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## Perception of the Indians regarding the sudden outbreak of COVID-19: A Rapid Online Cross-sectional Survey.

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### ABSTRACT

India is the second most populated country in the world having a rapidly growing population which is currently increasing at the rate of 16 million each year. At that situation to estimate the knowledge and prevalence of contraception among people an online randomized survey has been done among 126 volunteer. An anonymous online questionnaire has been developed and circulated among general public to assess the knowledge, attitude and practices regarding contraception and related factors. Majority of people around 92.9% were aware of the existence of contraceptive methods. The most commonly used contraceptive was condom 26.2%. Majority of 65.1% did not use any kind of contraceptive methods. About 26.2% used Condoms, minimum 15.1% used pills, and 5.6% used withdrawal method. Around 34.9% participants felt different types of issues after using any contraceptive tools. The study highlights that awareness does not always lead to use of contraceptives. A lot of educational and motivational activities and improvement in family planning services are needed to promote the use of contraceptive and reduce the high fertility rate & also to reduce the fatality due to sexually transmitted diseases.

**Keywords:** Awareness, COVID-19, India, Pandemic

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## INTRODUCTION

Coronavirus disease (COVID-19) is an outbreak situation, which has been a pandemic by the World Health Organization (WHO).[1] This is a severely infectious disease caused by a newly discovered coronavirus, which have a high human-to-human transmissibility. According to WHO the disease should be given the name as “2019-nCoV acute-respiratory disease” (‘n’ suggests novel and ‘CoV’ is for coronavirus). People infected with the COVID-19 virus experience the symptoms like fever, cough, a runny nose and difficulty in breathing within 2-14 days after exposure to the virus. The case analysis reports by the Disease Control and Prevention Centers in China and South Korea indicated that the people aged over 80 years are at the highest risk of mortality due to COVID-19. Older people and those with comorbidity like cardiovascular disease, diabetes, chronic respiratory disease, HIV and cancer are more prone to develop serious illness leading to severe morbidity and mortality. [2]

The country's Covid tally crossed the 26 lakh-mark today with about 50,000 deaths as well till 17<sup>th</sup> Aug 2020. The third worst-hit country by the COVID-19, India has been reporting the highest number of daily cases across the world for the last 13 days, striking the United States and Brazil that have a severe caseload, according to the WHO [3] It was first initiated on 31<sup>st</sup> December 2019, when a certain case in humans having pneumonia unknown etiology (unknown cause) emerged in Wuhan, China. From then to January 2020 onwards many more same cases were reported from China and it was detected that the disease exposure occurred from a seafood market in Wuhan City. A new type of novel coronavirus was identified and isolated on 7 January 2020 in China and later they shared the genetic sequence also. As of 20 January 2020, 282 confirmed cases of 2019-nCoV have been reported from four countries including China (278 cases), Thailand (2 cases), Japan (1 case) and the Republic of Korea (1 case). All of them were exported from Wuhan City, China. [4]

On 30<sup>th</sup> January 2020, the outbreak of 2019-nCoV acute respiratory disease was declared as a Public Health Emergency of International Concern with first confirmed cases in India, who had also a travel history to Wuhan City.[5]At present along with the relative stabilization in the detection of new infections around 1,000 to 1,200 every day, Delhi still considered highest in fatality rate.[6] WHO is working intensely with global experts and governments to generate more scientific knowledge on this new virus providing timely measures to protect the community worldwide and prevent from spreading this disease. Presently there is no a specific vaccine or treatment for COVID-19. However, many clinical trials are ongoing to develop potential therapy. The most possible way to prevent the outbreak and transmission of this disease is by spreading awareness. WHO informed that the respiratory droplets of infected people are the primary modes of transmission. The standard recommendations to prevent the spread of COVID-19 include proper hygiene maintenance by frequent washing of hands with soap and water or cleaning with alcohol-based hand rub, covering of nose and mouth with a flexed elbow during coughing and sneezing and to avoid close contact with a person having fever and cough.[7,8]. Social distancing, quarantines, massive airport screenings, lockdowns, curfews have become the norm across the globe in the current situation.

So, as presently India is in 3<sup>rd</sup> position in total number of COVID-patients, therefore at this critical moment to facilitate the management of COVID-19 outbreak in India, there is an urgent need to evaluate the awareness of the common people about this disease, to empower the citizens with the right information and guidelines issued by the governing bodies and most importantly taking precautions in preventing the spread of the virus in the community.

## METHODS

The study design was qualitative and descriptive with the insights about the present situation and problem that have not been studied so far. This survey was conducted from 22<sup>nd</sup> March to 5<sup>th</sup> April, immediately after the lockdown situation in West Bengal as well as throughout India. During this time community-based sampling survey was not feasible, therefore an online questionnaire based survey was done, data were collected and analyzed. A pre-determined questionnaire form was developed to evaluate the knowledge and perception of the commoners’ regarding the present COVID-19 outbreak.

The questionnaire was designed to emphasize some important aspects related to the precaution and preventive measures related to the novel corona virus disease transmission among the Indian population. The questionnaire consisted of two parts. One is the demographic criteria including age, gender, education,

occupation and another is the knowledge, attitude and perception regarding COVID-19. Overall, there were 43 questions in the questionnaire. All the data were presented as frequencies and analyzed as in percentages.

**RESULTS**

A total of 315 participants completed the survey questionnaire. The demographic data showed 196 (62.2%) were male and rest female. Among the total participants most i.e. 225 (71.4%) were from the age group of 18-30 years.

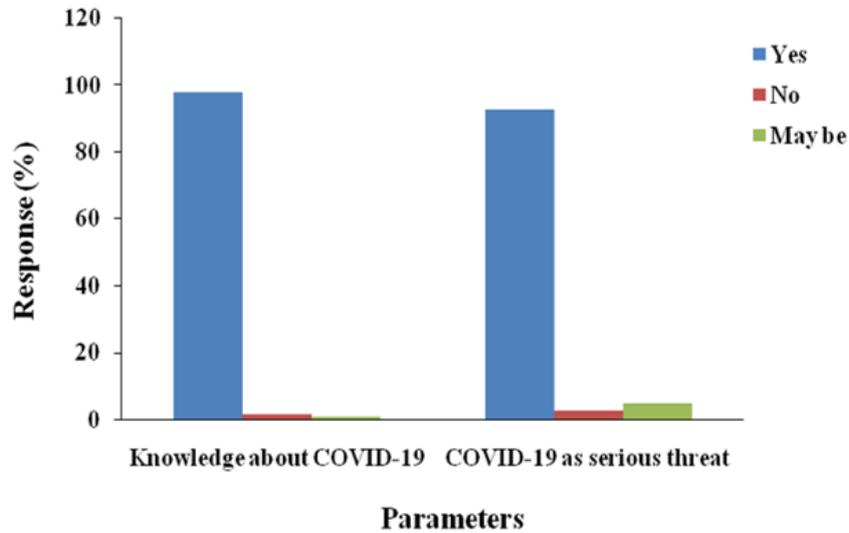
**Table 1: Demographic characteristics of participants**

Demographic criteria	Parameters	Number of Participants (%)
<b>Age</b>	10 to 18	11 (3.5)
	18 to 30	225 (71.4)
	30 to 50	58 (18.4)
	above 50	21 (6.7)
<b>Gender</b>	Male	196(62.2)
	Female	118 (37.5)
	Others	0
<b>Qualification</b>	Higher Secondary	83 (26.3)
	Bachelor	138 (43.8)
	Post Graduate	78 (24.8)
	Doctorate	16 (5.1)
<b>Profession</b>	Govt. Job	24(7.6)
	Private Job	68 (21.6)
	Businessman	8(2.5)
	Housewife	13(4.1)
	Unemployed/Student	202(64.1)

Data were presented as frequencies and analyzed as in percentages (n=315).

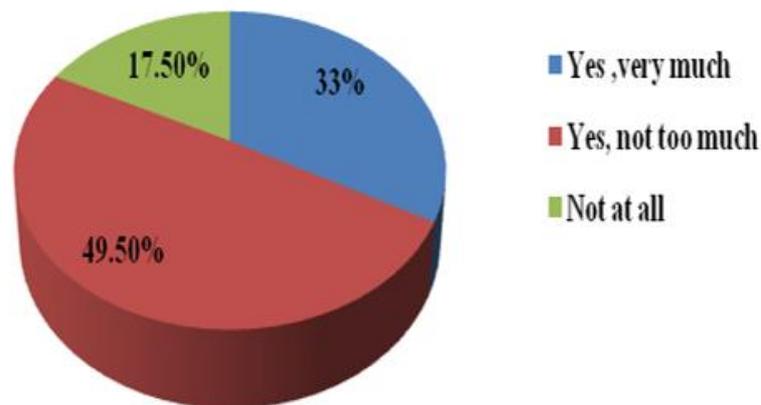
Most of the respondents i.e. 138 (43.8%) held a bachelor’s degree, about 94 (30%) people had post graduate degree or above and rest of them i.e. 83 (26.3%) were higher secondary qualified. The present data revealed that most of the responses 202 (61.4%) have obtained from the students or unemployed. The demographic characteristics are shown in Table 1.

**Figure 1: Responses associated with the knowledge about COVID-19 and its seriousness. Data were analyzed as in percentages (n=315).**



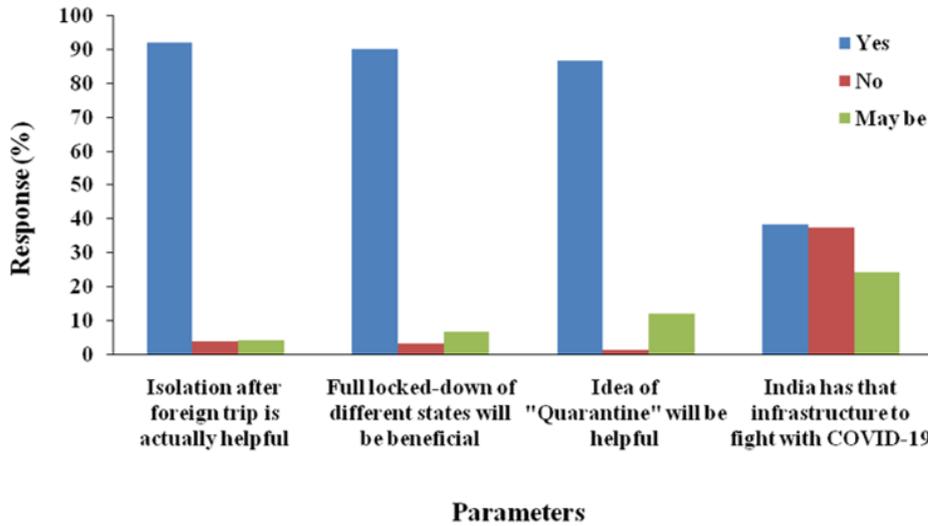
The majority of the respondents agreed 308 (97.8 %) that they are aware about the recent outbreak COVID-19 and 292 (92.7%) among them also indicated it as a severe and serious threat (Figure 1). However in the present situation, 307 (97.5%) person of the study population stated that they don't have any personal contact or direct relation with any person suffering from COVID-19. 286 (90.8%) respondents also affirmed that there is no such person in their family, friend or social contact who is suffering from fever in recent times.

**Figure 2: Represents anxiety and panic emotion in the common people. Data were analyzed as in percentages (n=315).**



The study data also revealed the panic emotion of the community. Figure 2 demonstrated that most of the study population is feeling nervous, depressed or hopeless due to this sudden outbreak of COVID-19. Among them 104 (33%) people were very much anxious and 156 (49.5%) were moderately worried about this critical situation. Very little number of people i.e. 55 (17.5%) had positive overview and were having hope to recover soon.

**Figure 3: Attitude of the respondents regarding Government rules and policies regarding COVID-19 outbreak. Data were analyzed as in percentages (n=315).**



The attitude of the citizen were assessed through some questions like their perception on the regulations followed by the Government now a days like quarantine, post foreign trip isolation, lock-down could be beneficial and their faith on the infrastructure in India to resist the COVID-19 outbreak. All most all of the respondents 306 (97.1) opined that they supported "Janta Curfew", which was a single day lockdown imposed by the Indian Government in this crisis situation. The data indicated most of the respondents i.e. 290 (92.1%) opined that isolation after foreign trip is actually helpful in this situation, 284 (90.2%) supported the lock-down in different states and 273 (86.7%) feel the quarantine process could be beneficial in the present situation. (Figure 3) However, there was a varied feedback to the fact that whether proper infrastructure and facilities were there in India to combat the battle against COVID-19. 121 (38.4%) were only sure about it and had faith on the infrastructure of India, where 76 (24.1%) were uncertain and 118 (37.5%) denied to this fact.

**Figure 4: Practice of the common people in personal hygiene maintenance factors significantly associated with COVID-19. Data were analyzed as in percentages (n=315).**

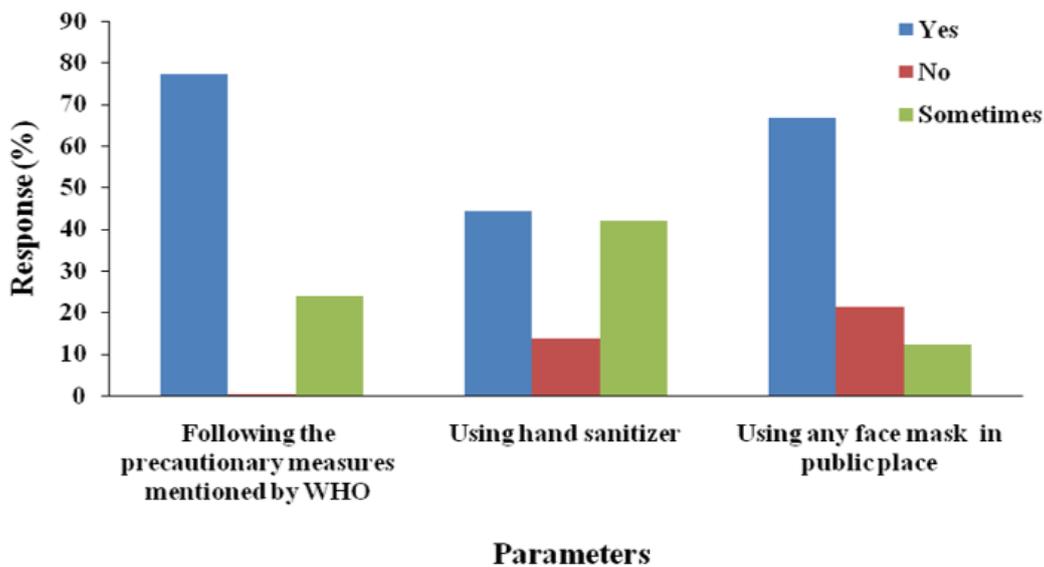
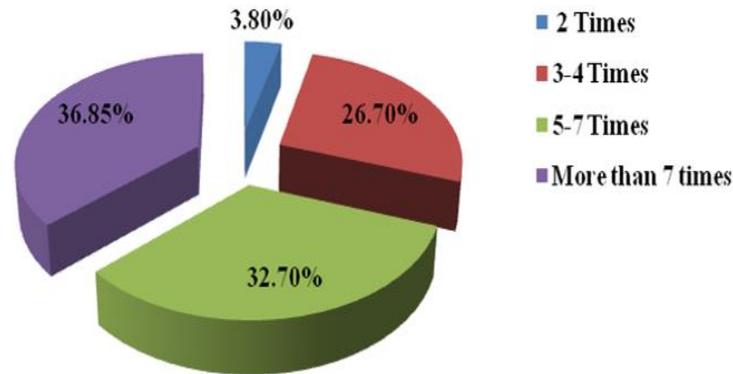


Figure 4 indicated the fact that majority of the participants 243 (77.1%) were strictly following the precautionary measures provided by World Health Organization (WHO) and 210 (66.7%) had made a practice of wearing masks when going out in recent days. According to the recommendation by WHO everyone should

maintain personal hygiene and should wash hand frequently either with soap water or with hand rub or sanitizer. The present study data revealed that 140 (44.4%) respondents were using sanitizer regularly, 132 (41.9%) started using sometime. But still there is a gap in awareness, approximately 43 (13.7%) people were found who were not using sanitizer at all and 67(21.3%) people of the population were not used to wearing mask while going outside.

**Figure 5: Hygiene practice of the common people emphasizing hand washing with soap as most important preventive measure. Data were analyzed as in percentages (n=315).**

**Frequency of hand washing with soap in a day**



Most of the people in the study population had made a practice to wash their hands with soap frequently. Figure 5 revealed that 116 (36.85%) people in the study population were doing it for more than 7 times a day, 103 (32.7%) were doing approximately 5-7 times a day and about 84 (26.7%) no. of people were maintaining it for atleast 3-4 times a day.

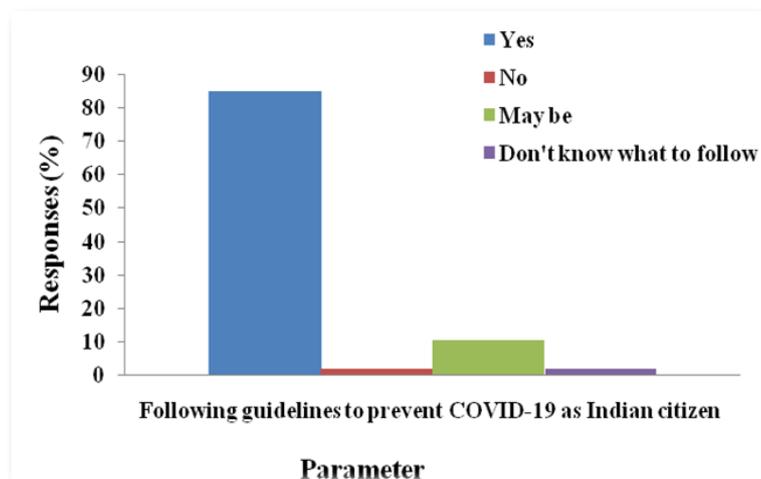
**Table 2: Perception of the community regarding recent outbreak of COVID-19**

Perception parameter	Number of Participants (%)		
	Yes	No	May be
Do you feel the information about COVID-19 is being conveyed; are enough to build real awareness among people?	188 (59.7)	53 (16.8)	74 (23.5)
Do you believe that within 2-3 months INDIA can be free from corona virus?	159 (50.5)	25 (7.9)	131 (41.6)

Data were presented as frequencies and analyzed as in percentages (n=315).

Table 2 data showed only 188 (59.7%) people felt that adequate information about COVID-19 are being conveyed among the common people which are very much important to generate awareness, 74 (23.5%) people were uncertain about the fact but 53 (16.8%) completely stated that they were deprived from proper information. The faith of the common people towards the fact to recover from this viral disease in India within 2-3 months revealed only 159 (50.5) respondents are confident, 131 (41.6%) were uncertain, while 25(7.9%) had no such confidence.

**Figure 6: Attitude of the common people to follow the guidelines regarding COVID-19 outbreak as an Indian citizen. Data were analyzed as in percentages (n=315).**



The data from Figure 6 denoted that 268 (85.1%) people of the total respondents affirmed that as a citizen of India they were following all of the standard measures and guidelines to prevent the COVID-19 disease transmission. But 34 (10.8%) were not so sure about that, 7 (2.2%) stated they were not following and 6 (1.9%) person were not at all aware about what to follow.

### DISCUSSION

Communicable diseases represent a serious issue to public health, among which viral diseases are the most important concern which has been emerging for a long time. Coronaviruses (CoV), positive-stranded RNA viruses are one on them, having crown-like appearance (*coronam* means crown in Latin) in the electron microscopic structure due to the presence of spike glycoproteins on the envelope. These can cause respiratory, enteric, hepatic, and neurological diseases in human as well as different animal species. In the last twenty years, several epidemic diseases had been occurred due to these virus such as in 2002 to 2003, the severe acute respiratory syndrome coronavirus (SARS-CoV), H1N1 influenza in 2009 and in 2012 the Middle East respiratory syndrome coronavirus (MERS-CoV) were first identified in Saudi Arabia. Most recently coronavirus disease 2019 (COVID-19) has become a global threat caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) or novel coronavirus (n-CoV). [9,10] The virus is highly transmutable within human and infected symptomatic people are the most frequent source of COVID-19 transmission. Till now no specific treatment has been developed for this viral disease, therefore preventive measures are the only strategy to limit the disease outbreak. Preventive strategies are focused on the isolation of patients including proper precaution during the diagnosis, treatment of an infected patient and maintenance of appropriate hygiene standard is the public health concern. India is currently ongoing through a tough time to encounter against COVID-19. Along with the careful infection control, the awareness must be generated within the common people, which altogether can only prevent the disease outbreak within the community. Present study investigated the knowledge and perception of Indian citizens towards COVID-19 of during the rapid rise period of the COVID-19 outbreak. A total of 315 participants completed the survey questionnaire, among them 62.2% were male and most of the participants (71.4%) were the young generation. The present study showed the majority of the respondents (97.8%) were aware about the recent outbreak COVID-19 and most of them also considered it to be a severe warning to the community. However, it was hardly found that a person of the study population has any personal contact or direct relation with any person suffering from COVID-19.

COVID-19 patients usually suffer from severe upper respiratory tract viral infection, presenting symptoms like mild fever, dry cough, sore throat, nasal congestion, headache and muscle pain. The incubation time is generally within 3 to 7 days but it may extend up to 2 weeks. Therefore the possibility of transmission of the disease before development of any symptoms may be infrequent, although cannot be excluded. [11] World Health Organization (WHO) has stated that respiratory droplets from infected person are the major route of disease transmission. Therefore it is important to maintain social distance of at least 1 metre (3 feet) from a person, who is coughing or sneezing. Social distancing was also found to be an important measure for

this infectious disease control in China, from where the rapid outbreak of COVID19 started.[12] At the very early stage of the disease occurrence, on January 23<sup>rd</sup>, the Hubei region in Central China was locked down with all restricted movements within the country. Commercial and social spots like educational institutes, restaurants, other entertainment spots and most shops were closed. The lockdown was beneficial to prevent transmission of the virus from infected person to other person, hence knocking down the pandemic condition. [12,13] However, in a country like India, maintaining such social distance can be a challenge, especially when there is no way to identify an infected person until some visible symptoms have been detected and it is more dangerous that sometimes the cases also be presented as asymptomatic. Therefore self quarantine or voluntary isolation as well as according to the Government directives mandated quarantine, avoiding mass gatherings and lockdown or restricted movement can be beneficial in this situation.[12] Present study data revealed that most of the respondents (92.1%) supported these Government regulation for isolation after foreign trip, 90.2% supported the lock-down and 86.7% feel the quarantine process can be favorable in the present situation. At the same time there was a cross-sectional study in Malaysia which shows around 98.9% people think isolation will be very useful to fight with this life-threat.[19] However, there was a varied feedback to the fact whether proper infrastructure and facilities are there in India to combat the battle against COVID-19. Only 37.1% were confident about the infrastructure of India to efficiently encounter against COVID-19, 24.1% were uncertain but the other 37.5% don't have any confidence at all. In contrary, a similar study from China, where the disease outbreak was miserable revealed the majority of the participants held an optimistic attitude and 90.8% believed that COVID-19 will finally be successfully controlled and had confidence that China can win the battle against the pandemic disease causing coronavirus. [14]

The WHO and other organizations have issued some general recommendations to prevent the transmission of virus, which includes frequent hand washing with soap water or alcohol based hand rub, maintaining social distance, avoid touching eye and mouth, respiratory hygiene practice etc. A very good finding that was obtained from the present study was the practice of hygiene measures among the common people. The respondents indicated that they are strictly following the standard protocols provided by the World Health Organization (WHO). Most of the people in the study population had made a practice to wash their hands with soap frequently. 36.85% were doing it for more than 7 times a day, 32.7% approximately 5-7 times a day and about 26.7% was maintaining it for atleast 3-4 times a day. Most of the responded had made a practice of hand hygiene by using sanitizer regularly and using masks as self protection when going out. However still there is a lack of awareness approximately 43 (13.7%) people were not using sanitizer at all and 67(21.3%) people of the population were not used to using mask while going outside. Similarly the knowledge, attitude and practice based survey data from Chinese residents also indicated the cautious hygiene practice among them after the disease outbreak. Almost all (96.4%) of the respondents stated that they were avoiding crowded places and were wearing masks (98.0%) while going outside from home during the rapid rise period of the COVID-19 disease. [14, 15]

Lastly the perception of the respondents regarding recent outbreak of COVID-19 was assessed, which was focused mainly on two questions that whether they felt adequate information about COVID-19 are being conveyed to build real awareness among common people and if they are confident to recovering from this viral disease in India within 2-3 months. Only 188 (59.7%) people felt that information about COVID-19 is adequate but 53 (16.8%) completely stated that they were deprived from proper information. The lack of confidence in the common people towards recovery from COVID-19 in near future was prominent. Only 159 (50.5%) respondents were confident, 131 (41.6%) were uncertain, while 25(7.9%) had no such confidence. But the KAP study from China revealed instead of the miserable situation there nearly all of the respondents (97.1%) had confidence that China can win the battle against COVID-19.[14] There was a study in Saudi Arabia where it has found that around 71.40% respondents strongly agreeing where 22.96% respondents believing that they will get out of this life-threatening danger very soon.[18] Finally the common people were asked whether being a dutiful citizen of India they were following all of the guidelines to prevent the COVID-19 outbreak and showed that 268 (85.1%) people affirmed that which is quite relatable with the cross-sectional study in Saudi Arabia where 82.15% people showed positive responses that compliance with Ministry of Health precautions will prevent the spread of coronavirus.[18]

Government had declared many policies and actions during lockdown but the present scenario revealed another impact in the community that most of the common people are feeling very much anxious and miserable due to this sudden eruption of COVID-19. Present study revealed there were very less number of people (17.5%) who has the positivity to cope up with current situation. In the mid time, it is also noticed

that the depression of being locked down without any preparation, people are going outside for no reason. Stocking excessive food materials due to anxiety is a major problem and therefore markets and shops are becoming more hotspot places. In the villages, there are aggressions for not getting daily jobs and income and suffering from scarcity of food supply for their survival. Many people are out of their native places and creating panic due to sudden lockdown. But from 8<sup>th</sup> June Unlock Phase-1 has been announced by govt. where shopping malls, few religious places, hotel have been opened [16] and unfortunately as a result of that a huge number of increase in affected patients thereafter. As per the data from ministry of health and family welfare on 10<sup>th</sup> May the number was 62939, on 10<sup>th</sup> June it was 267356 but at 10<sup>th</sup> July the number was 817500 and very surprising on 17<sup>th</sup> August it has crossed 26 lacs [17,3]. So it shows there was an increase in number of infected patients from 10<sup>th</sup> June to 10<sup>th</sup> July around 550,144 but from 10<sup>th</sup> July to 17<sup>th</sup> August the number became 1,782,500. So, it is very evident that during unlock phase-1 people have taken the situation very lightly and did not follow the proper guidelines given by govt. to break the chain. Along with that, some people are also spreading fake information with the help of social media and thus creating a nuisance in the society and not letting others to cooperate with the Government and health care professionals who are engaged with the treatment of COVID-19 patients. Therefore for the benefit of the mankind there is an urgent need to increase awareness among the common people regarding present situation and prevention from the pandemic disease transmission.

### CONCLUSION

Instead of all ongoing struggles in India, the panic emotion among the community regarding this pandemic COVID-19 and the fear of avoidance among the infected patients may further complicate the efforts to prevent the spread of the disease. These findings are actually important for the commoners and also for the Governing bodies to know about the perception and knowledge of common people for the sake of public health also for its prevention and health education. Preliminary these preventive practices seem to be very stringent but only these stringency and strictness can bring effective preventive measures against the disease outbreak and can also break the chain of transmission. This is very important to improve the knowledge of the common people specifically in India, as India consumes around 17.5% of the total population worldwide. Therefore some more surveys focusing this global crisis will be very important to get an overview about people's awareness about COVID-19 and must be helpful in improving the attitudes and practices of the overall community towards this disease.

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