Research Article

Practices, Attitudes, and Knowledge towards COVID-19 among North-Indian Residents during the outbreak of the COVID-19

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Abstract: There have been several measures adopt to manage the increase of COVID-19 in India. To combat the COVID-19 Pandemic faced by the nation, Govt. of India has in employ gigantic amount of procedures like Lockdown, aggressive testing, infusing funds to improve the financial system, present incentives to various sectors, promoting digital dealings, e-learning, etc. The challenge remains the acceptance and adoption of these by people of India. The need will be to educate people about this epidemic and increase their knowledge in the direction of it so that extend of the same can be slowed down. Majority people have not only to change their practices but also their attitude towards life. The lifestyles are bound to be affected due to COVID-19 across India. Through this study we will try to gauge on these aspects. For this a survey on people of Tricity (Chandigarh/ Mohali/ Panchkula) was conducted. The questionnaire included 20 questions to assess the understanding of the residents on the measures adopted for the prevention of disease and what they are doing on their own to come out of this. The study is based on their confidence level, knowledge level and the practices they are adopting towards this epidemic. The study found not too high levels of knowledge scores of the respondents. However, the results showed high levels of confidence and practices followed in such situation. The results of the demographic analysis revealed the knowledge scores showed significant differences existed between the groups based on gender and age. However, no significant differences are found for attitude and practices across the groups based on gender and age.

Keywords: COVID, attitude, Tricity, India

1. Introduction

COVID-19, a disease which originated from the city of Wuhan of China in December 2019 with acute symptoms of respiration, dry cough, illness, tiredness, myalgia, is infecting humans to humans. The disease becomes more fatal in-case of people already suffering from heart related problems, diabetics, acute respiratory problems and cancer. Study done on the same has revealed the fatality rate to be around 2.5% in China which is much lower than that resulted from other declared epidemics like SARS (9.4%), MERS (34.5%) and H7N9 (39%) 1-3. WHO (World Health Organisation) declared the COVID-19 (Novel Coronavirus Disease) outbreak as a global emergency with more than 9000 cases reported worldwide and 19 countries including China4. India too details its foremost case of COVID-19 in Kerala on 30th January 2020. By 11th March total confirmed cases rose to 126214 and confirmed death cases 4628 in more than 114 countries5. With rapid spread of the Coronavirus disease, WHO finally declared it as pandemic on 11th March, 20206.

In India, confirmed cases crossed 100 on 15th March 2020 and 280+ on 21st March 2020. The COVID-19 outbreak was confirmed an outbreak in additional than a dozen states and union territories, in addition to necessities of the outbreak Diseases Act, 1897 were petition to, and all academic institutions and many other establishments were pushed to shut down. India also perched all traveler visa since most of the inveterate cases were associated to additional affected countries8. The country observed a deliberate 14-hour public curfew on March 22, 2020 at the instance of the prime minister9. Further, on 24th March 2020, a nationwide lockdown for 21 days was announced to prevent the spread of disease10.

The struggle against COVID-19 is yet happening in India to make sure the final achievement, individuals' faithfulness to these manage events are indispensable, which is usually prejudiced by their insight, perspectives, and carry out towards COVID-19. SARS outbreak that was there in the year 2003 gave many insights related to knowledge and attitude of the people for infectious diseases. Lack of awareness for the same could complicate the efforts in controlling the disease.11-12

To contribute in managing the COVID-19 outbreak in India, it becomes more important toward appreciate the consciousness of public for COVID-19. Through the given survey, an attempt has been made to know the knowledge, practices and attitude of the people of Tricity towards the COVID-19 outbreak.

2. Research Objectives

The current study has an objective to assess the knowledge score, attitude and practices of people who are residents of tricity regarding the Covid19 situation. The study further aims to find out whether there is difference between the knowledge scores, attitude and practices of people on the basis of the demographic variables; age-groups and gender.

3. Research Methodology

This survey was conducted from April 10, 2020 to April 14, 2020, after 17 days of the lockdown in India. The study employed the questionnaire used by Zhong et al. (2020) to capture the knowledge, attitude and practices and modified it as required. The data for the study was collected online as it was not possible to reach the people physically under lockdown restrictions. Authors used their network with students/colleagues related to the authors' workplace and friends. A google form was shared using whatsapp groups. The study employed the descriptive statistics to assess the knowledge, attitudes and practices of residents of tricity regarding the Covid19 situation. To evaluate the difference between the knowledge scores, attitudes and practices across different groups based on demographic variables, the study performed the independent samples t-test and One-way ANOVA.

4. Research Hypothesis

H01: There is no noteworthy difference between the knowledge scores of males and females

H02: There is no noteworthy difference between the knowledge scores across different age-groups

H03: There is no noteworthy difference between the attitude of males and females

H04: There is no noteworthy difference between the attitudes of the people belonging to different age-groups

H05: There is no noteworthy difference between the practices followed by males and females

H06: There is no noteworthy difference between the practices of the people belonging to different age-groups

Data Analysis

Table 1 displays the demographic distribution of respondents who gave right answers to the questions pertaining to knowledge. It can be seen from the results that there are certain aspects where the respondents have complete knowledge but then there are certain aspects where very few respondents gave the correct answers. It can be seen that the most of respondents gave correct answers regarding the commonly known things about the covid-19 like its known symptoms, existence of no effective cure presently and the precautions required to avoid contacting this novel virus. However, the results show that the respondents lacked the knowledge regarding certain other aspects of covid-19. Many respondents gave the incorrect answer regarding distinction of symptoms of novel virus from the common cold, cases where this virus can affect severely and spread of virus. It is observed that in the majority of statements, the percentage of males who gave correct answers is higher than the percentage of females. It can also be seen from the table that the percentage of respondents in the age group 30-49 is higher than the other two age groups in answering the questions correctly.

Table 1: Demographic Distribution of Respondents who answered Knowledge Questions Correctly

Knowledge Statements	Gender-wise Percentage of Respondents		Age-wise Percentage of Respondents			Total
	Male	Female	16-29	30-49	50 and above	
Fever, tiredness, trouble in breathing and dry cough are the major symptoms of COVID-19	100	100	100	100	100	100
Stuffy running nose and sneezing are less common in COVID-19 infected persons	54.55	52.94	48.87	68.18	55.56	53.85
Presence of no effectual cure for coronavirus, however timely detection, indicative and supportive treatment can help in recovery	92.73	89.41	90.23	95.45	88.89	91.28

All cases of COVID-19 will not turn into severe cases. Majorly those patients which are elderly, having chronic illnesses, and obese are more prone to turn severe	65.45	44.71	49.62	72.73	66.67	56.41
Contact with animals can spread the infection of COVID- 19	71.82	64.71	70.68	61.36	72.22	68.72
COVID-19 infected persons cannot foul the illness to others when a fever is not present	83.64	83.53	82.71	88.64	77.78	83.59
The spread of coronavirus is through respiratory droplets of infected individuals	78.18	72.94	69..17	95.45	77.78	75.9
Population can wear all-purpose medical masks all days to stay away from the infection COVID-19 virus	79.09	87.06	80.45	84.09	94.44	82.56
It is not essential for children and young adults to adopt necessary steps to avoid the infection by the COVID-19 virus	86.36	72.94	78.2	86.36	83.33	80.51
People should not go to crowded places to avoid coming into contact with COVID-19	95.45	95.29	93.98	97.73	100	95.38

Table 2 displays the results of the knowledge scores of the respondents on the basis of gender. We can observe from Table 2 that the average knowledge score is 7.88 out of 10. The knowledge score of males is 8.07 whereas that of females is 7.64. Hence, the knowledge score of males is greater than that of two females. In order to evaluate the significance of this difference, the study employed independent samples t test. The test statistic is found to be, $t= 1.981$, $p< 0.05$. The results of the test reveaked significant difference in the knowledge scores of males and females.

Thus, the results reject the null hypothesis; H01: There is no significant difference between the knowledge scores of males and females.

Table 2: Knowledge Scores and Gender

Demographic Variable	**Category**	**N**	**Mean**	**Std. Deviation**	**Results of Independent t-test**	
					Knowledge	
					t	Sig. (2-tailed)

Gender	Male	110	8.0727	1.61818	1.981	.049
	Female	85	7.6353	1.40447		
	Total	195	7.8821	1.54033		

Table 3 displays the results of the knowledge scores of the respondents on the basis of age-groups. It can be seen that the average knowledge score of respondents between the age group 16-29 is 7.64; 30-49 is 8.50 and 50 years and above is 8.1667. Hence, the knowledge score of respondents between the age-group 30-49 is highest following the knowledge score of 50 years and above and is lowest for the age group 16-29. The study employed one-way ANOVA test to know the significance of the difference between these groups based on age of the respondents. The results of Levene's test show the value of test statistic equals to .902 and p=.408. Thus, the assumption of homogeneity of variance is found to be tenable as Levene's test is non-significant (p>.05). The results of ANOVA as can be seen from the Table 3, shows that the test statistic, F= 5.773, p< 0.05. The results of the test revealed significant difference between the knowledge scores across the age-groups. Thus, the results lead to rejection the null hypothesis; H02: There is no significant difference between the knowledge scores across different age-groups.

Table 3: Knowledge Score and Age-Groups

Demographic Variable	**Category**	**N**	**Mean**	**Std. Deviation**	**Levene's test**		**Results of One-way ANOVA Test**	
					Levene Statistic	Sig.	F	Sig.
Age	16-29	133	7.6391	1.57797	.902	.408	5.773	.004
	30-49	44	8.5000	1.32068				
	50 and above	18	8.1667	1.33945				
	Total	195	7.8821	1.54033				

Table 4 displays the results of attitude of the respondents on the basis of gender. It can be seen from below give table that the mean value for the attitude is 2.4513 out of 3. The mean value for the attitude for males is 2.5091 whereas that of females is 2.3765. Therefore, the mean value for the attitude are found to be higher for males than females. In order to evaluate the significance of this difference, the study employed independent samples t test. The test statistic is found to be, t= 1.187, p> 0.05. The results of the test show that there is no significant difference between the attitude of males and females towards Covid19. Thus, the results fail to reject the null hypothesis; H03: There is no significant difference between the attitude of males and females

Table 4: Attitude and Gender

Demographic Variable	**Category**	**N**	**Mean**	**Std. Deviation**	**Results of Independent t-test**	
					Knowledge	
					t	Sig. (2-tailed)

Gender	Male	110	2.5091	.72625	1.187	.237
	Female	85	2.3765	.83061		
	Total	195	2.4513	.77422		

Table 5 displays the results of the values of attitude of the respondents on the basis of age-groups. It can be seen that the value of attitude of respondents between the age group 16-29 is 2.4211; 30-49 is 2.5455 and 50 years and above is 2.4444. Hence, the average value of attitude of respondents towards covid19 situation is highest for the age-group 30-49 followed by mean values of age group 50 years and above and is lowest for the age group 16-29. The study used one-way ANOVA test to know the significance of the difference between these groups based on age of the respondents. The results of Levene's test show the value of test statistic equals to .157 and p=.855. Thus, the assumption of homogeneity of variance is found to be tenable as Levene's test is non-significant (p>.05). The results of ANOVA as can be seen from the Table 3, shows that the test statistic, F= .425, p> 0.05. The results of the test show that there is no significant difference between the attitude across the age-groups. Thus, the results fail to reject the null hypothesis; H04: There is no significant difference between the attitudes of the people belonging to different age-groups

Table 5: Attitude and Age-Groups

Demographic Variable	**Category**	**N**	**Mean**	**Std. Deviation**	**Levene's test**		**Results of One-way ANOVA Test**	
					Levene Statistic	Sig.	F	Sig.
Age	16-29	133	2.4211	.77078	.157	.855	.425	.654
	30-49	44	2.5455	.79107				
	50 and above	18	2.4444	.78382				
	Total	195	2.4513	.77422				

Table 6 exhibits the results of the mean values of practices followed by the respondents on the basis of gender. It can be seen from below give table that the mean value for the practices is 2.9436 out of 3. The mean value for the practices for males is 2.9364 whereas that of females is 2.9529. Therefore, the mean values of practices followed by the respondents are found to be higher for females than males. In order to evaluate the significance of this difference, the study employed independent samples t test. The test statistic is found to be, t= -.453, p> 0.05. The results of the test show that there is no significant difference between the practices followed by males and females during Covid19 situation. Thus, the results fail to reject the null hypothesis; H05: There is no significant difference between the practices followed by males and females

Table 6: Practice and Gender

Demographic Variable	**Category**	**N**	**Mean**	**Std. Deviation**	**Results of Independent t-test**	
					Knowledge	
					t	**Sig. (2-tailed)**
Gender	Male	110	2.9364	.24522	-.453	.651

	Female	85	2.9529	.26304		
	Total	**195**	**2.9436**	**.25261**		

Table 7 displays the results of the mean values of practices followed by the respondents on the basis of age-groups. It can be seen that mean values of practices followed by the respondents between the age group 16-29 is 2.9474; 30-49 is 2.9545 and 50 years and above is 2.8889. Hence, mean values of practices followed by the respondents towards covid19 situation is highest for the age-group 30-49 followed by mean values of age group 16-29 and is lowest for the age group 50 years and above. The study used one-way ANOVA test to know the significance of the difference between these groups based on age of the respondents. The results of Levene's test show the value of test statistic equals to .652 and p=.194. Thus, the assumption of homogeneity of variance is found to be tenable as Levene's test is non-significant (p>.05). The results of ANOVA as can be seen from the Table 3, shows that the test statistic, F= .476, p> 0.05. The results of the test show that there is no significant difference between practices across the age-groups. Thus, the results fail to reject the null hypothesis; H06: There is no significant difference between the practices of the people belonging to different age-groups

Table 7: Practice and Age-Groups

Demographic Variable	**Category**	**N**	**Mean**	**Std. Deviation**	**Levene's test**		**Results of One-way ANOVA Test**	
					Levene Statistic	**Sig.**	**F**	**Sig.**
Age	16-29	133	2.9474	.25572	1.652	.194	.476	.622
	30-49	44	2.9545	.21071				
	50 and above	18	2.8889	.32338				
	Total	**195**	**2.9436**	**.25261**				

5. Conclusion

Almost all of the countries of the world are making efforts to check the spread of coronavirus including India. In order to combat the spread of the coronavirus and control this pandemic, various measures have been initiated by the Government of India including Lockdown, large scale testing, infusion of funds to boost the economy, etc. However, the major part is their adoption by the countrymen. There is a need to create awareness among the people regarding this epidemic and enhancing their knowledge on what can be their contribution to control the spread of the same. The people are expected not only to change their practices as well as their attitud. This study is an attempt to obtain an insight into these aspects. This study included the conduct of a survey of people of Tricity (Chandigarh/ Mohali/ Panchkula). The questionnaire aimed to assess the understanding of the residents regarding the actions taken to prevent the disease.. The study is based on their confidence level, knowledge level and the practices they are adopting towards this epidemic. It found not too high levels of knowledge scores of the respondents. The results showed high levels of confidence and practices followed in such situation. The results of the demographic analysis revealed the knowledge scores showed significant differences existed between the groups based on gender and age. However, no significant differences are found for attitude and practices across the groups based on gender and age.

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