screened at the airports or seaports, the ones with travel history were asked to report all the cases of contacts made by them.
international flights and eventually banning domestic flights to stop this widespread of Covid-19.

“Wuhan health officials linked a large cluster of cases to the Huanan seafood market and closed it on 1st January. The assumption was that a virus had jumped to humans from an animal sold and possibly butchered at the market...you can only control Covid-19 if you can remove the source of the infection.” (GG).

The reasons behind the spread are identified as droplets due to cough or sneeze and the close contact with such surface.

“The virus spreads through droplets—when a sick person coughs or sneezes tiny droplets hang in the air, and when another individual inhales these droplets, he may get infected. Also, the incubation period of the virus is 2–14 days, by the time the person realises that he has the disease, he has already spread the virus to other people. It may even survive 6–8 hours on the surfaces. The elderly group with the age of 60 and people with co-morbidities such as diabetes, hypertension, chronic heart, or respiratory diseases are at high risk of catching the virus.” (RG).

“The big mistake in the U.S. and Europe, in my opinion, is that people aren't wearing masks. This virus is transmitted by droplets and close contact. Droplets play a very important role—you've got to wear a mask because when you speak, there are always droplets coming out of your mouth.” (GG).

The transmission of this disease is categorised into 4 stages, where stage 1 is getting imported cases, stage 2 is the local transmission, stage 3 is community transmission, and stage 4 is the epidemic stage. Community transmission happens when a person gets infected even without being exposed to any infected person and has not traveled to any Covid-19 affected country. Aggressive random testing of the population is the only way to detect this, given that Covid-19 is contagious even when "asymptomatic", i.e. the disease does not produce any visible symptoms in the infected, especially the young, but they are still able to pass on the infection.

4.2.5 | Precautions

The healthcare providers have continuously been the pillars in the fight against coronavirus. Periodically with the help of government, they have set certain guidelines for the public, which if followed, will help everyone aggressively defeat this disease. These guidelines relate to self-discipline, hygiene, quarantine, isolation, social distancing, etc.

"The best way to avoid the spread of the risk is to follow simple public health measures at all times—observing good personal hygiene, monitoring your health, practising frequent hand-washing or use of an alcohol-based hand sanitizer, following respiratory etiquettes, etc... screenings, travel restrictions, shutdowns, 'social distancing'—is a precautionary measure which must necessarily be based on the number and nature of confirmed cases." (HV).

"Social distancing is an essential strategy for the control of any infectious diseases, especially if they are respiratory infections. We used 'nonpharmaceutical strategies,' because you don't have any specific inhibitors or drugs and you don't have any vaccines; you have to make sure you isolate any cases; close contacts should be in quarantine; suspend public gatherings; and restrict movement, which is why you have a lockdown" (GG).

The policymakers and healthcare providers have been showing efficient teamwork while dealing with this pandemic. The healthcare administrators, being at the operational level, convey the challenges they face to the policymakers who then respond to them at a strategic level.

5 | POLICY IMPLICATIONS

The Covid-19 outbreak has inflicted a direct cost on human health that poses the most important effect on society. This direct cost can be further worsened by flawed economic and policy structures; and the indirect loss caused by the disease can enhance the economic ripple effects; therefore, the policymakers ought to take all possible measures to neutralize the negative effect (Bivens, 2020). Many experts assert that people are linked via an invisible transmission network, connected by the physical contacts between individuals, the inhalation of common air, which contains the particles that are coughed, sneezed, or even just breathed out, and in, by any number of sick people, as well as between individuals and physical objects that may transfer the deposited viral particles. The network of transmission is active all the time as we engage in daily activities. The risk lies in the interconnectivity of the individuals, resulting in contracting and transmitting the disease to others. The government has been working on breaking this tough network, although there is room for more measures to be taken (Shen & Bar-Yam, 2020).

The findings of this study lay out some policy implications at strategic and operational levels. First, there is a need to formulate a divide and contain strategy including limited transportation from country to country, also between parts of a country, requiring at least 14-day quarantines for those transferring from region to region. Although many countries have been put on lockdown, governments must ensure strict adherence to the orders. The reported cases are much more than the ones that are visible (tip of the iceberg) as they continue to multiply. The experts warn that even if people are encapsulated in a sterile bubble, the cases shall continue to grow, which is due to the delay between transmission and symptoms owing to the postponement of all prevention effects by 4 days (Shen & Bar-Yam, 2020).

Second, this outbreak has compelled even the superpowers like the USA to reconsider the healthcare-related and wellbeing policies, forcing them to increase the investment in these areas to provide aid to the general public as well as the patients. There has been a global shortage of masks, PPE (personal protective equipment), masks, and ventilators in most of the countries, due to which many health professionals are experiencing high rates of infection and death (Ranney, Griffeth, & Jha, 2020). The governments can encourage companies in the local communities to ramp up or shift to the production of masks, PPE, and other important devices. The governments can also ask smaller regional companies to play a key role in filling the gap as the elements of PPE and masks do not require intensive capital as
compared to the ventilators. Public–private partnerships will take ingenuity, meaningful resources, and relaxation of less essential regulatory norms. Apart from increasing the supply, a vital role for the government is to coordinate efforts for ensuring that the “hotspots” or the areas hardest hit at any given time are getting the equipment when needed (Ranney et al., 2020).

Third, the government must focus on the accommodative fiscal policy for the short-term to help cushion against the potential economic impact of the outbreak. One of the key steps is the reduction of the benchmark interest rate, that has already been done by Australia, Japan, Malaysia, Thailand, and the Philippines (Allan, 2020). The monetary conditions can be set loose for an extended period and such fiscal measures can provide relief to businesses by providing cushion to the demand reduction and mitigating some downside risks. The outbreak can hugely impact the real estate market that shall prevail for a longer time period rather than being immediately apparent. This can be curbed by tax cuts that may assist landlords in lowering expenses or covering revenue lost via the extension of rent rebates to tenants.

6 | CONCLUSION

Through this paper, we studied the challenges and responses to the Covid-19 outbreak in South Asia. South Asia is one of the most populous regions of the world, which is considered highly vulnerable to any large-scale outbreak of an infectious disease due to its low level of development, average health infrastructure, and dense population. Although all countries took individual actions, it took the collective political leadership of SAARC almost 2 months to put aside political differences and meet to discuss the dangers to the region posed by Covid-19. The video conference as held on March 15, 2020, was then followed by the video conference of the healthcare professionals at the Director-General of Health Services (DGHS) level on 26th March, to discuss a framework for cooperation as agreed in the video conference, to draw common strategy by involving all SAARC nations to deal with the current outbreak of Covid-19. A shared electronic platform for the sharing of information, knowledge, and expertise was proposed. Community engagement and participation were identified as an important element in any anti-Covid-19 strategy to augment the large-scale emergency measures undertaken by the governments in the SAARC region. Public health experts note concerns about a deficit of testing, detection, and reporting in the region, where access to medical and sanitation systems is inadequate and populations are dense. The doctors, nurses, police, etc. are still struggling the access to personal protective equipment. There is a shortage of body coveralls and N-95 masks in the country. The government of each South Asian nation has announced to set aside certain funds to purchase equipment necessary to fight Covid-19, such as ventilators, personal protective equipment, and masks.

Our analysis shows that the policymakers and healthcare experts have commonly agreed that testing, tracing, and treating the Covid-19 is the need of the hour. The common Covid-19 emergency fund created by the SAARC leaders would be used to tackle and mitigate the risks associated with the coronavirus pandemic in the South Asian countries. As on April 9, 2020 the fund has accumulated a sum of 21.8 US$ as contributed by all the eight nations.

Although the study provides a comprehensive analysis that would help formulate policy guidelines, it has several limitations that could become avenues for further research. We have collected interviews that are publicly available on social media, blogs, and newspapers, which may lead to selection bias. The sample includes only South Asian countries hence the conclusion could not be generalized to the entire world and the recommendations provided may be applied to a small group only. However, through adaptation, our findings may be helpful to understand the challenges and responses elsewhere as well.

This study confers two types of contributions to the body of knowledge, including theoretical and practical contributions. We make a theoretical contribution to the literature of pandemics and health economics by understanding the impact of the pandemic and the measures taken to address the issues to combat the effect of Covid-19 on individuals and communities in various ways. The practical contribution deals with the steps taken by the SAARC leaders and health care professionals at a strategic and operational level, respectively. At the strategic level, policymakers work on the captive policies to prevent the adverse impact of Covid-19 on people’s health (Hadjimanolis & Boustras, 2013), their lives, and the economy as a whole; whereas at the operational level, policy implementation, as well as execution, is focussed upon by involving estimation of the resources required and keeping track of real-time epidemiological data by the healthcare professionals.

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CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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ENDNOTE

Case fatality rate (CFR) is the proportion of deaths within a defined population of interest and measures the severity of the disease that causes death.

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