

Demographic Characteristics of Patients with COVID in Private Tertiary Hospital in Islamabad

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ABSTRACT

Background: the demographic characteristics of 100 COVID-19 patients from a private tertiary hospital in Islamabad were examined. The majority of the patients (72% of whom were female) were married (62%) and from the lower middle class (76%), with a median age of between 30 and 50 (47%). 57% of the patients were employed, putting them in a middle-class socioeconomic situation. The most often reported underlying comorbidities were coronary artery disease (5%), chronic lung disease (13%), diabetes (42%), and hypertension (47%). These results highlight the need to increase public awareness of the warning signals and preventative actions for this condition in vulnerable populations.

Objective: In this study, the socioeconomic level, age, and gender of patients with COVID-19 who were being treated at a private tertiary hospital in Islamabad, Pakistan, were examined.

Methods: The demographic information of 100 patients hospitalized with COVID-19 at a private tertiary hospital in Islamabad between January 2021 and January 2022 was examined in a retrospective research that we carried out. From patient records and medical reports, we gathered information on the patient's age, gender, socioeconomic position, present and underlying comorbidities, and other pertinent features.

Results: The bulk of the patients (72% of whom were female) were aged between 30 and 50 (47%), were married (62%) and were from the lower middle class (76%). In terms of socioeconomic position, 57% of the patients were employed. Hypertension (47%), diabetes (42%), chronic lung disease (13%), and coronary artery disease (5%) were the most frequently reported underlying comorbidities.

Conclusion: The findings highlight the need to raise public knowledge of the danger signs and protective measures for this illness in susceptible groups. Further study is required to understand the root causes of COVID-19 in Pakistan fully.

Keywords: COVID-19, demographic characteristics, Islamabad, private tertiary hospital

INTRODUCTION

In the last year, the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), known as COVID-19, has caused a worldwide epidemic and presented unheard-of difficulties. As of February 29, 2021, this unique virus's fast spread has caused more than 108 million confirmed cases and 2.3 million fatalities globally. Pakistan has suffered substantially since February 28, 2021, with 732,321 issues and 15,249 deaths recorded¹. Worldwide, the virus has significantly affected health services, and Pakistan's healthcare institutions are also having trouble owing to a shortage of funding². To handle the needs of COVID-19 patients, private tertiary institutions have remained comparatively well-equipped in places like Islamabad. This has allowed these institutions to treat patients of all ages and socioeconomic statuses³. In the current research, 100 COVID-19 patients who had been hospitalized at a private tertiary hospital in Islamabad, Pakistan, had their demographic profiles examined. Age, gender, socioeconomic position, present and underlying comorbidities, and other pertinent features were among the sociodemographic characteristics of patients hospitalized with COVID-19 that we sought to understand. There are variances in the sociodemographic features of COVID-19 patients in various areas of the globe, according to several research done in China and Europe⁴. According to research done in Wuhan, China, the majority of COVID-19 patients, or 58.5%, were found to be male. In addition, older individuals—those aged 45 to 64 and those over 65—accounted for 33.6% and 39% of the cases, respectively⁵. Similar patterns in the gender and age distribution of COVID-19 hospital patients have been documented in research undertaken in Germany and Italy.

Additionally, a study conducted in Shanghai, China, found that diabetes (44.3%) and hypertension (59%) were the two most common underlying comorbidities among COVID-19 patients⁶. Since household registration restricts residency in Shanghai, most patients come from lower socioeconomic groups, which may help explain why the area has a greater frequency of underlying comorbidities⁷. The sociodemographic features of hospitalized

COVID-19 patients in Pakistan are the subject of little public knowledge. To close this gap, we performed retrospective research on the demographic details of hospitalized COVID-19 patients in Islamabad from January 2021 to January 2022. The results of this research will make it possible for politicians to create more focused plans for the nation's prevention and control of this illness⁸.

MATERIALS AND METHODS:

Study Setting: This investigation was conducted at a private tertiary hospital in Islamabad with specialized COVID-19 departments. The hospital has enough medical equipment, such as masks and gloves, and 200 beds to accommodate COVID-19 patients.

Study Design: The demographic details of 100 individuals hospitalized with COVID-19 between January 2021 and January 2022 were studied retrospectively.

Data Collection: Patient information (age, gender, and socioeconomic position), present and underlying comorbidities, and other pertinent variables were gathered from patient records and medical reports.

Statistical Analysis: The IBM Corp., Armonk, NY, USA, used SPSS version 22.0 to conduct the descriptive analysis. Proportions and 95% confidence intervals were used to represent the data.

RESULTS

The average age of the 100 hospitalized COVID-19 patients included in this research was 50.4 years, with a standard deviation of 17.4 years, and 72% were female. 62% of the patients were married, and 76% were from the lower middle class in terms of socioeconomic level. In terms of socioeconomic position, 57% of the patients were employed. Our study showed that PCR results were 30% positive and 70% negative. Hypertension (47%), diabetes (42%), chronic lung disease (13%), and coronary artery disease (5%) were the most frequently reported underlying

comorbidities (Table 1).

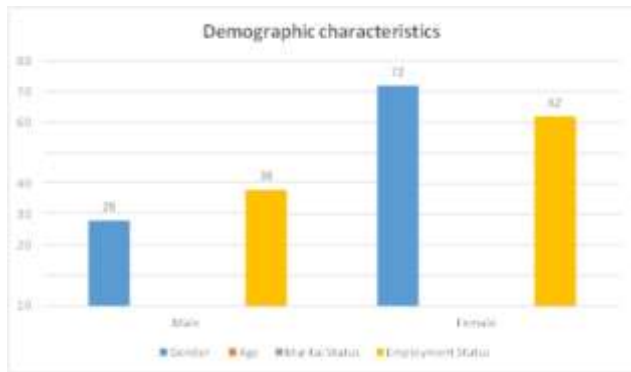


Figure 1: Demographic characteristics

Table 1: Demographic characteristics of 100 COVID-19 patients admitted to a private tertiary hospital in Islamabad from Jan 2021 to Jan 2022 (n=100)

Characteristics	Frequency	Percentage (95% CI)
Gender		
Male	28	28 (19.4 -38.5)
Female	72	72 (61.5-80.6)
Age		
<18 years	10	10 (4.6-19.1)
18-30 years	15	15 (8.5-23.6)
30-50 years	47	47 (36.2-57.7)
50-70 years	20	20 (12.1-29.9)
>70 years	8	8 (2.9-17.8)
Marital Status		
Single	38	38 (27.3-49.6)
Married	62	62 (51.4-72.7)
Socioeconomic Status		
Upper class	5	5 (1.3-13.1)
Upper middle class	12	12 (5.3-20.7)
Lower middle class	76	76 (64.9-85.1)
Employment Status		
Employment/business	57	57 (45.0-68.0)
Unemployed	43	43 (32.0-54.0)
Underlying Comorbidities		
Hypertension	47	47 (35.6-58.4)
Diabetes	42	42 (30.9-53.1)
Chronic lung disease	13	13 (6.2-22.8)
Coronary artery disease	5	5 (1.3-13.1)

Table 2: characteristics of patients and proportion

Characteristics	Number of patients	Ratio (95% CI)
Gender		
Male	28	28 (19.4-38.5)
Female	72	72 (61.5-80.6)
Age		
<18 years	10	10 (4.6-19.1)
18-30 years	15	15 (8.5-23.6)
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Chronic lung disease	13	13 (6.2-22.8)
Coronary artery disease	5	5 (1.3-13.1)

Table 4: Treatment Received for COVID-19

Characteristics	Number of Patients	Proportion (95% CI)
Drug Therapy	45	45 (33.1-56.9)
Oxygen Therapy	55	55 (43.8-66.2)
Ventilator Support	5	5 (1.3-13.1)
Intensive Care Unit	10	10 (4.6-19.1)
Overall Fatality Rate	15	15 (8.5-23.6)

Table 5: Symptomatic Treatment Received for COVID-19

Characteristics	Number of Patients	Proportion (95% CI)
Antiviral drugs	90	90 (81.3-96.7)
Antibiotics	74	74 (63.1-83.2)
Steroids	59	59 (47.2-70.7)
Oxygen therapy	39	39 (28.0-51.2)
Ventilator support	9	9 (2.9-17.8)

Table 6: PCR Results Positive and negative

Characteristics	Number of Patients	Proportion (95% CI)
Negative	70	55 (43.8-66.2)
Positive	30	30 (19.7-40.3)

DISCUSSION

The demographics of 100 patients hospitalized with COVID-19 in a private tertiary hospital in Islamabad, Pakistan, between January 2021 and January 2022 were the subject of the current research. According to the study, 47% of the patients were between 30 and 50, and 72% were female. Additionally, 76% of the patients were from lower middle-class socioeconomic backgrounds, and 57% were employed⁹. Hypertension (47%), diabetes (42%), chronic lung disease (13%), and coronary artery disease (5%) were the most frequently reported underlying comorbidities. These results are consistent with earlier research done in other nations. The majority of COVID-19 patients, according to studies from China, Italy, and Germany, are older males. However, Pakistan's COVID-19 demographics do not reflect those of other nations¹⁰. This could be because Pakistan has a limited supply of medical services, which means that both men and women are equally susceptible to the sickness. This emphasizes the need to expand access to healthcare services to stop the illness from spreading^{11,12}. The majority of patients in the current research were married and from lower middle-class socioeconomic backgrounds, according to the study's findings. This shows that the virus is disproportionately harming weaker groups of people. As a result, it is crucial to concentrate on preventing and controlling this virus, especially among vulnerable people, by promoting health and running efficient

education programmes¹³. In COVID-19 individuals, underlying comorbidities are particularly crucial since these cases have a greater probability of severity and hospitalization. The results of the current investigation also showed that the two most prevalent underlying comorbidities in these individuals were hypertension and diabetes. These results emphasize the need to manage diabetes and hypertension appropriately to lessen the incidence and severity of COVID-19, both of which are very common in Pakistan. This research has several restrictions^{14,15}. First, since the study was retrospective, it could not collect comprehensive data for analysis, such as body mass index or smoking status. Second, there were just a few patients included in the research¹⁶. Most COVID-19 patients admitted to a private tertiary hospital in Islamabad were female, married, from the lower middle-class socioeconomic group, and had diabetes and hypertension as underlying comorbidities, according to this study's findings¹⁷. These findings highlight the need for public health activities to raise risk factors and preventative strategy knowledge among vulnerable groups. To further understand the root causes of COVID-19 in various Pakistani groups, more study is required¹⁸.

Limitation: The findings of this research may only apply to some regions of the nation since it was restricted to the private tertiary hospital in Islamabad. Additionally, since this investigation was retrospective, there might have been causes of data misclassification. Furthermore, the underlying comorbidities could have been overestimated due to inadequate data.

CONCLUSION

This research evaluated the sociodemographic characteristics of COVID-19 patients admitted to a private tertiary hospital in Islamabad, Pakistan. Patients tended to be female (72%), between 30 and 50 years old (47%), married (62%), and lower middle class (76%). Hypertension (47%), diabetes (42%), chronic lung disease (13%), and coronary artery disease (5%) were the most frequently reported underlying comorbidities. According to the results of our research, PCR testing revealed 70% negative and 30% positive results, indicating the need to raise public knowledge of the risk factors and preventative.

Measures for this illness in susceptible groups. The root causes of COVID-19 in various populations need more investigation.

Future Finding: The following study should focus on the sociodemographic features of COVID-19 patients to establish population-specific preventive and control methods based on the study's results. Future research should also pinpoint the other underlying risk factors connected to this illness in Pakistan, such as occupational and environmental exposures.

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