



# **Clinical, Socioeconomic, and Psychosocial Profile of COVID 19 Patients at a Tertiary COVID Designated Hospital in Pune, India**

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## **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## **ABSTRACT**

The COVID 19 pandemic continues its havoc over the last six months in India. The present study of the initial phase of illnesses in mild to moderate cases of SARS-COVID is the rampant community transmission. This observational and cross-sectional study aimed to analyse and correlate the socioeconomic and demographic parameters with clinical and psychosocial presentations of the COVID disease through a questionnaire-based interaction. Mild and moderate COVID positive patients with stable hemodynamic were enrolled for the study. The findings revealed that of the 179 patients, the majority of patients were adults below 60 years of age group, followed by the older age group above 60. Males had a slightly higher preponderance than females. The majority of people in their families were medium to big and overcrowded, lacked social distance and poor hygiene practises were partially attributable to bad social economic conditions. Most of the patients originated from the red area, i.e. high-risk zone, as well as the high level of transmission of COVID illnesses to human beings. The majority of patients were in the poor and lower middle classes (Kuppuswamy modified scale). Most of the occupations of COVID patients involved the lower strata

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labour jobs. Fifty percent of patients had no symptoms at onset and remained asymptomatic throughout the illness. There were many issues and insecurities in most patients relating to the current illness, future well-being of families, job and financial concerns that warrant strategies to be implemented during and in post COVID era.

*Keywords: COVID 19; social economic; demographic; SARS, psychosocial; pandemic.*

## 1. INTRODUCTION

Beginning in Wuhan, China in early 2020, the world's population was affected by a unique respiratory virus. It spread fast to our Indian people through travellers from those nations, then swallowing up the industrialised countries like as Italy, Great Britain, and the USA with significant morbidity and death [1]. COVID 19 continues with serious morbidity and death to cause havoc today. A new coronavirus, known as COVID 19 or SARS CoV19 [2], was found to be the acute respiratory sickness. It has unabated dry toxin, high-quality fever and other viral symptoms [3] and fewer individuals have dyspnea, which may be severe [4].

In March 2020 the WHO proclaimed the worldwide pandemic [5]. The actions undertaken at the state level in India were a partial or complete lockdown in order to mitigate the spread of the virus and to prevent it from spreading [6] as well as measures such as social removal, the use of protection masks to cover mouths and nose, and frequent hand washing and preventing contact or transmission, since the virus has a high chance of transmission from human to human. In medical personnel, too, this illness is more affected in the elderly population, i.e., age more than sixty, and those with co morbid conditions [7], i.e., diabetes, heart, and lung diseases, which can deteriorate and succumb rapidly. It has been observed that males are more often affected than females [8].

The new virus about the host infection process and the course of the disease is poorly known. For treating coronavirus illness no particular antiviral therapy is defined. Many medicines, including antivirals, are empirically trialled, thus more trials are needed. There have been minimal studies, notably in India, examining socio-economic and demographic correlations with the clinical manifestations of the disease [9].

## 2. LITERATURE STUDY

In the early phase of this COVID epidemic before and during a lockdown in Pune, India, we report

an observational research with maximum COVID cases.

The purpose of this study was to analyse the different clinical presentations of the COVID 19 patients hospitalised within the Lavale, Pune, Maharashtra, in 3 months at Symbiosis Hospital, Symbiosis Medical College of Women and SUHRC. Socioeconomic variables were investigated and the relationship between them was linked through the Kuppuswami Index and the psychosocial effect of the illness [10].

### 2.1 Study Design

Observational cross-sectional descriptive study

### 2.2 Sample Size

Two hundred COVID19 adult positive patients were selected for this study throughout three months in Symbiosis Hospital, i.e. April 2020 - June 2020.

#### 2.2.1 Goals / Questions on research

1. To identify positive COVID patients' demographic and socio-economic characteristics.
2. In asymptomatic and symptomatic individuals with COVID, to analyse the course of disease.
3. To link and, if applicable, identify a relationship between demographic and clinical characteristics.
4. Find out how COVID illness affects patients' emotional and social well-being and their patient knowledge of the condition.

### 2.3 Inclusion Criteria

1. All positive patients with or without symptoms of COVID (RTP CRT) over 18 years and above any other sex who have been received at SUHRC were included for the study in accordance with established guidelines [2].
2. After proper informed permission, the study includes patients with or without the

co-morbidities of other medical illnesses such as diabetes mellitus, heart and lung disease.

## 2.4 Exclusion Criteria

1. Patients with severe senile debility/ altered sensorial.
2. Severe category COVID patients needing intensive care.

## 2.5 Duration of the Study

3 months starting from April 2020 to June 2020.

## 3. MATERIALS AND METHODS

COVID positive ward patients are the subject of the study, with minimal formal paperwork, permission documents and questionnaires. After a proper written and informed permission was obtained in a locally understood language, a number of questions were posed to the patients (179). The questionnaire was validated by two experts in this field and included demographic information, clinical questions about possible sources of infection, journeys outside the city or city, time of disease, patterns of disease, signs and symptoms, a significant history if any and measures taken to prevent disease, etc [11]. The remaining information needed for the study has been gathered from the papers of the hospital. The address, job and collective income of the households, i.e. the family's socioeconomic position, were examined. The Kuppuswami index was classified into the higher, medium, lower, lower or lower classes [12]. The co-morbidities have also been investigated and details documented. We looked at demography factors such as age, gender, addresses of the patient's house/family indices and total numbers of members of the family (Red, Orange, or Green) for high-risk regions, education, occupation, and earner's data for Kuppuswamy [13].

This survey includes the clinical history of co-morbidities such as diabetes, hypertension, asthma, TB, cancer, and clinical complaints, such as fever, cough, cold, headache, malignancy, articulate pain, discomfort and loss of taste, or hunger. A history of medication and any clinic findings were recorded, history of safe cough and hand hygiene practices[14], mask use outside homes, social distancing in public, any important family, personal or social history such as serious or family death or death, or a history of medication visit to a hospital etc. Patients

recorded the patient's psychological and psychosocial history of anxieties relating to health, family, death fears, employment and financial worries, as well as open-ended issues of patient mental well-being. Because this has been cross-sectional, at the time of discharge, only one data from each patient was gathered in the paper questionnaire around two weeks following hospital stay. For particular population [15] the study was compiled according to numerous factors and findings. Free distribution tables, bar graphics, and PI charting were used for statistical analysis.

## 4. OBSERVATIONS AND RESULTS

Of the 179 patients in the age group, 42% were from 20 - 40, 40% were from 40 to 60, 19% were from the age group beyond 60, and 2% were from below 20. Male counted 54%, while female counted 45%.

The jobs of patients included the work of an office worker, a home manufacturer, driver, data entry operator, an office employee, police officer, hotel owner/company wine shop, film theatre manager, plumber, security officer, worker, artist, executive of the Call Center, housewife, waste worker, race worker, boy in a private office, mechanic, sewages manufacturer, mazon at a construction site, student, chair repairer, scrap worker, retired post office staff, housewife, fish seller, furniture worker, cloth shop worker, accountant, labourer in a cotton mill, housekeeping at a college hostel, ward boy at the hospital, labourer, rag picker, iron shop worker, a society sweeper, mechanic, technician, fruit seller, cook, etc. six patients were domestic maidservants working at multiple homes with a history of foreign travel of the employers in 3 of the homes of 3 maids. All these patients were exposed to varied protection measures and distances in several persons working.

The high-risk zone for Covid19 was 70 percent of patients presenting at the hospital. The medium risk zones accounted for 30 percent while the low risk regions represent 4 percent. The kuppuswamy indicator shows a 60% (109) rate of patients with socio-economic level of lower middle (LM), 24% (43) with social-economic status of upper lower(UL), 12% (22) with socio-economic status of lower(L) and 2,8% (5) of lower(L) patients.

121(69%) of patients were of modest family size (4 to 10) 22% were tiny family (<3) and 17%

were large family (>10) with cramped houses, poor hygiene and lack of social distance, partly owing to poor socioeconomic position. The figures are modest. In the high-density COVID regions of Pune & Mumbai and other red and orange cities, and secure green zones by government agencies, corona infections have a greater prevalence in big congested populations.

80% of patients were without co-morbidity, 7-8% were diabetic at the beginning, but many of them were diabetic first time, and thus the figure later ranged from 18-20%. 9% were hypertensive, some had around 10% of hypertension after admission.

Symptomatically, 12.8% had fever alone, 9.8% had fever, cough and bacteria, 24% had non-fever symptoms, and 53.6% had no symptoms, respectively. The asymptomatic patients were identified by officials on normal testing or screened as precautions with the ill household. Every Kuppuswamy index on the socio-economic position and age relationship, gender, co-morbidity and signs, was analysed using demographical parameters of age, sex, housing location (depending on the medium-risk and low-risk zones) and age.

Awareness and safe practises of cough and cleanliness, interior and public wearing of masks have been approved and 90% to 95% of the patients are currently doing this.

As regards psychological and psychological history, 9 patients lost a relative to COVID, with the majority concerned about spouses or parents or children or/and adults who were admitted to different COVID locations of the same or the same name.

Few had concerns for their kids who were being looked after by others when the couples were admitted for COVID care. 90% of the patients had anxiety about the health and progression of the COVID course and fear of complications. 72 - 75% of patients had anxiety over their jobs and financial security in the face of the government's prolonged lockdown and the compulsory abstinence from jobs in offices, shops, restaurants, and other work places, and due to scare of the spread of COVID in public places.

## 5. DISCUSSION

At the beginning of the pandemic in India, the first phase of COVID patients will take place from

March to May 2020. Before the transmission of the community in most cases, the illness was developed when people from different cities or countries were contacted or in the neighbourhood and spread to their close connections. In our investigation, very few suggestions were received by the community. All patients at different occupations were exposed to several individuals with unknown COVID status at work. All COVID patients were moderately severe except three moderately severe pneumonia cases. This was a single cross-section study of interaction time, such that every instance progressively progressed.

The bulk (>75%) of patients were identified below the age of 60, although a considerable proportion (19%) were below the age of 60. Males in our research were somewhat higher than women, which corresponds to prior studies. Our results reflect a research conducted in North India in which male patients are greater (80%) and less than 60 years old. A research from Delhi is consistent with the results of the age and gender prevalence of COVID.

Most of the professions were undertaken for work in the low category, which exposed themselves to outside environments such as grounds, air and people, and which, despite social distance, were forced to continue their jobs for different reasons.

This aspect is of importance for the high human-to-human transmission of COVID and an exposure to the public in a number of undiagnosed, suspected COVID cases to workplaces connected to floor cleaning or work (high deposition of the virus on surfaces).

Most patients were medium and big in families, i.e., more than 5 to 7 people were in family size. That has been noted in conjunction with overcrowded houses, poor hygiene and a lack of social distance, together with the problems of diet and immunity in a number of patients.

In most patients the importance of selfcare and tough and hand hygiene, seclusion and distance from social life and knowledge on proper diet and strains was highlighted by inadequate hygiene, nutritional and immunological variables, as well as by the related overcrowded house (Kuppuswamy index).

Most came from the red zone regions, i.e. high-risk confinement zones. In rare from the families

of histories of patients who have either died or had more significant problems, co-morbidities such as diabetes and high blood pressure have been observed. Fever has been identified alone or as additional symptoms of body aching, malaise and tiredness in a small number of individuals in respect of COVID symptoms. Some individuals with a few signs other than fever had a moderately greater proportion, but 50% had no symptoms and were asymptomatic throughout. There were anxiety issues of insecurities relating to the current illness, the patient and family's future well-being, and job and financial concerns. The findings of the psychological impact are consistent with an update from South India.

### 5.1 Significance of the Study

COVID 19 is a new illness of the virus. Although a lot of research is being done, many elements of their illness [15] differ in set-up and age and gender, co-morbid diseases, complications, therapy, prevention and its impact on the people afflicted. The observations of our study group have been analysed and contrasted with the other research that allows us to make greater conclusions.

### 6. CONCLUSION

These results provide an insight into the demographic profile and the socio-economic conditions of patients in larger families and the high prevalence of the disease. The majority of patients were individuals under the age of 60, but a substantial proportion was older. In our analysis, males were somewhat more prevalent than females. Most patients were medium and big in families, i.e., more than 5 to 7 people were in family size. Most cases originated largely from the red regions, i.e. very risky areas of containment. The majority of patients belonged to the lower and middle classes (Kuppuswamy modified scale). All patients who worked in various occupations were exposed to several individuals with unknown COVID status. Lower strata of workplace work with external exposition such as floors, air, and the public was the main occupation of COVID patients. Fifty percent of patients did not have symptoms and were asymptomatic for the whole disease. The problems of insecurity in the existing disease, patient and family well-being and employment and financial interests were concerned. In post COVID patients, this guarantees some coping techniques. All these knowledge would enable us to learn more about the novel area of

coronavirus, aid communities, students and society in health education and improve the awareness of the disease for this unique coronavirus.

### CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the author(s).

### ETHICAL APPROVAL

Ethical approval taken from Symbiosis Medical College for Women, Symbiosis International University (Deemed University), Pune, Maharashtra, India

### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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