A Cross-Sectional Study of Precautions Followed By Patients Attending Primary Health Centre During The Lockdown Period of Covid-19

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Abstract

During the lockdown period of the COVID 19 pandemic in 2021 the patients approaching the primary health centre were studied for a period of 3 months, from March to May in Hyderabad city. The precautions taken by these patients were also recorded using a se mi-structured questionnaire. Among the 223 subjects mean age was 27.88 years, 61.9% were females, 83.4% were educated and 47.1% belonged to the SES III. Majority (50.2%) of patients were between 15 to 40 years. Below the age of 15 years constituted 28.3% and those above 40 years were 21.5%. In the study group only 12.6% suspects were asymptomatic, 31.8% had only fever, 49.3% had fever and URTI, while 6.3% had SOB along with fever and URTI. 1.8% had interstate travel history in past 15 days. 5.8% had history of contact with a COVID-19 patient or suspect. 65% patients took precautions. Under the preventive measures hand washing was 59.6% among which 69.2% used soap – water and 30.8% used alcohol rub to clean hands. 51.2% used mask while 48.2% did not use any protection. In this study the clinical symptoms were significant with age, sex, SES and preventive measures taken (p<0.05) but there was no significant association with presence of comorbidity.

Keywords: COVID 19, social distancing, hand wash, respiratory symptoms, SOB.

Introduction

COVID-19 is a novel respiratory virus that emerged from Wuhan City, Hubei, China. The viral outbreak is a pandemic resulting in human deaths in enormous numbers [1].

On 11th March 2020, The World Health Organization (WHO) declared this disease as a pandemic [2]. By the end of January 2021, the coronavirus disease 2019 (COVID-19) has infected approximately 100 million people, leading to more than 2 million deaths globally [3]. India has been experiencing a massive surge of COVID-19 cases and deaths. As of April 10, 2021, India is the 3rd leading country based on the USA and Brazil's identified cases. Since the middle of March 2021, the second wave has started, and on April 09, the highest number of cases (144,829) has been identified in India [4].

As an emerging acute respiratory infectious disease, COVID-19 primarily spreads through the respiratory tract, by droplets, respiratory secretions, and direct contact [5] for a low infective dose [6].

Common clinical features included fever, cough, fatigue, sputum production, shortness of breath, sore throat, and headache [11]. Complications included acute respiratory distress syndrome (ARDS), arrhythmia, shock, acute kidney injury, acute cardiac injury, liver dysfunction and secondary infection [12].

It is highly transmissible in humans, especially in the elderly age 65 years and older [7]. Studies suggest the elderly are more susceptible to COVID-19 and likely to have poor outcomes [8]. The incidence is much lower in children [9,10].

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Having a high level of awareness about recommended preventive health behaviour (e.g., mask-wearing, hand hygiene) are essential safeguards against the community spread of COVID-19. All of these can significantly improve disease prevention, timely diagnosis and management [3].

In the light of lacking consistent effective treatment, the best way to deal with the highly infective virus is by mitigating the spread of the virus [13].

Simple measures are to be followed to reduce the risk of infection with COVID-19 [14].

1. Should maintain a distance of 6 feet in public places.
2. Use of face masks to be mandatory.
3. Practice frequent handwashing with soap
4. Use of alcohol-based hand sanitisers.
5. Respiratory etiquettes are to be strictly followed.

Social distancing, case isolation, and shielding have been widely used to limit community-level transmission of COVID 19 and protect vulnerable groups. These interventions aim to reduce mobility and contacts within the population and thus to reduce the transmission of COVID 19 [15].

This study aims to assess the knowledge and awareness of COVID-19 among the population who are attending health centres.

Aim & objectives

1. To study the socio demographic profile and clinical symptoms of patients at the health center during lockdown period of COVID-19 pandemic.
2. To study the precautions followed by patients during lockdown period of COVID-19 pandemic.

Material and methodology

This present study was taken up in the primary health centre of a tertiary teaching hospital, Hyderabad, Telangana over a period of three months. The said centre provides the out-patient care, immunisation and referral services along with awareness programs to

the population residing around it. It is an institution based descriptive cross sectional study. The patients who consented to participate were included in the study and semi-closed structured questionnaire was used to interview and record the responses. This included the socio demographic details, clinical symptoms and practices about the precautions to be followed. Data was entered into an excel

spreadsheet. It was analyzed using SPSS version 20. Categorical data was expressed as frequencies and percentages. Pearson's chi-square test was applied to test the association of categorized independent and dependent variables. Where p value (significance) was <0.05 it was deemed statistically significant.

Results
Socio-demographic profile [Table 1]

Table 1: Frequency Table of demographic variables (n=223)

Variables	Frequency (n=223)	Percent (%)
Age (years)		
<15	63	28.3
15 – 40	112	50.2
>40	48	21.5
Sex		
Male	85	38.1
Female	138	61.9
Educated		
Not eligible	36	16.1
Yes	150	67.3
No	37	16.6
Occupation		
Employed	72	32.3
Unemployed	151	67.7
SES		
Upper Middle	63	28.2
Lower Middle	105	47.1
Upper Lower	55	24.7

During the one month of study period 223 patients were enrolled. Among these, 61.9% (n= 138) were females. Almost half of patients were in the age group of 15 to 40 years (50.2%, n=112). Children below the age of 15 years constituted 28.3% (n=63) and those above 40 years were 21.5% (n=48). Total 186 (83.4%) patients were educated, where females (n=104, 55.9%)

outnumbered males (n=82, 44.1%). Among the study population only 32.3% (n=72) were employed. Maximum patients (47.1%, n=105) in the study group belonged to the socio-economic class III (Kuppuswamy scale) followed by class II and class IV, 28.2% (n=63) and 24.7% (n=55) respectively (Fig 2).
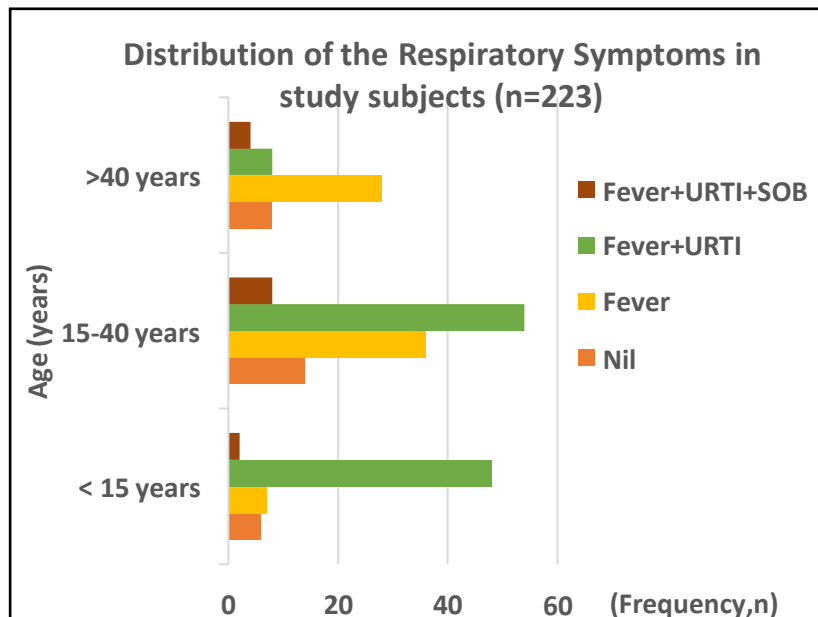

Fig 1: Distribution of clinical symptoms in study subjects (n=223)

This difference in age (Chi-square = 41.243, p= 0.000) and gender (Chi-square = 13.336, p=0.004) distribution was significant.

Clinical profile
In the study group only 12.6% (n=28) suspects were asymptomatic, while 31.8% (n=71) suffered with only fever. 49.3% (n=110) complained of fever and upper respiratory tract infection symptoms such as nasal block, running nose and pain in throat (Table 2).

Table 2: Frequency table of the COVID-19 Suspects variables (n=223)

Variables	Frequency(n)	Percent(%)
Respiratory Symptoms		
Nil	28	12.6
Only fever	71	31.8
Fever + URTI	110	49.3
Fever + URTI + SOB	14	6.3
Travel history		
No	219	98.2
Yes	4	1.8
H/O contact		
Nil	210	94.2
Family member	7	3.1
Others	6	2.7

The comparison of other variables with the respiratory symptoms is shown in table 3.

Table 3: Test of significance between Respiratory symptoms in COVID-19 suspects and other variables

Respiratory Variables	Nil	Only fever	Fever+URTI	Fever+URTI+ SOB	Total	Pearson Chi Square	P - value
Age (years)							
<15	6	7	48	2	63		
15 – 40	14	36	54	8	112	41.243	.000
>40	8	28	8	4	48		
Total	28	71	110	14	223		
Sex							
Male	4	28	51	2	85	13.336	.004
Female	24	43	59	12	138		
Total	28	71	110	14	223		
Occupation							
Unemployed	22	37	81	11	151		
Employed	6	34	29	3	72	11.934	.008
Total	28	71	110	14	223		
SES							
II	4	28	29	2	63		
III	12	24	60	9	105	16.458	.011
IV	12	19	21	3	55		
Total	28	71	110	14	223		

Only 1.8% (n=4) of the study subjects had travelled across the states in past 15 days. About 5.8% (n=13) had history of contact with a COVID-19 patient or suspect. Among these 3.1% (n=7) had the history of contact in family and remaining 2.7% (n=6) had contact from others like neighbours and co-passengers.

Profile of the preventive measure taken by patients during COVID phase 2

The precautions taken by study subjects during the second phase of COVID -19 were 65% (n=145) while remaining 35% (n=78) said they did not take any precautions. Under the preventive measures hand wash habit was followed by 59.6% (n=133) among which 69.2% (n=92) used soap – water and 30.8% (n=41) used alcohol rub to clean hands. Use of mask as a preventive measure was reported by 51.2% (n=114) of them, while 48.2% (n=) did not use any protection. Of the 51.2% the use of either cloth or professional mask was equally distributed, that is 25.7% (n=57 in each).

Table 4 : Frequency table for preventive measures taken

Variables	Frequency(n)	Percent (%)
Precautions		
No	78	35.0
Yes	145	65.0
Hand wash		
No	90	40.4
Yes	133	59.6
Uses (n=133)		
Soap	92	69.2
Alcohol rub	41	30.8
Mask		
No	109	48.8
Cloth	57	25.6
Surgical/ N95 Mask	57	25.6

Table 5: Test of significance between Respiratory symptoms in COVID-19 suspects and other variables

Precautions	Nil	Only fever	Fever + URTI	Fever + URTI + SOB	Total	Pearson Chi-Square	p - value
No	1	39	30	8	78		
Yes	27	32	80	6	145	30.466	0.000
Total	28	71	110	14	223		

Discussion

With the recent widespread outbreak of COVID-19 across the globe, there has been an increasing need for the rapid, cheap and accurate detection of the virus in infected individuals. As SARS-CoV-2 spreads through droplets and fomites, it is important to consider methods to control the potential transmission and to implement them. As SARS-CoV-2 is found in respiratory droplets [16] and abundantly present in nasopharyngeal and salivary secretions. Personal protective measures and personal hygiene becomes important [17].

In our study we found that the almost half of the patients were between the age group 15 to 40 years and 61.9% were females. Children below the age of 15 years constituted 28.3% and those above 40 years were 21.5% (n=48)., In another study [18] the mean age of participants was 40.3 years (range 16-73 years). There was a male preponderance (66.7%) contrary to our study. In a study done by Moriah Bergwerk, M.B. et al [19]. The mean age of the study population was 52.8 years, 6% were among the children under the age of 19 .In Sohrabi et al [20] study, mean age of patients was 53-years old. In a study done outside China, the mean age of COVID-19 patients was 52.5 years old, but it was less within China, that is 46 years old [21]. In study from Iran the mean age was 57.3 years. [22]. This difference is seen as our study considered the patients visiting the primary health centre when compared to confirmed COVID 19 patients in the other study. In this study, females outnumbered males. The Iran study showed male predominace contrary to our findings [22]. Even global report shown more men effected in most countries and this was attributed to the biological factors which make men generally more susceptible to viral infections [23]. In the present study only 12.6% suspects were asymptomatic, while 31.8% suffered with only fever and remaining 49.3% complained of fever and upper respiratory tract infection symptoms. In Sohrabi et al study, the most common symptom on admission was cough, followed by difficulty breathing, fever, and muscle ache similar to the findings in our study [20].

In the present study the patients with symptoms had a history of travel and contact with COVID 19 patients. Though the percentage was less it was a finding of concern and needs further evaluation.

"Face masks are physical barriers to respiratory droplets that may enter the mouth and nose and to the expulsion of mucosalivary droplets from infections individuals [24]. In our study use of mask was seen in 51.2% patients despite much advertising and awareness campaign in the pandemic period. It is documented from many studies that asymptomatic infected individuals, or symptomless spreaders, may also effectively cross-infect other susceptible people with SARS-CoV-2 [25] which supports the need for wearing of face masks and improvised face coverings.

WHO has instructed that the use of a mask alone is insufficient to provide an adequate level of protection or source control, and other personal and community level measures should also be adopted to suppress transmission of respiratory viruses. Whether or not masks are used, compliance with hand hygiene, physical distancing and other infection prevention and control (IPC) measures are critical to prevent human-to-human transmission of COVID-19 [26].

The present study recorded almost 35% of the patients who reported with the respiratory symptoms did not take any precautions. Under the preventive measures hand wash habit was followed by 59.6% among which 69.2% used soap – water and 30.8% used alcohol rub to clean hands. Thus illustrating the importance of PPE.

The invention of vaccine and its administration to large population has started, we cannot rule out the importance of the personnel preventive measures that are still best tools to control the transmission of the respiratory viruses.

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Conflict of Interest: Nil   Source of support: Nil