

**COMMENTARY**

COVID-19 and India's vulnerable indigenous populations

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The COVID-19 pandemic has already infected over 70 000 indigenous people with 2000 deaths (WHO, 2020). In Brazil alone, over 27 000 cases of COVID-19 infections and 806 deaths have been reported among the indigenous population till September 2020 (Charlier & Varison, 2020). Similarly, new infections were reported from one of the least approachable groups, the Nahua tribe in the Amazon region of Peru (WHO, 2020). In the United States, the pandemic has caused the death of one in 3600 white Americans compared to one in every 2300 Native Americans. The Navajo Nation alone has recorded many COVID-19 infections and deaths, exceeding New York and New Jersey (Sternlicht, 2020).

India has over 100 million people from various indigenous groups and they are locally known as “Adivasi,” meaning ancient inhabitants. They live in forests, drylands and islands away from the general public (Agoramoorthy & Hsu, 2020). Although India has enforced the lockdown from late March to the end of May 2020, little is known about its aftermath impacting the indigenous communities. A quick search of the word “COVID-19” in Web of Science database for 2020 has yielded 41 798 papers and when the phrase “COVID-19 indigenous people” was used, it yielded only 38 papers. When we have added “India” in the search, it did not yield anything, which shows the deficiency of data on the rarely discussed topic. This commentary provides the information on how the pandemic impacts India's vulnerable indigenous groups.

1 | THE VULNERABLE INDIGENOUS GROUPS

India's affirmative action came into effect in 1950 to uplift the customarily suppressed people belonged to the lower social castes so that they could be integrated in society. Historically, the Hindu scriptures have justified the untouchability narrative as a result of odious sins accumulated in previous births leading to rebirths of some individuals in lower social castes (Joshi, 1986). Although the caste prejudicial practice was outlawed in 1950, the discrimination nonetheless continues (Agoramoorthy & Hsu, 2020). India's indigenous communities represent 8% of the total population and 25% of them are listed as the most impoverished (Government of India, 2011). Similarly, a survey conducted in 2016 has showed that 46% of the indigenous groups had the least wealth compared to 27% of the scheduled caste, 18% of the backward castes, 8% of other castes, and 25% of cases unknown (NFHS-4, 2020).

The above statistics has exposed the magnitude of poverty affecting the socially and economically marginalized groups leading to severe migration stress. As a result, 500 000 people from different indigenous groups migrate to cities for jobs. They traditionally rely on farming and collecting forest products. But in recent years, they are faced with more difficulties to access irrigation water and to procure agro-products and machineries to continue farming and thus, many are forced to leave their farm-lands. The enduring pandemic has further forced them to face food insecurity in their villages (Saxena et al., 2020). They are known to collect over 200 minor forest products that range from firewood to medicinal herbs and the revenue generated has been estimated at USD 20 billion yearly (Aggarwal & Ghosh, 2020). But, only a fraction of

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it reaches them because a major part of it ends up in the pockets of numerous intermediary dealers.

2 | THE IMPACT OF PANDEMIC

India enforced the pandemic lockdown abruptly on March 24 that ended on May 31, 2020 and that certainly impacted the country's 1.35 billion inhabitants (Agoramoorthy, 2020). Among them, the disadvantaged migrant workers from various indigenous groups based in cities such as Delhi, Mumbai, and Kolkata were the most affected. Due to the lack of transport, many ended up walking for hundreds of miles to return home as they lost their jobs leading to sudden shortage of funds and food (Agoramoorthy & Hsu, 2020).

Most of India's 550 indigenous groups are adapted to the lifestyle of the mainstream society with the exception of 75 highly vulnerable groups that continue to follow the hunter-gatherer way of life. They have minimal contact with outside leading to low education, less socio-economic progress and more susceptible toward diseases (Giri, 2020). For example, the Odisha state has over 60 indigenous groups and 13 of them have been listed as the most vulnerable. They have a combined population of 250 000, distributed across 1500 villages. Six from two vulnerable groups (Bonda and Didayi) were tested positive for COVID-19 (Mohanty, 2020). The first case was recorded from Malkangiri district, home to 12 000 people. The source of the infection remains unclear, so it has become an epidemiological nightmare for officials. Likewise in March 2020, the Chhattisgarh state government reported only six COVID-19 cases (Raju, 2020). But, the cases have exploded to 198 000 including 2400 deaths by November 2020. Also, the viral spread has reached the remote indigenous region of Bastar by infecting five from the Abujh Maria community. The infected patients traveled outside recently that might have triggered the viral exposure (Sharma, 2020).

The isolated indigenous populations located in the Andaman and Nicobar Islands have a long history of death by diseases. The historical record showed that contagious diseases namely pneumonia, measles, mumps, and influenza were introduced by outsiders and they played a major role to wipe out nearly half of the indigenous population in the 1800s (Krishnakumar, 2008). When the British officials arrived in 1858, the Great Andamanese community had a population of 5000. But, many died by defending territories and also by diseases namely measles and influenza introduced by soldiers. In 1999, about 90 people from the Jarawa tribe were impacted by an outbreak of measles (Pandya & Mazumdar, 2012). In August 2020, 10 people from the

Great Andamanese group have tested positive for COVID-19. Currently, a small population of 250 from Shompen group, 500 from Jarawa group, 100 from Onge group, and 50 from Great Andamanese group live on the archipelago distributed across 37 islands and 20% already infected by COVID-19 (Thacker, 2020). So, officials have to enforce emergency plans to contain the viral spread before it is too late.

3 | PROTECTING THE INDIGENOUS GROUPS

India's indigenous populations live in remote areas with poor healthcare facilities. They also lack timely awareness to efficiently deal the COVID-19 outbreak. To make matters worse, no baseline data are available for over 50% of the vulnerable indigenous groups. Therefore, the indigenous communities are under immense threat from COVID-19 than other communities. By early March 2021, India had recorded over 11.4 million infected cases of COVID-19 with 159 000 deaths. People from the indigenous groups have not exposed to novel outside pathogens as they have minimal contact with the outside (Pandya & Mazumdar, 2012). Hence, they are more vulnerable toward various viral diseases. Also, the lack of access to adequate health care facilities and the scarcity of access to clean water, sanitation, and personal protective equipment have made the indigenous populations more vulnerable toward the pandemic (Kasi & Saha, 2021). Moreover, the indigenous population is the most marginalized socio-economically and therefore less scientific studies are done to understand the actual infectious disease burden faced by them. So, we call for more studies and the government has to allocate special research grants to boost systematic disease surveillance in the least studied tribal region.

The indigenous areas of Chhattisgarh and Odisha states are the epicenters of the Naxalite–Maoist insurgency where attacks on officials, soldiers, and indigenous people lead to deaths (Ahuja & Ganguly, 2007). Sociologists have argued that the indigenous groups are deprived of economic opportunities when compared to others as they are inept to express their outcries through the electoral process and thus they have become more fearful of the systemic violence committed against them historically. The poverty and predicament have further pushed them to distrust the government (Guha, 2007). According to the UNICEF (2020), the nutritional services for the indigenous children and their mothers have plunged by 68% in April 2020 when India's lockdown came into effect that indicated how the government continued to ignore their agony.

When the COVID-19 news reached the indigenous communities, many have turned to forest deities for natural protection from the pandemic. The Hallaki group in Karnataka has a pandemic goddess named “Mari” and people believe that it would cut the head of the pandemic demon. Similarly, in the Bastar region of Chhattisgarh, people seek protection from a deity named “Sheetla.” Scientists have recognized that religious faith-induced perceptions have shown more tolerance to psychological and physical stress leading to the fine handling of threatening diseases (Le et al., 2019). Besides, the indigenous people use numerous medicinal plants to control ailments that affect them and their livestock (Adhikari et al., 2018). They also use the traditional medicine for COVID-19 (Basu, 2020). Unfortunately, the knowledge of forest medicinal remedies is under threat due to deforestation. Therefore, scientists have called for the documentation of indigenous knowledge to sustainably manage medicinal plants across the region before it gets worse (Kanaujia Sukula, 2006).

4 | RECOMMENDATIONS

The Indian government needs to enforce public health policies in partnership with indigenous groups while respecting their traditional perspectives on diseases and their treatments. The government must respect their rights for self-governance prioritized by the UN Declaration on the Rights of Indigenous Peoples in 2007. Officials in general are reluctant to work in remote forest areas so young officers, educators, and health professionals need to be trained to sensitize the indigenous culture so that they can work exclusively to resolve their concerns. The state government of Tamil Nadu, for example, has offered additional merit points for each year of service in remote areas where indigenous communities live that attracted health professionals (Bruno Mascarenhas, 2012). Also, some doctors prefer to stay in remote forest areas to serve the indigenous communities as they often develop close relationships with people and thus get used to the rural lifestyle (Sheikh et al., 2012). In order to encourage such health workers, the state government of Chhattisgarh came out with an attractive scheme and offered higher salaries to health professional to serve the indigenous communities inhabiting the remote forest areas and thus establishing a successful model (Mavalankar, 2016). Given the lack of data on the vulnerable indigenous groups, a coordinated effort by various government and non-government agencies to monitor COVID-19 in the indigenous communities is highly recommended. However, the efforts need to be adapted to the community to be effective rather than trying

to integrate the community into the broader society, which will be counterproductive. Above all, the government must provide special budget allocation to ensure the public health safety for the often ignored and socially-suppressed indigenous communities while retaining their self-governance with minimal outside influence.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Govindasamy Agoramoorthy: Conceptualization; data curation; formal analysis; validation; writing-original draft; writing-review & editing.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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