

Long-term Health Ailments among COVID-19 recovered patients in South Asian Countries: A Descriptive Cross-sectional Study

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Abstract

Introduction: COVID-19 pandemic declared as Global Health Emergency by World Health Organization. The novel SARS-CoV-2 virus is the major cause of COVID-19. Although the recovery rate of COVID-19 is higher, the recovered patients experience mild to severe health ailments post recovery. These health ailments affect their routine day to day life and also their quality of life. The key objective of this study is to find out the prevalence of various health ailments among COVID recovered population from south Asian countries.

Methods: A descriptive cross-section study was conducted among 384 COVID-19 recovered population in South Asian Countries through randomized survey. Ethical approval of the institution was obtained and a convenient sampling technique was done. Statistical package for Social Sciences is used for the analysis of the data. Point estimate at 95% Confidence Interval was calculated along with frequency and proportion for binary data

Results: Among 384 samples, 68% of patients had post COVID-19 long term extreme tiredness and 64% of patients reported with sleepless ness. 73% of patients had fever and smell loss during the COVID19. 64% had reported body pain and cough when they had the infection. 42% of the patients were healthy ones without any comorbidity prior to COVID.

Conclusions: The study concludes that there was high prevalence of long term illness among COVID-19 recovered patients and the prevalence was reported even in patients who had no comorbidities prior to COVID19 are the dominant health disorders prevalent among COVID-19 recovered population.

Introduction

COVID-19 is global health emergency affecting millions of people worldwide. The novel SARS-CoV-2 induced disease so far affected around 200 million people's worldwide causing more than 4 million mortalities as on June 2021.^{1,2} The percentage of recovery of COVID-19 patients is reported to be more than 95% in several countries.³ At the same time, the recovered patients develop some long term health ailments with mild to severe complications.⁴

The increasing number of co-morbidities caused by COVID-19 on the recovered population and their severity require clinical planning for better disease management.⁵ Currently there is lack of knowledge on the comprehensive study of COVID-19 induced health ailments and their severity.^{6,7}

The key objective of this study is to find the prevalence of health ailments among COVID19 recovered population in South Asian Countries.

Methods

A descriptive cross sectional study was conducted between a period of 1 year from June 2020 to May 2021 among the COVID19 recovered patients in South Asian Countries. Ethical approval obtained from Institutional Review Committee of the Institution. Informed consent of participating individuals was obtained before the data collection through the sample collection e-form. Convenience sampling was followed in this study. The sample size for the study is calculated from the formula given below

$$n = Z^2 \times p \times q / e^2$$

$$= (1.96)^2 \times 0.5 \times (1-0.5) / (0.05)^2 = 385$$

Where,

n= minimum required sample size

Z= 1.96 at 95% Confidence Interval (CI)

p= prevalence taken as 50% for maximum sample size

q= 1-p

e= margin of error, 2%

Total sample size was calculated as 384.

Data of patients succumbed to COVID19 were excluded from the scope of the current study. Data pertaining to patients below the age of 12 has been excluded from the study. Only Patients with a positive RT PCR result and subsequently tested negative in RT PCR after recovery were included in the study. Patients reporting health ailments more than 14 days after RT PCR negative were included and ailments reported before the 14 days from the date of negative RT PCR is excluded. Web form based e-form was used to obtain patient consent and sample data. Patient personal identification data such as name, date of birth etc., not collected. Statistical tool for social sciences package is used in the study. Data reporting and analysis were done using Microsoft Excel Software.

Results

Ailments during the COVID (1 to 14 days of infection)

The analysis of the data revealed that 73% of the patients had fever and smell loss while they had the COVID-19. Also Cough and Body pain also had higher prevalence among 64% of the patients. 55% of the patients had extreme tiredness during COVID-19. Stomach upset was reported by 44% and taste loss by

40% of the patients during COVID. 31% of the patients had breathing troubles. 28% of the patients seen changes in their tongue color and 27% of patients had throat pain. Urine Color change, sleepless ness and dreams or night mares were reported by less than 20% of the patients during their COVID-19 period

Post COVID health ailments (after 14 days)

Among the 384 patients reported long term health ailments after their recovery, or after 14days of their infection, a high prevalence extreme tired ness of 68% was reported. Further 64% of the recovered patients had sleepless ness. Body pain was reported by 47% of the patients. Stomach upset was prevalent among 34% of the patients and chest pressure was encountered by 21% of patients after their COVID recovery. 18% of the patients had mild to severe heart palpitations and 12% of the patients felt high heartbeats post COVID. Head ache 17%, lips drying 15% and nightmares 18% were also prevalent among the patients post COVID-19. Dehydration is present in some 12% of the patients. Less than 10% of the patients had other issues such as menstrual cycle changes 9%, hot/cold sensation in legs 7-8%, and change in urine colour among 6% of the patients

History of Comorbidities Prior to COVID-19 in Recovered Patients

The comorbidity of the participants prior to their COVID-19 were analysed in which 42% of the participants were healthy persons with no other diseases prior to the COVID-19. 29% of the participants had Diabetes and 14% of the participants had hypertension pressure before their COVID-19 encounter. 13% participants had breathing disorders before the COVID19. 2% of participants had other type of comorbidities such as Heart issues and tumours etc.

Treatment mode among the COVID19 recovered patients

Among the persons reported health ailments after recovery from COVID 68% of the patient's undergone home quarantine with intake of prescribed medicines. In other words the prevalence of long term ailments were high in the patients underwent home quarantine with intake of medicines. 32% of the participants were hospitalized prior to their recovery from Covid in which 9% received oxygen support and 5% of the participants were supported in Intensive Care Units.

Age Distribution among the COVID19 Recovered Patients with Health Ailments

The analysis of age distribution among the patients reported with ailments shows that the prevalence of COVID19 associated health ailments was high in the 36 years to 50 year age band having 134 (34.89%) participants followed by the 31 to 35 year age band with 103(26.82%) participants and then 26 to 30 years age band with 97 participants (25.26). The 41 to 45 year old age band has lower prevalence of COVID-19 ailments after recovery.

Gender Distribution of COVID-19 Recovered Patients with Long-term Illness

Among the 384 persons reported with long term COVID related health ailments 236(61.5%) participants are male and 148(38.5%) participants are female patients recovered from COVID-19. The prevalence of COVID-19 associated long term complications is predominately high in male than female patients.

Discussion

A number of studies were present about the SARS-COV-2 induced disease their symptoms, onset syndromes and their complications. Recently a number studies were present regarding the long term COVID19 associated illness reported by COVID-19 recovered patients. There are numerous cases of post COVID19 illness are being reported ranging from extreme fatigue to uncommon night mares. It is essential to study the COVID-19 caused long term health complications among the recovered patients.

High prevalence of extreme tiredness among 68% of the recovered personas and 64% of sleeplessness had been found which is similar to the studies as established by Islam et al.⁸ and Sayed et al.⁹

High prevalence of fever and smell loss reported among 73% of the patients during the COVID-19 period and next to it cough, body pain were seen in 68% of the patients. These findings are incoherent with the findings of a number of studies.¹⁰⁻¹²

Although 42% persons reported no health comorbidities prior to their COVID 19, a substantial population had existing illness such as diabetes and hypertension prior to their COVID encounter, these finding is similar to the finding of Sanyaoul et al.¹³, Ye et al.¹⁴ and Song et al.¹⁵

68% of the patients recovered from COVID-19 were undergone home quarantine based medicine prescribed by healthcare professionals which is same as the findings of a similar study by Al hayex et al.¹⁶

The Prevalence of long term illness was high on the age group 36 to 40 years which was similar to the study done by Yan CH et al.¹⁷ Among the participants with post COVID long term illness the prevalence of male patients is high which is similar to a number of international studies.^{18,19,20}

The current study does not have any limitations with reference to the scope and main objective of this work. This work shall be extended by follow-up studies with the sample population after a certain period of time to identify the period of prevalence of illness post COVID-19.

Conclusions

The study concludes that post COVID19 long term heath ailments was present in most of the recovered patients who had no history of comorbidities prior to COVID. In order to improve the quality of life and wellbeing developing healthcare protocols and procedures for management of COVID19 associated long term health related ailments are required.

Declarations

Conflict of Interest: None.

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Figures

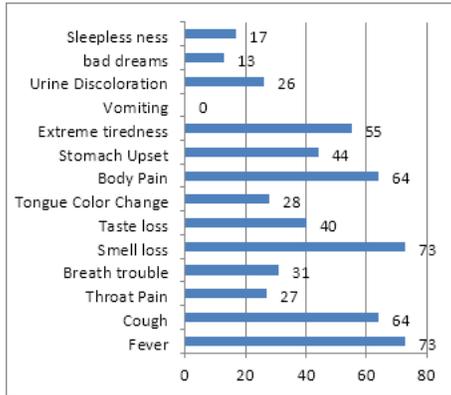


Figure 1

Symptoms during COVID-19 (1 to 14 days)

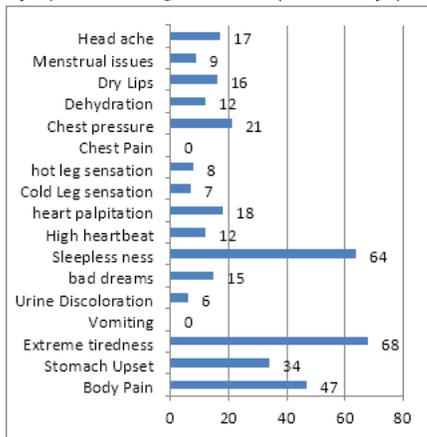


Figure 2

Longterm health ailments in recovered patients after COVID-19 (after 14days)

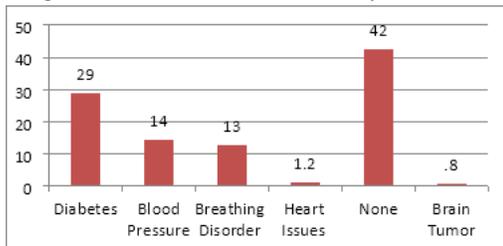


Figure 3

History of comorbidities prior to COVID- 19 in recovered patients

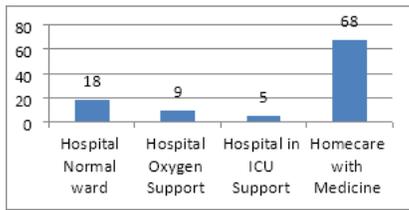


Figure 4

Treatment methods among the sample population

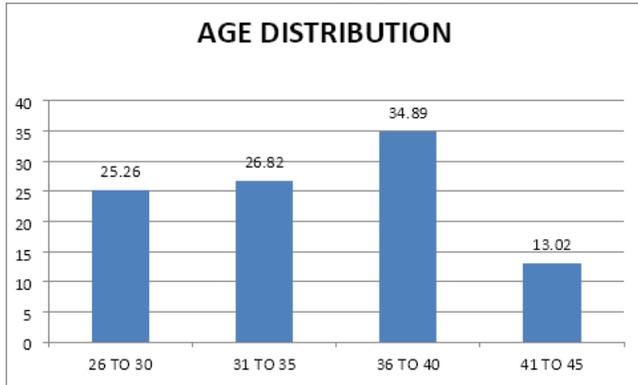


Figure 5

Distribution of age