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### Assessing the knowledge, attitude and practices regarding COVID 19 among infected subjects admitted to a COVID isolation facility: A cross-sectional study

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#### Abstract

The COVID-19 pandemic is the defining global health crisis of our time. Preventive measures are playing a pivotal role in reducing infection rate and controlling the spread of the disease. People's knowledge, attitude and behaviour are important predictors of whether they engage in disease specific preventive behaviours. This study aims to assess the Knowledge, Attitude and Practices regarding COVID 19 among patients in India.

**Methods:** This study was conducted on COVID positive patients admitted in a COVID isolation facility using an online Questionnaire.

**Results:** A total of 250 individuals participated in the study. Majority (94.13%), of the respondents gave a correct response to questions assessing knowledge regarding COVID-19. 96% of the patients feel that social distancing can help avoid infection and 88.5% of the subjects recognise the importance of hand hygiene.

**Conclusion:** Our findings suggest that the study population has good knowledge, positive attitudes, and good practices toward COVID-19.

**Keywords:** COVID 19, knowledge, attitude, practices

#### 1. Introduction

COVID-19 is a global public health threat which originated in Wuhan, China in December 2019. It is caused by a virus-Severe Acute Respiratory Syndrome Corona virus - 2(SARS-COV-2). On 11 March 2020, WHO changed the status of the COVID-19 emergency from public health international emergency (30th January 2020) to a pandemic. Nonetheless, the fatality rate of the current pandemic is on the rise (between 2%-4%), relatively lower than the previous SARS-CoV (2002/2003) and MERS-CoV (2012) outbreaks [1].

The COVID-19 infection is reported to be 1.7% in India which is significantly lower than the worst affected countries, as per the report on 29 March 2020 [2]. In the initial phases of the disease, a small state in India, Kerala stood as an ideal example for all by giving awareness and instituting prompt measures to prevent further transmission of disease. The Government of Kerala introduced the "Kerala Model" of management of this outbreak, which included some important components like -administrative preparedness to deal with the pandemic, implementation of the WHO approach of 'test, trace & treat' and social mobilisation in the form of extensive awareness and education programs for the population.

The "KAP theory" is a health behavior change theory which involves change in human behavior via three successive processes- acquiring right knowledge, generating attitudes and adopting a behavior (or practice) [3]. Several studies have shown that the KAP level in individuals is associated

with effective prevention of illness and promotion of one's own health [3, 4, 5].

In our experience, there are very few studies that have tried to assess knowledge, attitude and practice about COVID 19 among patients. Most studies that have been done have focussed on healthcare workers, students and the public at large.

Keeping this in mind, we decided to evaluate patients being admitted to our hospital with regards to their knowledge regarding this pandemic. By the time this study was conducted, at least 3 months had passed since the onset of this disease throughout India and multiple sources from governments; NGO's and media had been trying to educate people regarding this issue. It was felt that the target population would have more than a basic awareness regarding the various facets of this pandemic.

#### 2. Materials and Methods

This study was conducted amongst the patients admitted to COVID Care Center. The duration of the study was from 20<sup>th</sup> July to 10<sup>th</sup> September 2020. Given the social distancing measures and restricted movement, data was collected online via Self-Assessment questionnaire using Google forms. The link was distributed among respondents digitally and responses were collected and entered in excel sheets and analyzed. The study was clearly explained to the patient in the language best understood by them and only those patients who were willing were included in the study.

The questionnaire was formulated in English and measured the knowledge of the patients regarding COVID 19. The questions included Demographic Data, knowledge, Perception and practices regarding COVID 19. For those patients who were unable to read or understand English, the questions were explained to them in their own languages.

**Inclusion criteria**

1. Age group between 20 to 80 year
2. COVID positive patients.

**Exclusion criteria**

1. Patients with age less than 20 or more than 80 yrs
2. Mentally challenged patients
3. Unwilling patients.

**3. Result**

**3.1 Demographic profile of patients under study**

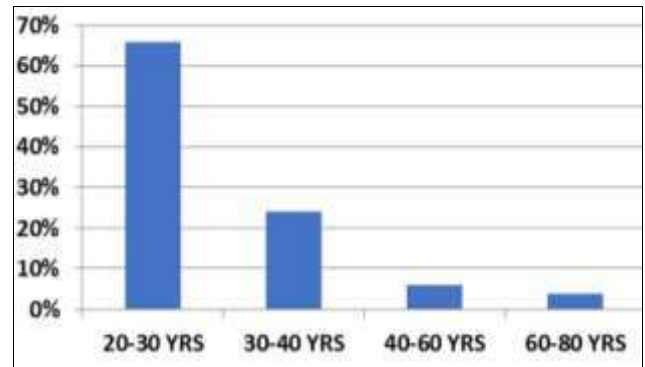


Fig 1: Age

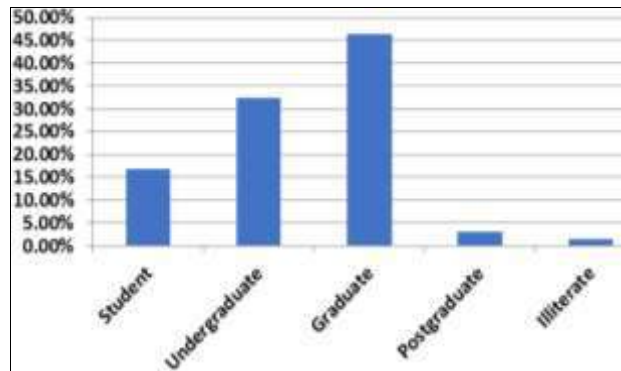


Fig 2: Education

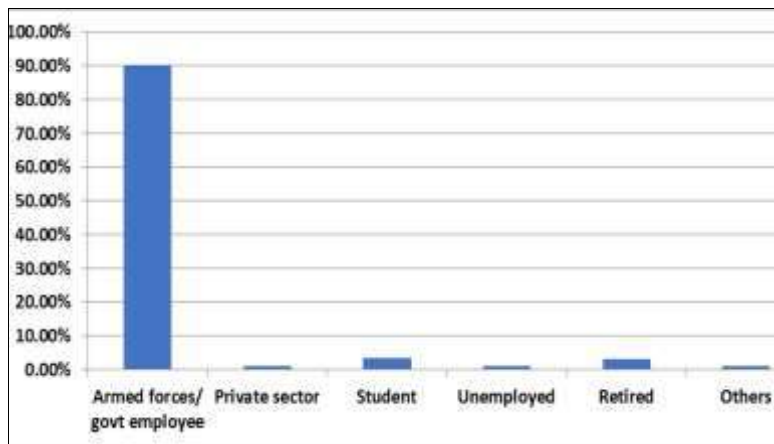


Fig 3: Occupation

**4. Assessment of knowledge**

**4.1 The main symptoms of covid-19 are**

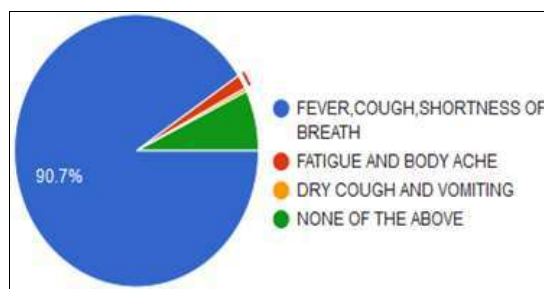
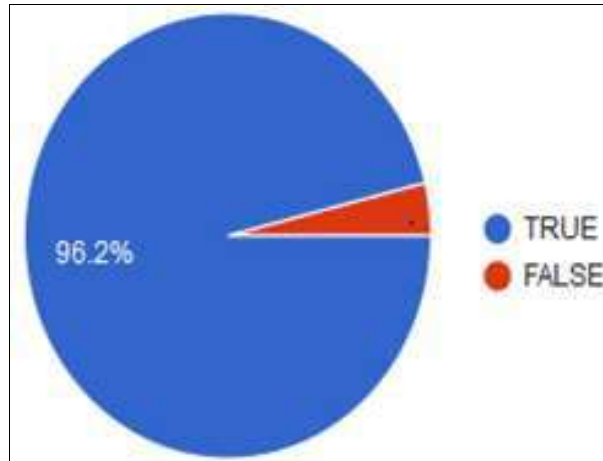


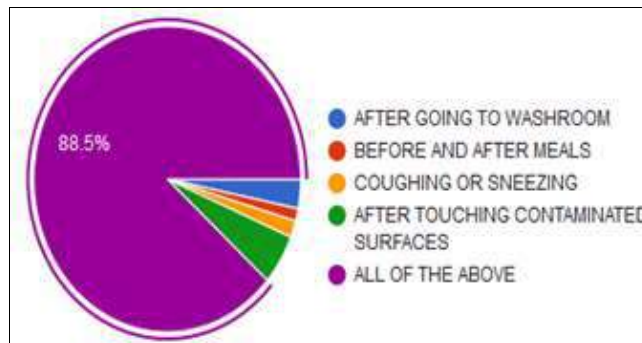
Fig 4: 90.7% of the patients were aware about main symptoms of COVID-19, whereas only 9.3% were unaware about the same.

#### 4.2 The covid-19 virus spreads through respiratory droplet of infected individuals (true/ false)



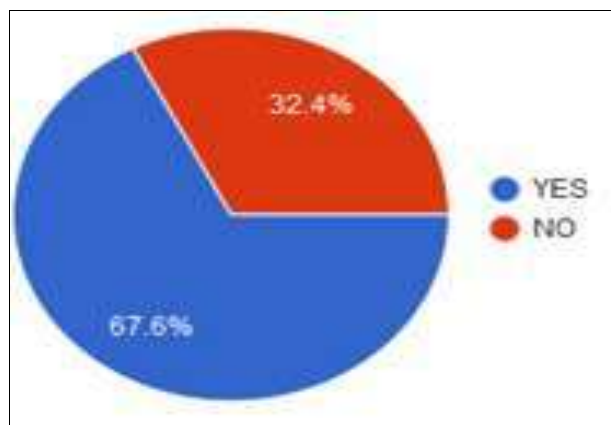
**Fig 5:** 96.2% knew that SARS-COV-2 spread through respiratory droplets from one individual to another. The remaining 3.8% disagreed with the statement.

#### 4.3 Institutional/ home quarantine for 14 days minimizes the risk of transmission of the covid-19 virus?



**Fig 6:** 95.7% of subjects knew that institutional /home quarantine for 14 days minimize the risk of transmission of disease, on the other hand, only 4.3% had opposite outlook towards it.

#### 4.4 Has your life been disturbed/ interrupted/ changed by covid-19?



**Fig 7:** 67.6% of the study population felt that their life has been changed by the COVID-19.

4.5 Main sources of information regarding covid-19

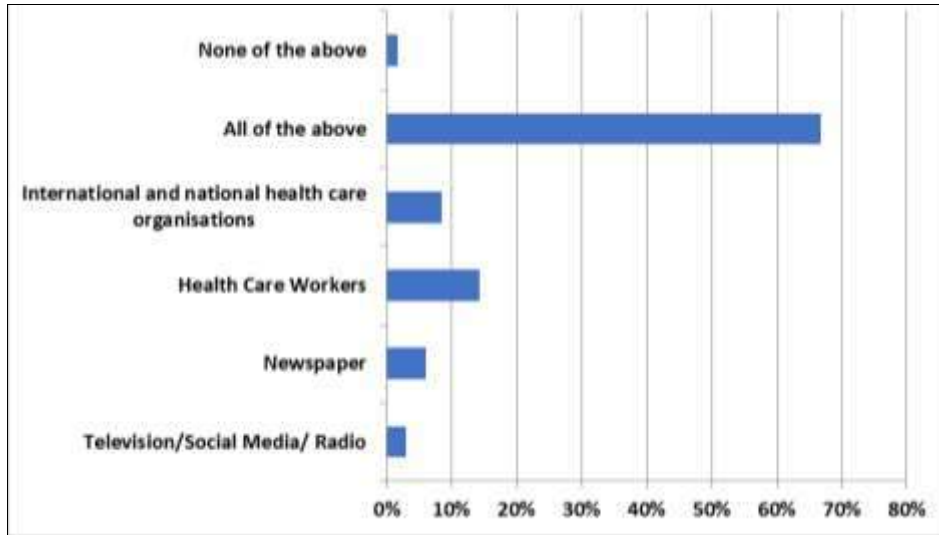


Fig 8: 66.7% subjects feel all the mentioned sources important for controlling the disease. 14.2% feel health care workers are important sources of information.

5. Assessment of attitude

5.1 Activities following which one should clean hands

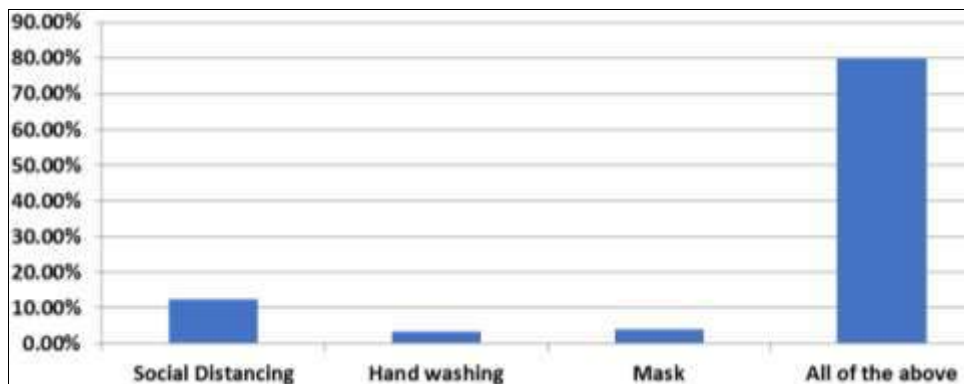


Fig 9: 80.3 % all the practices important to avoid infection such as maintaining social distancing handwashing practices and wearing of mask

5.2 Is social distancing effective in preventing covid-19?

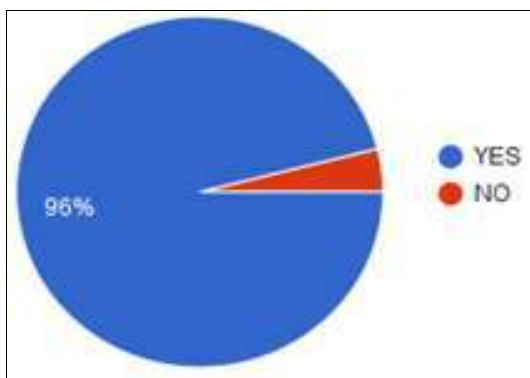


Fig 10: 96% of the study population feels that social distancing is an important method to control the spread of COVID-19.

5.3 Yoga and exercise in reducing stress level related to covid-19

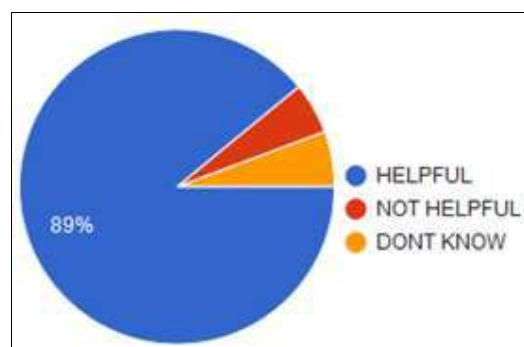


Fig 11: 89% of the subjects feel that yoga and exercise are good ways to reduce stress related to COVID-19

## 6. Discussion

COVID-19 is a relatively new virus that has had devastating effects within the short time since it was first detected in December 2019. To date, there has been limited published data on population knowledge, attitudes, and practices toward COVID-19, especially among infected subset of population. The novelty of this disease, along with its uncertainties, makes it critical for health authorities to plan appropriate strategies to prepare and manage the public. It is therefore of utmost importance that the knowledge, attitudes, and practices of the population be studied to guide these efforts<sup>[6]</sup>.

This questionnaire-based study assessed knowledge, attitude, and practices among COVID positive subjects during the time-period extending from 20<sup>th</sup> July to 10<sup>th</sup> September 2020.

Our findings indicate that most study participants were knowledgeable about COVID-19. The results based on three questions for assessment of knowledge reveal that 90.7% of the people were aware about the main symptoms of COVID-19. (fever, cough, shortness of breath), 96.2% of the study population was aware that COVID-19 transmits via respiratory droplets and 95.7% subjects agree that quarantine (home/institutional) was an effective method of controlling spread of infection. The overall correct answer rate in questions regarding assessment of knowledge was 94.13%. A study done in Malaysia during March- April 2020 in general population revealed that the overall correct answer rate of the knowledge questionnaire was 80.5% and the average knowledge score for participants was 10.5 (SD = 1.4, range 0–13)<sup>[6]</sup>. A cross sectional online survey on public from India by Goruntla Narayana *et al* found that the correct answer rate of knowledge towards COVID-19 was 74.7%<sup>[7]</sup>.

On assessment of attitude towards COVID-19, our study found that 88.5% of the subjects recognise the importance of hand hygiene, 67.6% of the study population feels that their life has been disturbed by COVID-19, and 66.7% trusted all the sources on information, while 1.70% trusted none of the sources, 14.2% patients trusted only health care organisations, 6% subjects trusted just newspaper and 3% patients trusted what they saw or heard on TV/radio/social media. A bi-national survey in Africa concluded that 48% respondents were bored, fearful, and anxious to return to the "new normal"<sup>[8]</sup>. Regarding the sources of information, a study from India revealed that the main sources for COVID-19 information were television (74.5%) and social media (71.0%)<sup>[7]</sup>. A study by Karen Austrian *et al* from Kenya reported that Health providers (public or private facility, community health workers) are very trustworthy (over 90% of respondents said they are trustworthy); however, they were some of the least reported sources of information for COVID19 (16-25% of respondents got information from them)<sup>[9]</sup>.

On analysis of the questions assessing the practices of the study population regarding COVID-19, it was found that 89% subjects find yoga and exercises an effective method to reduce stress due to COVID-19 pandemic and 96% of the patients feel that social distancing can help avoid infection. On questioning about method to avoid infection 80.1 % of the study population felt that all the mentioned methods (social distancing, wearing mask, hand washing) are

important methods to avoid infection. The remaining found any one of them to be appropriate methods to avoid infection. An online survey among Indian residents revealed the adherence to social distancing was 97.3%<sup>[10]</sup> a finding consistent with our study was found by a study by Elnadi Hager *et al* from Africa which concluded that 81% respondents valued the importance of proper hygiene, self-isolation, the use of face mask when going out, and the ideal distance between two people in curbing the spread of the virus<sup>[8]</sup>.

Our findings suggest that the study population has good knowledge, positive attitudes, and good practices toward COVID-19. A cause for this could be the good IEC (Information, education and communication) services by the government and non-government organizations about the COVID-19 since the time the virus spread across the country. Also the results obtained could be a consequence of the fact that the population under study were all positive patients and therefore acquiring the disease themselves would have made them more aware about the same based on the information they would have obtained from the easily assessable web and print media and also health care workers. Knowledge of the disease is considered the first steppingstone to any health education activity that is implemented. For effective containment of the pandemic, increasing stress should be laid on spreading knowledge and awareness about the disease and promoting behavioural changes.

## 7. Conclusion

Our findings suggest that the study population has good knowledge, positive attitudes, and good practices toward COVID-19. Knowledge about the disease increases the likelihood that people will become more aware of the spread and of the preventive measures to slow transmission by following appropriate practices and having a positive attitude to fight the pandemic.

## 8. Conflicts of Interest: Nil

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