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Awareness survey on COVID-19 pandemic in India

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Abstract

A pandemic caused by novel corona virus begins in end of year 2019 in Wuhan, China and within few months it emerged and affected the whole world. To providing information about health care, sanitation to the rural people of India, we conducted an Awareness, Cleanliness and Practice (ACP) survey among the rural people of Delhi-NCR, India in April 2022. An analytic cross-sectional survey with questionnaires administered online to the rural population including Farmers, Janitors, Health Care Workers (HCW), House wives, Students in Delhi-NCR, India. All Participants were voluntarily participated and the percentage of ACP scores was categorized as good and poor. However, Independent predictors like Awareness of severe acute respiratory disorder were ascertained using a binary logistic regression model. The questionnaire was online administered among rural people of Delhi-NCR, India. There were 400 study participants with mean age 32.37±8.15 yrs, interquartile range 28–32 yrs and males 63.4% with graduate education. Most participants were farmers (30%), Janitors (20 %), Health Care Workers, and 20% of House wives and students. All results were expressed in mean ± standard deviation for Awareness, Cleanliness and Practice (ACP) and their scored were 55.18± 12.38, 63.15% ± 5.16 and 45.02% ± 14.2 respectively. Apart from this 376 participants (56.25%) had good awareness (GA) about the hygiene, 32.5% had good knowledge about the cleanliness (KC), and 70% participants following good practices (GP). Despite of this around 58 % did not agree that vaccines can protect them from COVID-19 which as originated from animals and 46 % thought it was a manmade virus and China is behind it. Although, in case of factor fear most of participants (86%) gives 9 out of 10 and 75% agreed that taking basic precautions like wash hand with soap, wear mask, social distancing and vaccines can protect them from this pandemic. However some the respondents (56%) blamed govt election policies and holy bath in kumbh in Haridwar is the main reason of spreading the COVID19 in 2021 in India. One in seven people had public stigma towards infected person and recovered patient from the virus.

Keywords: COVID-19; Survey; Awareness; Cleanliness and Practice; Delhi-NCR

1 Introduction

Since late 2019, humanities try to free from the grip of novel viral SARS-CoV-2 that causes coronavirus disease COVID 19, with fertility rate around 4% (WHO, 2020). Researcher stated that this new corona virus is related to the SARS-CoV and Middle Eastern Respiratory Coronavirus (MERS-CoV) that emerged in the early 2000s [1,2]. On 30 January 2020 World Health Organization declared the outbreak a Public Health Emergency of International Concern (PHEIC) on 11 March 2020, WHO declared it pandemic. Due to its highly contagious nature, soon it spread out in all around the world with 55.8 L deaths with 58.4 Cr cease were reported globally till 18 May 2022 [4, 5].

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2 Coronavirus

COVID-19 Coronavirus (CoVs) belongs to *Coronaviridae* family having order *Nidovirales* with subfamily *Orthocoronavirinae* belongs to beta group of coronavirus having 90% nucleotide similarity with bat SARS-like-CoVZXC21 and around 83% nucleotide similarity with human SARS-CoV [6], it has single-stranded RNA (80 to 100 mm in diameter) with 29891 nucleotides encoding around 9860 amino acids [7, 8]. There are 4 types of Coronaviruses were reported; α-coronavirus, β-coronavirus, δ-coronavirus, and γ-coronavirus. Some others common human coronaviruses are HKU1, NL63, and OC43 and 229E, which also infected humans and caused mild respiratory disease only as compared to, MERS-CoV and SARS-CoV-1[9,10]. First case of COVID-19 in India was reported on 27 January, 2020 (20 year old female in General Hospital, Thrissur, Kerala, having one day history of dry cough and sore throat). After the first case reported in India, till May 18, 2021 the total number of cases were reported by ICMR were around 2.5 Cr suspected case with 2.75 L death [6]. To avoid this Govt. of India impose social distancing, Janata curfew, the lockdown and establishing health check posts between the national borders to test whether people entering the country have the virus etc. In year 2021 India approved two COVID-19 vaccines; Covishield and Covaxin and Mr. Manish Kumar, 34-year-old sanitation worker at Delhi's All India Institute of Medical Sciences (AIIMS), was the first person in India to be vaccinated against the coronavirus disease (Covid-19) on 16 Jan 2021. [https://www.hindustantimes.com/india-news/aiims-worker-34-is-first-in-india-to-get-covid-19-vaccine-101610797044914.html]. As per the Govt. of India guidelines people above 60 years of age and people over 45 years of age with co-morbidities, were being administered the vaccines first [7].

Thus, in this study, we explore the awareness among the rural people belongs from Delhi-NCR region, India regarding COVID-19, morbidities, importance of cleanliness and practice of HO guidelines with and hygiene (respiratory). We also evaluate the predictors of good awareness of COVID-19 as well as exploring cleanliness issues towards the virus.

3 Methodology

3.1 Study design and participants

This was an analytic cross-sectional survey with online questionnaires administered to the rural population of Delhi-NCR, India, including Farmers, Janitors, Health Care Workers (HCW), House wives and Students. All participants were recruited by convenience sampling via online mode (following COVID-19 protocol). The National Capital Region (Delhi-NCR) is the region encompasses Delhi and several districts surrounding it from the states of Haryana, Uttar Pradesh and Rajasthan. The study was done in 2 major localities, rural area of Gurugram and outer Delhi India.

3.2 Data collection

The questionnaire was administered in three formats; first was an online questionnaire that was distributed to the rural via Google form (50%), the second formats interview like questionnaire via call (27.9%) and the last was administered as online MCQs from accounting for 22.07%. Corrections were made in some questions and certain relevant questions were added as the epidemic become worst in April and May 2022 in India. The survey was conducted from 28th April 2022 to 17th May 2022.

The questionnaire has three components: the awareness about COVID-19, necessary cleanliness measures to avoid or minimizing the pandemic i.e. various risk factors, transmission and prevention methods and good hygienic practice [6]. The study started when India came in second wave of COVID-19 and daily cases were more than 3 lakh in a day. Some relevant questions were added as more information about the disease evolved. Open-ended questions were analyzed separately and demographic data was evaluated and summarized (descriptive presentation). All quantitative data were presented as mean, standard deviation and inter quartile ranges. However, some questions were analyzed using simple frequency tables. Chi-square and student's t testing was used in identifying associations between variables and outcomes. The level of significance (α) was set at 0.05 and analyses was done using Stata version 11.0.

4 Results and Discussion

4.1 Basic characteristics and univariate analysis

A total of 200 questionnaires were selected and administered to the rural people of Delhi-NCR from 28th April 2022 to 17th May 2022, out of which 14 questions were dropped (figure 1). There were 400 study participants with mean age 32.37±8.15 yrs, interquartile range 28–32 yrs and males 63.4% with graduate education. Most participants were farmers (30%), Janitors (20%), Health Care Workers, and 20 % of House wives and students (Table 1). All results were

expressed in mean ± standard deviation for Awareness, Cleanliness and Practice (ACP) and their scored were 55.18± 12.38, 63.15% ± 5.16 and 45.02% ± 14.2 respectively. Apart from this 376 participants (56.25%) had good awareness (GA) about the hygiene, 32.5% had good knowledge about the cleanliness (KC), and 70% participants following good practices (GP). Despite of this around 58% did not agree that vaccines can protect them from COVID-19 which as originated from animals and 46% thought it was a manmade virus and China is behind it. Although, in case of factor fear most of participants (86%) gives 9 out of 10 and 75% agreed that taking basic precautions like wash hand with soap, wear mask, social distancing and vaccines can protect them from this pandemic [7]. However some the respondents (56 %) blamed govt election policies and holy bath in kumbh in Haridwar is the main reason of spreading the CVID19 in 2021 in India. One in seven people had public stigma towards infected person and recovered patient from the virus.

Table 1 Baseline demographic characteristics of survey participants (n = 376)

S. No	Characteristic	Number, n (%)
1	**Gender [males/females]**	200/176
	Mean [± SD], years	32.37±8.15
2	**Marital Status**	
	Single	120 (31.91%)
	Married	220 (85.93%)
	Divorced	10 (3.9%)
	Widowed	5 (1.9%)
	Separated	1 (0.8%)
3	**Educational Level**	
	Post graduate	100 (26.59%)
	Graduate	150 (39.89%)
	Secondary	67 (17.81%)
	None	59 (15.69%)
4	**Questionnaire Administration**	
	Self-administered	188 (50%)
	Interviewer administered	105(27.9%)
	Online administration	83 (22.07%)

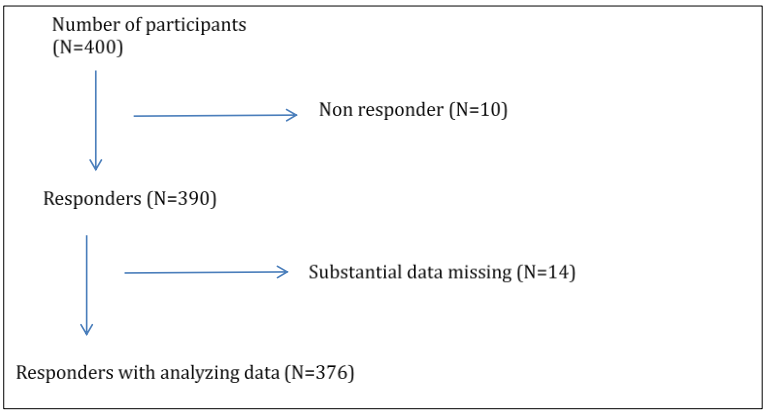

Figure 1 Flow diagram of participants

Almost 80% of respondents said they were willing to accept both dose of vaccine providing by govt of India and 25% saying they would be willing to pay for it. Data obtained from univariate analysis (Table 2) indicated that married persons and higher age persons having greater responsible towards ACP while basic education was associated with GP; odds ratio 87%, Confidence Interval: 2.45(1.79–3.95). However, Independent positive predictors were unmarried, fear of COVID19, habits modification and stay at home.

Table 2 Relationship of demographic characteristics to knowledge

Variable	Good Knowledge	Poor knowledge	Test-Statistic	P value
Age[years] (mean ± SD	29.18±9.70	30.15±6.18	t = -4.0	<0.001
Gender [males]	175/200 [87.5%]	25/200[12.5%]	X2 = 0.2837	0.433
Gender [females]	120/176 [68.18%]	56/176 (31.81%)	X2 = 0.387	0.543
Marital status	198/220 [90%]	22/220 [10%]	X2 = 89.87	<0.001
Questionnaire	320/376 [85.10%]	56/376 [14.9%]	X2 = 97.35	<0.001
Education	280/376 [74.46 %]	96/376[25.53%]	X2 = 57.82	<0.001

5 Conclusion

Providing awareness about the COVID 19, importance of cleanliness and practicing the world health organization should minimize the transmission of COVID. This study accentuates the points considering them we can fight against the fear, consequences and psychological impact of COVID19. Currently, almost every country has taken precaution to avoid spreading the COVID-19 especially America, Brazil and India (contributes maximum number of COVID-19 cases globally). However, preventive measures like lockdown, hand wash with soap, maintain social distancing, wear mask, avoid social gathering and vaccine is the best weapon available to fight against this deadly viral infection. Although COVID-19 is dangerous to humans, its sacred method called lockdown helps in the rebirth of nature. However, such effects are for the time being but raise the question, can we together make it permanent. Apart from this there are many challenges like limited number of test facilities, Lack of safety equipment and vaccines, Lack of skilled human resources and health service provider and large number of vulnerable people are the major one.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare no conflict of interest, financial or otherwise.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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