



## SOCIOECONOMIC IMPACT OF THE PANDEMIC ON RURAL AREAS OF TAMILNADU

Annapoorna D

### ABSTRACT

COVID-19 was declared a pandemic by the WHO on March 11, 2020. In India, early COVID-19 instances were first noticed in February 2020. Travel restrictions, quarantine enforcement, testing, and contact tracing are examples of precautionary measures that India has put in place. A nationwide shutdown that began on March 22, 2020 and was later prolonged until May 31, 2020 was the primary COVID-19 containment measure implemented by the Indian government. Because of the usage of national lockdowns as a containment measure, especially in emerging countries, all socioeconomic strata saw increased unemployment and revenue loss. The households had lower incomes and ate less food during the lockdown, according to multi-state rural research performed in India, and many resorted to borrowing to pay bills as aid options like rations and cash transfers started to become scarce. To spread knowledge of the virus, caller ringtones for mobile phones with COVID-19 alerts were implemented throughout the nation. The report concludes that overcoming COVID-19's challenges will require socioeconomic strategies and tactics. Coordination between the health system, the finance system, and the general community is crucial for efficiently combating the COVID-19 epidemic and maintaining quality of life. In this epidemic, community-centered care is more appropriate than patient-centered care. A COVID-19 pandemic solution is also necessary for hospitals and the general public. Because pandemics are unpredictable, long-term medical care and hospital management plans are required in the event of the next one. In hospitals, COVID-19 patients occupy a high containment of 300 beds out of 900 beds.

### KEYWORDS :

#### INTRODUCTION

On March 11, 2020, WHO labelled COVID-19 a pandemic. (1) Beginning in February 2020, early COVID-19 incidences in India were noted. (2) India implemented preventative measures such as travel restrictions, quarantine enforcement, testing, and contact tracking. The main COVID-19 containment measure put in place by the Indian government was a nationwide shutdown on March 22, 2020, which was then extended until May 31, 2020. 1) Country-wide implementation of mobile phone ringtones with COVID-19 warnings was completed to raise awareness of the virus. (1)

All socioeconomic levels have experienced higher levels of unemployment and income losses as a result of national containment measures used as a containment mechanism, particularly in developing countries. (3,4) According to multi-state rural research conducted in India, households had lower incomes and consumed less food during the lockdown, and many turned to borrowing to cover expenses when relief options like rations and cash transfers became scarce. (1) In Tamil Nadu, households with ration cards (a government-issued document for qualified households to purchase subsidised food from the Public Distribution System under the National Food Security Act) were qualified for free monthly rations as well as a special cash provision of 1,000 Indian rupees (14 U.S. dollars [USD]) during the lockdown. (1)

Levels of infection fluctuate throughout Tamil Nadu. Increased testing, doctors say, only partially explains the jumps. In many areas of the state, hospitals and ICU units are overflowing with new cases. Along the southern boundary and in the Vellore region, infection rates are also increasing. In these conditions, the study on COVID-19 and its effects on specific rural areas of the Katpadi Taluk in the Vellore district of Tamil Nadu is crucial, socially pertinent, and urgently required.

The goal of the study is to investigate the spread of COVID-19 in adjacent areas of Katpadi taluk in the Vellore district of Tamil Nadu. It aims to study the nature and pattern of spreading, observe the knowledge, attitude, awareness, and survival of people living in the study area, study the measures taken by the government to control the spreading of the COVID-19 pandemic, and suggest suitable policy measures to control the spreading of the COVID-19 pandemic in the study area. These research questions include: what were the

awareness levels in the villages of the study area regarding COVID-19?

1) how did the study area withstand various challenges posed by COVID-19? <sup>(5)</sup>

Coronavirus disease (COVID-19) in China's Wuhan City has become a global public health concern and the World Health Organization (WHO) has declared it a public health emergency. As of March 2021, more than 160 million people were affected and over 3.5 million deaths were recorded. 6) India declared an all-state lockdown on March 24, 2020 to contain the 2019 coronavirus pandemic (COVID-19). To date, over 12 million people have been infected with COVID-19 and over 0.162 million have died. (7)

#### Diagnostic Technique:

To diagnose positive instances in clinical testing labs, Reverse Transcription Polymerase Chain Reaction (RT-PCR) kit has been developed and is used. <sup>(8)</sup> However, it is only 30–70% effective for cuspidated infection, which may be caused by using lab kits incorrectly because the testing grid varies from nation to country. According to the CDC's advice, anyone who believes they have come into contact with someone who has the virus that causes the symptoms indicated above should contact their doctor. <sup>(9)</sup> The compliance requirements for testing include things like location, age range, patient history and risk of being harmed, and symptom duration. <sup>(10)</sup>

If the requirements are met, the testing process will be successful. If it is possible, collect test samples from the upper and lower gastrointestinal tracts using a nasopharyngeal swab. If a productive cough is absent, a sputum specimen X-ray and CT scan should be performed.

Plausible case and confirmed case: A probable opportunity to test positive is indicated by an inconclusive or suspected case where an individual tests positive in the lab and exhibits symptoms of the virus.

#### MEDICATION:

There will be Siddha treatment facilities for COVID-19 in every district. The Tamil Nadu government has established specialized Siddha care facilities to treat COVID-19 patients throughout the State's districts. Patients who test positive for COVID-19 and have minimal symptoms are treated with

Siddha. Around 75,000 COVID-19 patients are reportedly being treated in Tamil Nadu using the Indian medical system.

In Tamil Nadu, patients with COVID-19 can access an integrated treatment, and AYUSH physicians are offering their support. The government chose Tamil Nadu as the exclusive location for Siddha treatment and erected quite 18 locations there. Traditional foods and herbal mixtures, such as Kabasura kudineer, are used as a part of the patient's treatment and are well-received by them. Since the treatment is so effective, patients who are admitted to government hospitals can receive a similar level of care. <sup>(11)</sup> Homeopathy is used in conjunction with allopathic treatments, and patients also receive multivitamins and zinc supplements to boost their immune systems as a preventative measure. In addition to Siddha, the Tamil Nadu government has added yoga and naturopathy as supplemental therapy for COVID-19 treatment. Yoga asanas and pranayama are taught to the patients to strengthen their minds, increase their immunity, and improve lung health. More than 200 experts are involved in the treatment, which is also extended to government medical college hospitals, government district headquarters hospitals, and taluk hospitals around the state. <sup>(12)</sup>

The State that conducts the most testing is Tamil Nadu, where 1,83,956 people have been treated and discharged whereas 26,58,138 people have been tested thus far, demonstrating the efficacy of the integrated treatment given to the patients. <sup>(13)</sup>



#### Precautions To Be Taken For Covid-19:

Ayurveda is a conventional medical system that has been used for many years. To satisfy the needs of the present and the future, efforts are being made to reaffirm the advantages. Although efforts are being made, a viral remedy has not yet been developed. <sup>(14)</sup>

Convalescent plasma (CP) is a medication given to people who have been infected with viruses by taking samples from patients who have fully recovered to treat people. Many patients appeared to have recovered from the illness, suggesting that this treatment is successful. To improve patient treatment and boost the recovery rate, the Tamil Nadu government established several Plasma centers around the districts. <sup>(15)</sup>

#### Corona-viruses (covid19) & India's Epidemic:

The administration had prepared strategies to handle a worsening of the epidemic in the nation by early to mid-March 2020. To expand the number of quarantine and treatment facilities across the nation, seven ministries collaborated to establish them. Twenty ministries, including those for home, defense, railroads, labor, minorities affairs, aviation, and tourism, as well as the states, were made aware of the containment strategy.

In India, more than 16% of patients recover, compared to 3% of fatalities. Comparatively, the death rate is 10% in Spain, 5% in the US, and 13% in the UK and Italy. Even if there are around

33,405 positive cases in the Netherlands, the death rate is 11%

#### Preventive Measures:

Coronavirus screening, testing, and quarantining at Indian airports; coronavirus lab testing in India; a nationwide lockdown; the denial of visas for foreign people flying from impacted nations; the availability of coronavirus medications in India; etc. When epidemics and pandemics occur, these phrases refer to strategies for preventing the spread of illness

#### Public Social Distance Means People:

- Remain at home and only out if necessary.
- Maintain a 1.5 m distance between people.
- Refrain from giving or receiving hugs, kisses, or other physical pleasantries.
- Skip the cash and go for tap and go.
- Travel at dusk and steer clear of people.
- Keep yourself clean by avoiding public gatherings and at-risk populations like the elderly.

#### Quarantine:

Consider booking a single room with good ventilation and a separate or linked bathroom. Maintaining a gap of at least 1 meter between two people is recommended if another family member must stay in the same room. Restrict his or her movement inside the home. Under no circumstances, attend any social or religious gatherings, such as weddings, funerals, etc. Needs to avoid older folks, pregnant women, toddlers, and people with comorbidities in the household, to prevent the spread of disease, sick persons are isolated from others.

#### Data Gathering:

There are two different kinds of data collection: Primary and Secondary information gathering.

#### Primary data:

The information for primary data was initially gathered from the respondent via a questionnaire. The survey approach was used by the researcher to collect the primary data.

#### Secondary data:

Websites, journals, and newspapers were used as secondary sources to get the secondary data.

#### Analysis Of Data:

The Statistical Package for Social Sciences (SPSS) version 20 was used to process the data. All variables were described using descriptive statistics. The standard deviation and mean were used to calculate the average scores for the various research domains. The hypothesis was examined using the Chi-square test. <sup>(16)</sup>

#### Data On Covid-19 Morbidity, Mortality, And Risk Factors:

The largest capital of Hubei Province in central China, commonly referred to as the "Chicago of China," is Wuhan. With an estimated population of about 11 million, it is regarded as the most economically and industrially important region of central China (ECDC Outbreak of Acute Respiratory Syndrome Associated with a Novel Coronavirus, China: First Local Transmission in the EU/EEA Third Update, 2020). End-of-year reports of cases of unexplained pneumonia came from all across the world.

Patients in Wuhan who had concentrated pneumonia with comparable symptoms but an unidentified origin was also told in late December 2019. A significant public health catastrophe and reported deaths resulted from the disease spreading throughout China during the Chinese New Year enormous public mobilization. After prompt action by the Chinese government and researchers, it was determined that the SARS-CoV-2 virus is to blame for the continuing viral

pneumonia pandemic after conducting a thorough etiological and sequencing analysis. The World Health Organization (WHO) declared it a public health emergency on January 30, 2020, and later declared it a global pandemic on March 11 (WHO Coronavirus Disease 2019 (COVID-19) Situation Report - 76, 2020).

Therefore, it was of paramount importance to the researcher to identify the SARS-CoV-2 natural hosts and origin to reduce health risks and limit transmission across species and between humans. SARS-CoV-2 belongs to the Beta coronavirus genera that cause concentrated pneumonia outbreaks, according to systematic whole genome-based molecular phylogenetic analysis and comparative genomic investigations. Two Bat SARS-like CoVs (ZC45 and ZXC21), which are close cousins of SARS-CoV-2, were identified by phylogenetic analysis using the full-length genome as the probable ancestor of SARS/SARS-like CoVs (Rehman., 2020).

Additionally, a full-length sequence analysis showed a higher sequence similarity (96%) with RaTG13 discovered in Yunnan Province, which is far from Wuhan, suggesting a transitional host for breaking down a species barrier. Then, CoVs obtained from pangolins were also thought to be responsible for the epidemic; however, human SARS-CoV-2 had a Furan cleavage site that was not seen in the spike protein of either pangolin-derived CoVs or CoVs derived from RaTG13. Additionally, it was thought that the isolated CoV from *Rhinolophus Malayans* (RmYN02), which exhibited insertions in the spike protein and high genome homology (93.3%), was probably the ancestor of SARS-CoV-2.

Cities that connect to Wuhan, which serves as a transportation hub, have higher traffic volumes. Around the time of the Chinese New Year, there is a rapid nationwide spread of the disease due to increased public activity, which sparks an epidemic. The spread of SARS-CoV took 54 days, whereas COVID-19 took six months. According to Gundel (2005), the factors that hindered China's management of the initial COVID-19 cases included an unidentified etiology, controlled disclosure of information to the public, public anxiety, and resistance to restrictive movement measures. Furthermore, the decision to conceal information or deal with viruses with unclear etiologies and natures during politically and culturally sensitive times resulted in lies and cover-ups (Shang guan., 2020). A lack of autonomy in the management of local health structures does not guarantee prompt crisis response.

According to studies by Shanghai. and Public Health Ontario Review of "The Epidemiological Characteristics of an Outbreak of 2019 Novel Coronavirus Diseases (COVID-19) - China, 2020," there were insufficient public health resources to treat the affected patients as a result of the privatization of public hospitals (Shang guan., 2020). Hubei Province has so far (October 2021) been the epicenter of COVID-19 patients, with 96,410 confirmed cases and 4636 fatalities. Lower infection rates can be found in other Chinese provinces.

Furthermore, the decision to conceal information or deal with viruses with unclear etiologies and natures during politically and culturally sensitive times resulted in lies and cover-ups (Shang guan., 2020). A lack of autonomy in the management of local health structures does not guarantee prompt crisis response. According to studies by Shanghai. and Public Health Ontario Review of "The Epidemiological Characteristics of an Outbreak of 2019 Novel Coronavirus Diseases (COVID-19) - China, 2020," there were insufficient public health resources to treat the affected patients as a result of the privatization of public hospitals. Hubei Province has so far (October 2021) been the epicenter of COVID-19 patients, with 96,410 confirmed cases and 4636 fatalities. Lower infection rates can be found in other Chinese provinces. <sup>(17)</sup>

#### Risks Associated With Convalescent Plasma:

It is clear from the study's findings that the Capacitively Coupled Plasma therapy is effective, and the unfavorable ratio, which is only one percentage, may not be attributable to this and instead may result from other issues in the medical industry. <sup>(18)</sup>

#### Convalescent Plasma Donors:

To be eligible to donate, potential donors must have a valid medical record of their SARS-CoV-2 infection, regardless of whether they tested positive for the virus by a nasopharyngeal swab or a blood test, and they must have been symptom-free for at least 14 days.

Convalescent plasma donation information can be found through AABB-accredited donation sites, which also provide a way for potential donors to get in touch with these facilities to learn more about their eligibility requirements.

Donate COVID-19, Food and Drug Administration Convalescent plasma donation locations for transfusions and the production of hyperimmune globulin are listed. Convalescent Plasma National COVID-19 Project. <sup>(19)</sup>

#### CONCLUSION:

According to the study, socioeconomic actions and methods are required to get beyond COVID-19's obstacles. To effectively combat the COVID-19 epidemic and maintain quality of life, coordination between the health system, financial system, and the general population is essential. Community-centered care is more suitable during this pandemic than patient-centered treatment. Additionally, the entire populace as well as hospitals require a COVID-19 pandemic solution. Plans for long-term medical care and hospital management are necessary in case of the next pandemic because pandemics are unpredictable. A high containment of 300 beds out of 900 beds are occupied by COVID-19 patients in hospitals. Also, 70% of the ICU beds were set aside for COVID-19 patients who were seriously ill and had a good chance of surviving. Because of a lack of experience managing the epidemic setting, the situation is ineffective.

For hospitals and the general public to address the problem efficiently, a proper procedure is also required. The sick will experience a high amount of stress because front-line soldiers, particularly health staff, become carriers. It is necessary to appoint many frontline employees for hospitals and the general public to address the dire situation.

The threat of a recession and the breakdown of the nation's financial state has intensified as a result of the present pandemic emergency. For the sake of the larger society, there should be a strong commercial and government foundation tied to welfare leadership. In addition, emergency financial assistance measures must be put in place to deal with the collapse. Governments and policymakers must create medium- and long-term plans to revitalize and rebalance the economy to address the crisis.

A thorough socioeconomic development strategy with a solid and sustainable business model is also necessary to support entrepreneurs. To ensure the economy is operating under normal and stable conditions, financial institutions and governments must constantly reevaluate and reassess their policies. <sup>(20)</sup>

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