

Knowledge and Apprehension on Covid 19 among the General Public

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Abstract:- Covid-19 has been an massive outbreak throughout the world, several preventive measures are taken to control the spread and ensure well being of public. This study was conducted among 100 participants to evaluate the knowledge of the general public, a poor understanding of the disease may result in the rapid spread of infection. This study aimed to investigate the knowledge and perceptions of general public about COVID-19. A 31-item survey instrument was developed and randomly to public using social media; The data of 100 people were collected randomly in India. The questions were premeditated to assess knowledge of the subjects and to weigh the factors which contribute to the fact. Participants information was maintained anonymous throughout the study and participants were asked to provide honest answers. The study concludes, the participants have fair knowledge on the preventive measures of covid-19 but there is still gap in right perception of the situation. Providing health education programs through social media/networks can resolve the misconceptions and improve the knowledge of covid-19 among public

Keywords:- COVID-19, Corona Virus, Preventive Measures, Health Education Intervention, SARS-Cov-2.

I. INTRODUCTION

COVID-19 is an respiratory disease caused by a novel coronavirus, was first detected in December 2019 in Wuhan, China. In December 2019, numerous pneumonia cases of unknown etiology emerged in Wuhan, Hubei Province, China. On analysis from lower respiratory tract samples indicated Severe Acute Respiratory Syndrome-Coronavirus-2 (SARS-CoV-2) which was caused by novel corona virus, and the disease it causes called COVID-19[9] [10]. Coronavirus is enveloped, single-stranded RNA viruses [8].The disease is highly infectious, with symptoms including fever, dry cough, fatigue, myalgia, and dyspnoea[7] .COVID-19 is spread by human-to-human transmission through droplet, fecal-oral, and direct contact and has an incubation period of 2-14 days[12].Till date there

are no definitive antiviral drug or vaccine to cure the disease. Therefore, applying preventive measures is the only way to control the infection[13]. The media has been reporting continuously to keep everyone informed about the pandemic situation. Pandemics can lead to heightened levels of stress, as this issue creates lot of concern for people which leads to heightened levels of anxiety.:[11]The Center for Disease Control and Prevention (CDC) and the National Institutes of Health (NIH) made recommendations based on the scientific knowledge to limit social contacts, encourage use of masks, and assure the public about the reliability of the food and goods supplies[14] [15]. This study is about the knowledge among the people about the disease COVID-19 in order to prevent the disease from spreading and basic information on the disease.

II. MATERIALS AND METHODS

Cross sectional study was implemented with randomly selected participants in India. Since this study was conducted during COVID-19 pandemic, collection of live samples from the participants weren't possible. A self-administered structured questionnaire of 31 question under the aspect of the cause , features, prevention and treatment of COVID-19, written in English to access the knowledge and apprehension of COVID-19, questionnaires included demographic details along with questions exploring the knowledge of the participants on COVID-19. No identification information was included in the questionnaire, the questionnaire consisted of combination of selected response, it would take about 5-20 minutes to complete the questionnaire. The questionnaire was then converted into google form and then shared via social networks, total of 100 participants have participated in the survey and the purpose of the study was explained and the participants were requested for their willingness to participate the survey, any doubts raised regarding the questionnaire were addressed. Subsequently, questionnaire was collected through google form and then analysed.

III. RESULTS

❖ *Demographic Data:*

The study was about the knowledge of COVID 19 among general public. And it was conducted among 100 participants. Randomly from residents from southern part of India. Out of 100 participants (n=94) 94% were Tamilnadu residents and remaining are from other parts of India. And mostly from Chennai 78% (n=78). Among all the participants 80% (n=80) people were from urban areas. There were (n=61) 61% female and (n=39) 39% male participants.

➤ *Knowledge About Covid-19*

Subjects were asked to answer wide range of questions regarding the origin, transmission, prevention, diagnosis and treatment procedures of COVID-19. First they were asked several questions about the origin and history of COVID-19 majority of the subjects got the right answers then some questions about transmission and prevention of COVID 19 majority were aware about the procedure to prevent and avoid transmission of the disease, the finally under the diagnosis and treatment about the disease most of the subjects weren't aware of the procedures and so there were mixed results.

➤ *Knowledge About Origin And History (Table 1 And Figure 1)*

About 94% of the subjects knew the first case was reported in Wuhan, whereas the remaining 6% chose the other options. 51% knew the name corona was formulated as the spikes in the virus looks like a crown but 45% thought it was due to pandemic, 45% participants answered the size of corona virus was 80 billionth of meter in diameter but 32% answered its 8 billionth of meter in diameter. When the subjects were questioned about the origin of corona virus 81% answered from bats 11% from human beings. So concluding the majority of the participants have good knowledge about the origin and history

➤ *Knowledge About Transmission And Symptoms (Table 2 And Figure 2)*

Subjects were asked about the transmission of the virus and only 9% says its through droplets but 79% choose both droplet and close contact are cause of transmission, 66% knew that virus gets attached itself to ACE-2 receptor lining when it enters human body. 80% were aware of the primary symptoms of the disease. There was a mixed response to question on the quantity of alcohol in handwash, 32% answered 2% alcohol is used, 34% answered 20% alcohol and 34% answered 60% alcohol. And for the question about which organ does the virus attack 86% have answered right. So on concluding majority subjects had given the right answer for most of the questions whereas there are misconception in few questions.

➤ *Knowledge About Diagnosis And Treatment (Table 3 And Figure 3)*

69% subjects had knowledge that corona virus is detected by PCR. 62% had answered rightly on CT chest of infected person shows ground glass opacity with pleural effusion. 64% knew R number indicates the average number of people to whom, one infected person to the other but 36% percentage answered R number indicates percentage of death due to corona. 39% have answered that the fatality ratio of COVID-19 was 30-40% and 40% have answered that the fatality ratio of COVID-19 is 5-6%. Concluding the participants have reduced knowledge on diagnosis and treatment of the disease as the survey shows almost equal misconception among the participants

IV. DISCUSSION

This study was created to know the knowledge and awareness of the disease among the public, which is necessary for prevention and spread of the disease. Lack of awareness often leads to an unconcerned attitude on the contrary people experience fear and anxiety due to epidemics and pandemics which influence the behaviour of people in the community. Several measures were taken to prevent the infection, WHO suggested alcohol based hand sanitizers for hands hygiene in healthcare to sensitize the hands and to diminish the spread and corruption of coronavirus, they are mostly made up from ethanol, isopropyl alcohols, hydrogen peroxides in dissimilar combinations which on being misused can be venomous to human health and environment. These references are based on rapid, effective and broad spectrum anti-microbial action with easy accessibility and safety [18]. Airborne protections, such as a fit-tested N95 respirator, and other personal protective equipment are strongly recommended. There is no substantial indication that medical masks are inferior to N95 respirators for protecting healthcare employees against laboratory-confirmed viral respiratory contaminations during routine care and non-aerosol-generating measures. Medical masks also achieved similarly to N95 respirators in preventing laboratory-confirmed influenza contagion [17]. Testing of respiratory cases should be done instantly once a diagnosis is suspected. Serum antibodies should be tested among health-care workers before and after their contact to corona virus for identification of asymptomatic contagions [19]. The CT outlines of viral pneumonia are connected to the pathogenesis of the viral infection. Some CT structures and features of patients with confirmed COVID-19 that were commonly seen in patients are similar to CT features of SARS and Middle East Respiratory Syndrome. [20].

During this coronavirus, most people and health professionals are aware of this infection, prevention, importance of social distancing, government have taken initiatives were to limit the spread of infection [1]. In the study, correct rates of COVID-19 knowledge ranged widely indicating that while some participants had high levels of knowledge on the disease, others did not. Several studies done in other countries have indicated high levels of COVID-19 knowledge among the general population [2] and healthcare workers [3]. As there is difference in the procedure of measuring and scoring the participants in the studies it is not possible to make the accurate comparison of the knowledge among the people. These results reinforce conclusions from previous studies associating higher levels of knowledge with association of higher confidence and positive attitudes in health crises which would help the government to reduce the spread of infection [4]. Similar to article on knowledge and perception among health care workers [5], even our study has significant gap in the source of information.

V. CONCLUSION

To accomplish, this study presents a unique comparison of data designed to evaluate the knowledge and awareness of Covid-19 among public. This study established the knowledge and awareness concerning Covid-19 was inadequate among people, as everyone has to have knowledge about the disease to prevent disease from spreading. So to conclude the government should take steps in health awareness among the people, not just about the prevention but even the basics of diagnosis and treatment of the disease for the public to be cautious and doesn't have to panic if they acquire the disease. As the global threat of COVID-19 continues to progress, it is important to improve the knowledge and perceptions of the general public, to get the situation under control. Educational interventions are needed to improve the status.

KNOWLEDGE ON ORIGIN AND HISTORY			
QUESTION	OPTION	FREQUENCY	PERCENTAGE
1.First case of corona virus was reported at	BEIJING	5	5.0
	WUHAN	94	94.0
	SHANGHAI	0	0
	HONGKONG	1	1.0
3. Corona virus is	a large family of virus	16	16.0
	family of nidovirus	18	18.0
	both A and B	66	66.0
4. The term Corona was formulated by which of the following reasons	the spike on virus looks like a crown	51	51.0
	due to pandemic	45	45.0
	due to severity	4	4.0
5. What is pandemic	incidence in whole world	78	78.0
	incidence in a geographic area	10	10.0
	prevalent in a particular area	5	5.0
	prevalent in geographic area	7	7.0
6. Corona virus is	SARS-COV	18	18.0
	MARS	5	5.0
	SARS-COV2	77	77.0
7. What is the size of Corona virus	8 billionth of meter in diameter	32	32.0
	80 billionth of meter in diameter	45	45.0
	800 billionth of meter in diameter	23	23.0
8. What does 19 in Covid-19 stand for	19 molecules make up the virus	10	10.0
	19th Corona virus was identified since the WHO began naming them	18	18.0
	year the virus was first encountered	72	72.0
14. Origin of Corona Virus is from	Bats	81	81.0
	cow	4	4.0
	Dogs	4	4.0
	Frogs	0	0
	human being	11	11.0

Table 1

KNOWLEDGE ABOUT TRANSMISSION AND SYMPTOMS			
QUESTIONS	OPTIONS	FREQUENCY	PERCENTAGE
9. Corona virus spreads through	Droplets	9	9.0
	close contact	8	8.0
	both A and B	79	79.0
	none of the above	4	4.0
10. What does the virus attach itself to when it enters the human body	antigen	14	14.0
	RBC	20	20.0
	ACE-2 receptor in lining of airway	66	66.0
11. Early symptoms of Corona Virus	Cough	3	3.0
	Fever	10	10.0
	sore throat	7	7.0
	all the above	80	80.0
12. Incubation period of Corona Virus	1-7 days	10	10.0
	2-14 days	66	66.0
	7-12 days	19	19.0
	10-30 days	5	5.0
13. preventive measures	wear face mask	8	8.0
	Handwashing	2	2.0
	Curfew	6	6.0
	all the above	84	84.0
17. What is more effective in removing Corona virus from Hands	at least 2% alcohol	32	32.0
	at least 20% alcohol	34	34.0
	at least 60% alcohol	34	34.0
19. Higher level protection is by	Surgical mask	6	6.0
	homemade cloth mask	6	6.0
	N95 mask	52	52.0
	all the above	36	36.0
21. In which age group the COVID-19 spreads	all groups irrespective of its age	73	73.0
	Children	7	7.0
	Aged	7	7.0
	people with pre-existing medical condition	13	13.0
22. According to study how long the virus survives on plastic and stainless steel surface	72 hrs and more	31	31.0
	24- 60 hrs	47	47.0
	4-13 hrs	22	22.0
24. Which organ in body does Corona virus attack	Lungs	86	86.0
	liver	5	5.0
	Kidney	8	8.0
	Heart	1	1.0
26. Maximum time for which virus stays on surface	1 day	28	28.0
	12 hours	27	27.0
	1 week	32	32.0
	14 hours	13	13.0

Table 2

KNOWLEDGE ABOUT DIAGNOSIS AND TREATMENT			
QUESTIONS	OPTIONS	FREQUENCY	PERCENTAGE
2.Primary care triage contain	Patient motivation and health precautions	21	21.0
	Analgesia	9	9.0
	Antimicrobial	7	7.0
	All of the above	63	63.0
15.how is corona virus detected	PCR	69	69.0
	MRI	8	8.0
	Blood test	23	23.0
16. CT chest of infected shows	Ground glass opacity with pleural effusion	62	62.0
	Ground glass opacity without pleural effusion	22	22.0
	No significant changes	16	16.0
18.To minimize exposure dentists are advocated to	Use of rubber dam	4	4.0
	Reschedule appointment	13	13.0
	Rinse with 1% H2O2	9	9.0
	All the above	74	74.0
20.Name the clinical trial in which blood is transfused from recovered COVID-19 patients to corona virus patients who are in critical conditions	Plasma therapy	65	65.0
	Solidarity	9	9.0
	Remdesivir	10	10.0
	hydroxychloroquine	16	16.0
23.government around the world have been monitoring 'R number' to determine when to ease the lockdown	Percentage of confirmed corona virus cases that lead to death	36	36.0
	Average number of people to whom, one infected person pass on the virus	64	64.0
25. What is a fomite	Hospital grade infection	16	16.0
	Contaminated objects or surface	46	46.0
	Diseased carrier	22	22.0
	Immunity boosting supplement	16	16.0
27.Fatality ratio of Covid-19	30-40%	39	39.0
	5-6%	40	40.0
	70%	14	14.0
	10%	7	7.0
28.Which of the following statement is/are correct about favipiravir	Its is an antiviral COVID-19 drug	12	12.0
	Glenmark pharmaceuticals under the brand name fabiflu has launched an antiviral drug favipiravir	22	22.0
	It's the India's first COVID-19 drug launched priced at Rs 103 per tablet	10	10.0
	All the above are correct	56	56.0
29.In a study, which cells are found in COVID-19 patients 'bode well' for long term immunity?	P-cell	19	19.0
	D-Cell	21	21.0
	T-Cell	40	40.0
	Endothelial Cells	20	20.0
30. Name the vaccine that is jointly developed by German company Bio N tech and US pharm giant Pfizer for COVID-19	BNT 162	16	16.0
	PICOVACC	18	18.0
	Both A and B	45	45.0
	Neither A and B	21	21.0

Table 3

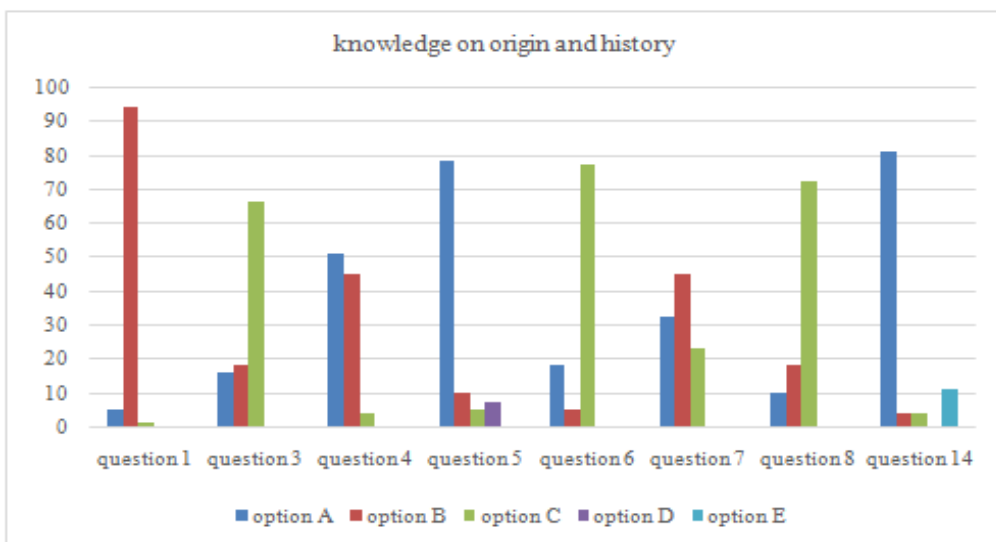


Fig 1

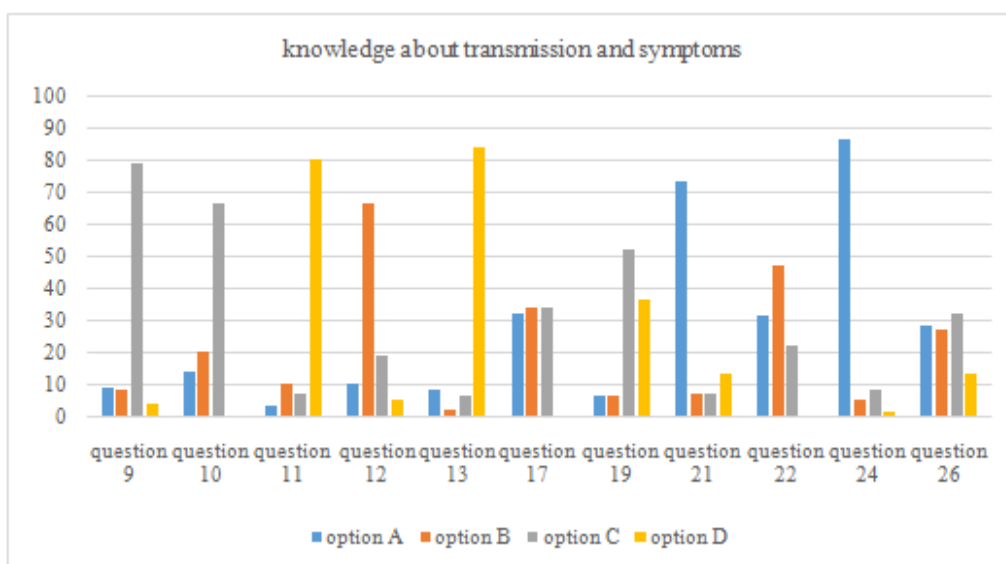


Fig 2

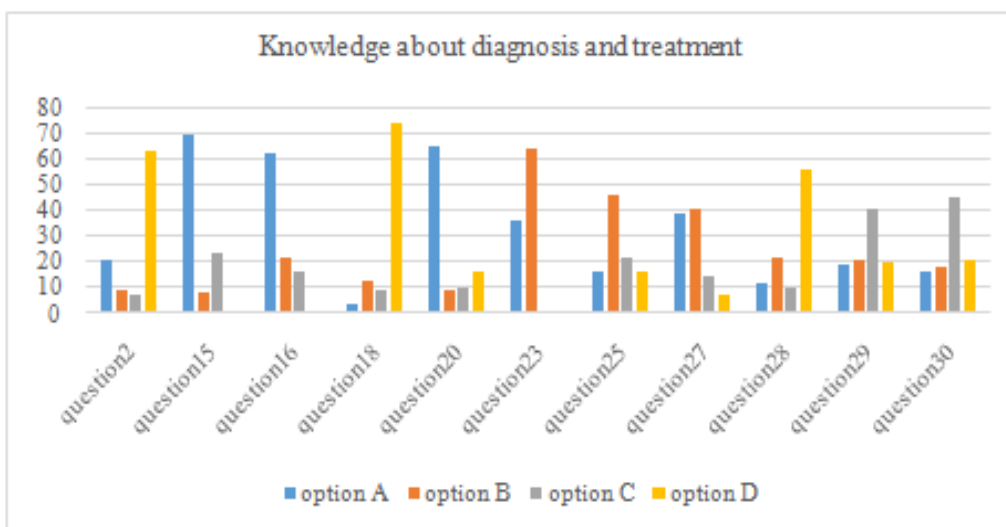


Fig 3

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