

A Study on COVID-19 Awareness in INDIA: Comparative Study

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Abstract

Background: COVID-19 pandemic affected each and every individual in our country, physically, socially, emotionally, psychologically as well as financially. Since the outbreak and its outcomes of Corona Virus were unknown for many nations, India can be considered one of them. World Health Organization (WHO) declared the Corona Virus Disease 2019 (COVID-19) outbreak “A public health emergency of international concern.” The aim of the present study is to assess the awareness among individuals about COVID-19 Pandemic.

Methods: An online survey was conducted in which 233 individuals willingly took part. The level of awareness regarding COVID-19 pandemic was assessed with respect to an individual’s gender, locale and age group. Self-Structured Questionnaire was used to assess COVID-19 awareness. T- test and ANOVA Statistical analysis were used to analyse the level of awareness regarding COVID-19, between individuals of different age, locality & gender.

Results: The numerical results of the study depicts that there is a slight difference in the awareness level on the basis of locale. On the basis of answering the questions on the questionnaire, the individuals between age group of 31-45 and above 46 are less aware as compared to below 30 age group, and should be more aware about COVID-19 Virus.

Conclusion: The outcomes of the study depicted that the awareness regarding COVID-19 pandemic is sporadic in case of rural individuals as compared to urban individuals.

Keywords: COVID-19, Pandemic, Awareness, Age, Locality, Gender

Introduction

Coronavirus is a category of viruses that are known to affect respiratory tract of infected person. Coronavirus can multiply rapidly as it is spreading from person to person. The first case of novel coronavirus (COVID-19) was reported in Wuhan, China on December 1, 2019 (Liu, Kuo & Shih, 2020) and since then its outbreak is confirmed in different parts of the world. Such type of viruses causes common colds, pneumonia, bronchitis and respiratory issues such as SARS (severe acute respiratory syndrome). The World Health Organization has (WHO) has affirmed COVID-19 as a global epidemic, as it is spreading at an alarming rate in more than 100 countries around the globe. Researchers and scientists

have a probable opinion that these viruses might have developed from snakes or bats which further spread to human beings (Guo, Luo & Gao, 2020). However, there's another conspiracy theory regarding this epidemic which states that Wuhan Institute of Virology has some special labs where this type of virus has been bioengineered or some lab technician came in contact with the bat that possibly contains this virus which was further spread outside the lab when he came in contact with others (Mallapaty & Callaway 2021). Various scientists across the globe have studied this virus and stated that such type of viruses is generated from wildlife and it has nothing to do with the assertions made in context with bioengineering (Tam, Pham, Ha, Nam & Phung, 2021). Such theories create fear and rumours among people and ruin the global collaboration to fight against such viruses. Fever, common cold, breathing issues, cough, sneezing is some of the common signs of corona virus. Some patients may suffer from pneumonia as well as organ failure. This may prove to be fatal in some cases. It is a highly contagious disease and patients may do not exhibit any signs of it before it is actually detected positive and the incubation period of corona virus is 1-14 days (Lauer, et. al. 2020).

The COVID-19 pandemic brought many challenges with respect to mental health for everyone, including children and adolescents. Grief, fear, uncertainty, social isolation and increased screen time, have negatively affected the mental health of individuals. A study shows that the COVID 19 awareness, attitude and practice on Pakistan population. The results showed that the majority of Pakistanis have a generally positive attitude and take preventative measures against COVID-19, although their level of understanding is insufficient (Rehman, Jawed, Ali, Noreen, Baig, & Baig, 2021).

Material & Methods

The aim of the study is to measure the level of awareness on COVID-19 among people of India.

Study Design & Sample:

An online survey was conducted, where 233 people took the part from different parts of the country. For the present study, 64% were male respondents and 36% were female respondents, 34% urban and 66% rural respondents and 52% below 30 age group, 32% between 31-45 age group and 16 % above 45 age group. With the help of a self-structured questionnaire to study the COVID-19 awareness of the individuals.

Assessment of COVID-19 Awareness

Self-structured questionnaire COVID-19 Awareness Scale by “Prof. Manju K Pandey” department of Psychology HNBGU Srinagar Garhwal was used for studying an individual's COVID-19 awareness. This scale is a three-point scale with 40 items. Every item has three options as ‘YES’, ‘NO’ and ‘CAN'T SAY’. This questionnaire is available in two languages, Hindi and English. The scoring sheet has been purposefully designed to enable effective interpretation and conclusions of the results. Numerical scoring is provided to the items. Each “Right” response suggests a characteristic of COVID-19 awareness. Higher “Right” answer suggests high awareness and lower “Right” answer suggest low awareness.

Statistical Analysis

Through the SPSS version 18 ANOVA and t-test were applied for the analysis of the data.

Baseline Characteristics of Data

S. No	Baseline Characteristics	N (=233)
1.	Gender(Male/Female)	148/85
2.	Age(Below30/ 31-45 / above 46)	121/74/38
3.	Locality(Rural/Urban)	80/153

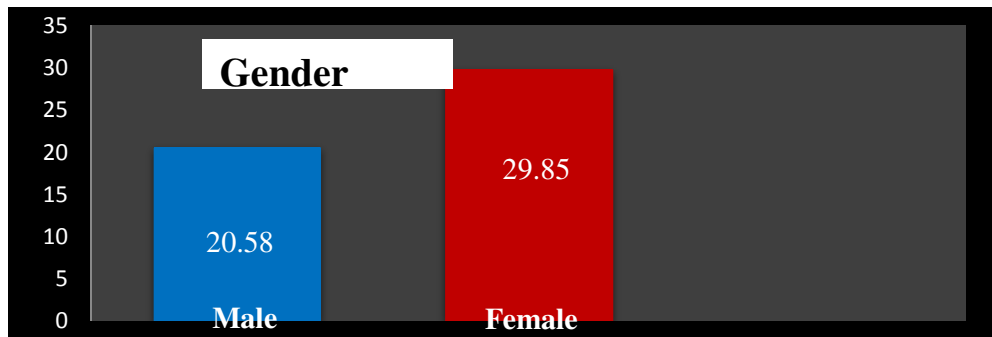
Results

Table1. Comparison between males and females on their COVID-19 awareness

Gender	N	M±SD	SeM	t Value
Male	148	20.58 ±3.875	.318	-0.647 ^{NS}
Female	85	29.85 ±3.096	.335	

(p>0.05 at degree of freedom 231)

Above table represents that there is no significant difference between male and female on their COVID-19 awareness. The mean of male and female are 20.58 and 29.85 respectively and t-value is -0.647 with 231 degrees of freedom, shows no significant difference in COVID-19 awareness of subjects, so the hypothesis has not been rejected.



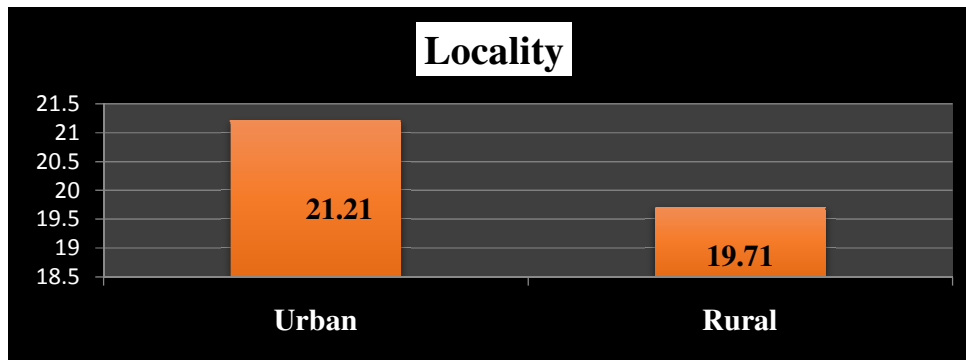
(Figure 1 shows the mean difference between males & females on their respective COVID-19 awareness.)

Table2. Comparison between Urban and Rural people on their respective COVID-19 awareness

Locality	N	M±SD	SeM	t Value
Urban	153	21.21 ±3.023	0.244	-3.074**
Rural	80	19.71 ±4.375	0.489	

($p < 0.05^*$, $< 0.01^{**}$ at degree of freedom 231)

Above table represent that in urban and rural group showed that there is significant difference in their awareness of Covid-19 (p value= .002), the mean value for the awareness of Covid-19 of urban and rural subjects are 21.21 and 19.71 respectively and t -value is -3.074 with 231 degrees of freedom, shows significant difference in the awareness of Covid-19 of subjects, so the above hypothesis has been rejected.

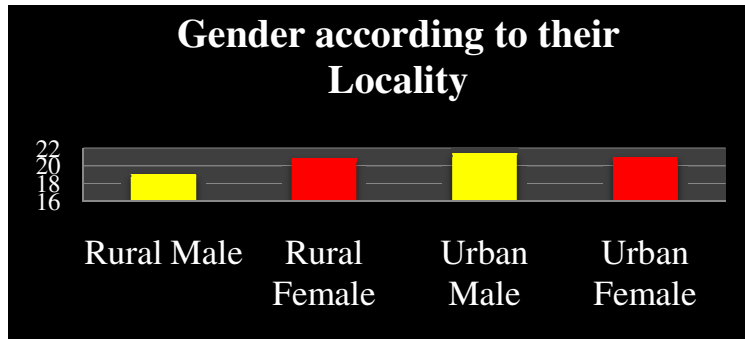


(Figure 2 shows the mean difference between Urban & Rural on their respective COVID-19 awareness.)

Table 3: Comparison between Males and Females according to their locality

Subjects	N	M±SD	SEM	t Value	Df
Rural Male	51	19.07 ± 4.94	.692	-1.741 ^{NS}	78
Rural Female	29	20.82 ± 2.89	.536		
Urban Male	97	21.36 ± 2.894	0.293	0.780 ^{NS}	150
Urban Female	56	20.96 ± 3.247	0.433		

Above table represent that in urban and rural female groups, there is no significant difference in their awareness of Covid-19 (p value= .086). the mean value for the awareness of Covid-19 of rural male and female subjects are 19.07 and 20.82 respectively and t -value is -1.741 with 78 degrees of freedom, shows no significant difference in the awareness of Covid-19 of subjects, so the above hypothesis has not been rejected. In urban and rural group showed that there is no significant difference in their awareness of Covid-19 (p value= .0436). the mean value for the awareness of Covid-19 of rural male and female subjects are 31.67 and 30.21 respectively and t -value is 0.780 with 150 degrees of freedom, shows no significant difference in the awareness of Covid-19 of subjects, so the hypothesis has not been rejected.



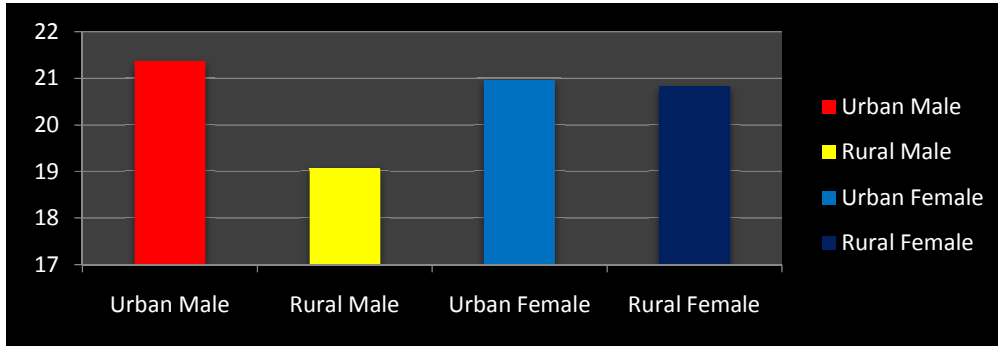
(Figure 3 shows the mean difference between urban male & female and Rural male & female on their respective COVID-19 awareness.)

Table 4 Comparison between Urban & Rural Males/ Comparison between Urban & Rural Females on their respective COVID-19 awareness:

Subjects	N	M±SD	SEM	t Value	Df
Urban Male	97	21.36± 2.879	0.292	3.542**	146
Rural Male	51	19.07 ± 4.894	0.685		
Urban Female	56	20.96 ± 3.24	0.433	0.191	83
Rural Female	29	20.82 ± 2.89	0.536		

(p<0.05*, <0.01**)

Above table represent that in urban male and rural male group, there is no significant difference in their awareness of Covid-19 (p value= .001). the mean value for the awareness of Covid-19 of rural male and female subjects are 21.36 and 19.07 respectively and t-value is 3.542 with 146 degrees of freedom, shows no significant difference in the awareness of Covid-19 of individuals, so the hypothesis has been rejected. In urban female and rural female group, there is no significant difference in their awareness of Covid-19 (p value= .849). The mean value for the awareness of Covid-19 of rural male and female subjects are 20.96 and 20.82 respectively and t-value is 0.191 with 83 degrees of freedom, shows no significant difference in the awareness of Covid-19 of individuals, so the hypothesis has not been rejected.



(Figure 4 shows the mean difference between urban & rural male And urban & rural on their respective COVID-19 awareness.)

Table 5 Comparison between different age groups on their respective COVID-19 awareness:

Age Groups	N	Between Groups SS	Within Groups SS	Total Df	F
Below 30	121	11.49571	3007.071	232	0.44
31-45	74				
Above 46	38				
Df		2	230		

Above table represent that in groups of different ages there is no significant difference in their awareness of Covid-19 (p value= 0.644813). The mean value for the awareness of Covid-19 of below 30, 31-45 and above 46 subjects are 20.55, 20.70 and 21.18 respectively and f-value is 0.439633 with 2 degrees of freedom, shows no significant difference in the awareness of Covid-19 of individuals, so the hypothesis has not been rejected.

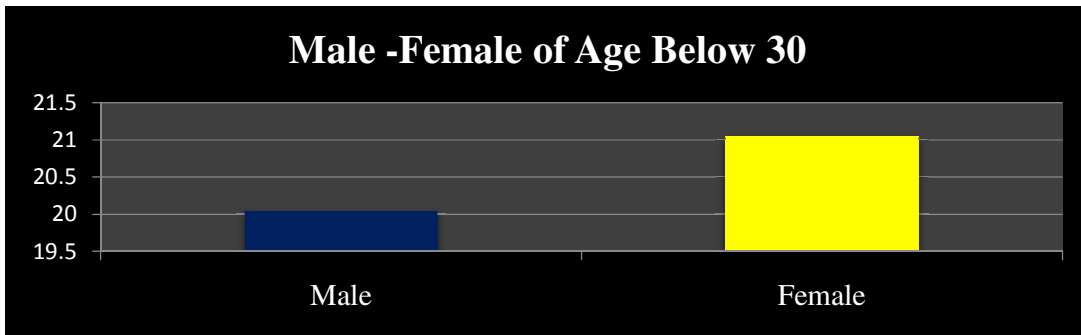
Table 6 Comparison between males & females of below 30 age group on their respective COVID-19 awareness:

Age- Below 30	N	M±SD	SeM	t Value
Male	59	20.033± 4.35	0.566	-1.427
Female	62	21.04 ±3.437	0.436	

($p > 0.05$ at degree of freedom 119)

Above table represent that in Below 30 male and female group, there is no significant difference in their awareness of Covid-19 (p value= 0.156). The mean value for the awareness of Covid-19 of male and

female subjects are 20.033 and 21.04 respectively and t-value is -1.427 with 119 degrees of freedom, shows no significant difference in the awareness of Covid-19 of individuals, so the hypothesis has not been rejected.



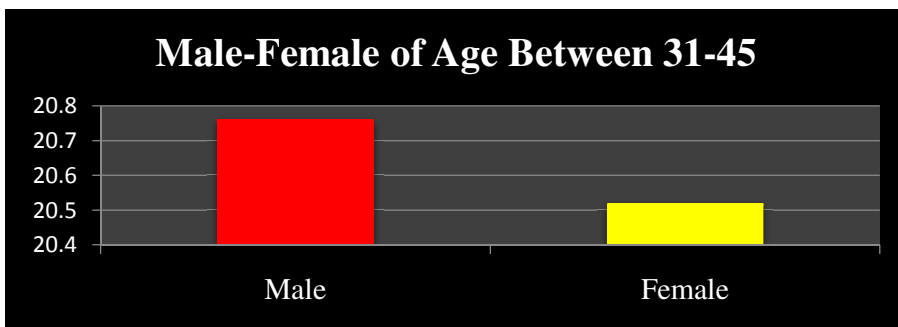
(Figure 5 shows the mean difference between male female of Age- Below 30 on their respective COVID-19 awareness)

Table 7 Comparison between males & females of 31-45 age groups on their respective COVID-19 awareness:

Age- Between 31-45	N	M±SD	SEM	t Value
Male	55	20.76 ± 3.891	0.524	0.254
Female	19	20.52±0.982	0.454	

($p > 0.05$ at degree of freedom 72)

Above table represent that in Between 31 - 45 male and female group, there is no significant difference in their awareness of Covid-19 (p value= 0.800). The mean value for the awareness of Covid-19 of male and female subjects are 20.76 and 20.52 respectively and t-value is 0.254 with 72 degrees of freedom, shows no significant difference in the awareness of Covid-19 of individuals, so the hypothesis has not been rejected.



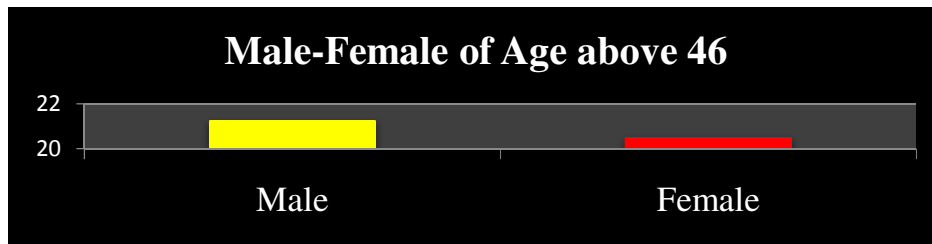
(Figure 6 shows the mean difference between male female of Age- Between 31-45 on their respective COVID-19 awareness)

Table 8 Comparison between males & females of above 46 age group on their respective COVID-19 awareness:

Age-Above 46	N	M±SD	SeM	t Value
Male	34	21.26 ± 2.788	0.478	0.533
Female	4	20.5 ± 1.732	0.866	

($p > 0.05$ at degree of freedom 36)

Above table represent that in Above 46 male and female group, there is no significant difference in their awareness of Covid-19 (p value= 0.598). The mean value for the awareness of Covid-19 of male and female subjects are 21.26 and 20.50 respectively and t-value is 0.533 with 36 degrees of freedom, shows no significant difference in the awareness of Covid-19 of individuals, so the hypothesis has not been rejected.



(Figure 7 shows the mean difference between male female of above 46 age group on their respective COVID-19 awareness)

Table 9 Comparison between males of different age groups on their respective COVID-19 awareness:

Groups	N	Between Groups SS	Within Groups SS	Total Df	F
Males Below 30	59	35.38098	2172.477	147	1.18
Males 31-45	55				
Males Above 46	34				
Df		2	145		

Above table represent that in groups of males of different age groups there is no significant difference in their awareness of Covid-19 (p value= 0.309). The mean value for the awareness of Covid-19 of below 30,

31-45 and above 46 male subjects are 20.03, 20.76 and 21.26 respectively and f-value is 1.180736 with 2 degrees of freedom, shows no significant difference in the awareness of Covid-19 of individuals, so the hypothesis has not been rejected.

Table 10 Comparison between females of different age groups on their respective COVID-19 awareness:

Female (Age Group)	N	Between Groups SS	Within Groups SS	Total Df	F
Below 30	62	4.655	800.5917	84	0.24
Between 31-45	19				
Above 46	4				
Df		2	82		

Above table represent that in groups of females of different age groups there is no significant difference in their awareness of Covid-19 (p value= 0.309987). The mean value for the awareness of Covid-19 of below 30, 31-45 and above 46 female subjects are 21.04, 20.52 and 20.5 respectively and f-value is 0.238412 with 2 degrees of freedom, shows no significant difference in the awareness of Covid-19 of individuals, so the hypothesis has not been rejected.

Discussion

The study was performed for assessing the awareness regarding COVID-19 among individuals and compared them based on their gender, locality and age groups. The study consisted of, gender wise 36% Males and 64% Females, locality wise 66% Rural and 34% urban individuals and age wise 52% below 30, 32% age between 31-45 and 16% above 46. Urban male and Rural males differed significantly in their awareness of Covid-19. Males and Females were found significant on their COVID-19 awareness. The mean of male and female are 20.58 and 29.85 respectively and t-value is -0.647 with 231 degrees of freedom. Urban and Rural individuals differed significantly in their awareness of Covid-19 (p value= .002), the mean value for the awareness of Covid-19 of urban and rural subjects are 21.21 and 19.71 respectively and t-value is -3.074 with 231 degrees of freedom. Urban and Rural female showed no significant difference in their awareness of Covid-19 (p value= .086). The mean value for the awareness of Covid-19 of urban and rural females was 20.96 and 20.82 respectively and t-value is 0.19 with 83 degrees of freedom. Urban and Rural male found significant in their awareness of Covid-19 (p value=<0.05). The mean value for the awareness of Covid-19 of urban and rural males was 21.36 and 19.07 respectively and t-value is 3.54 with 146 degrees of freedom. Urban male and Rural male differed significantly on their awareness of Covid-19 (p value= .001). The mean value for the awareness of Covid-19 of rural male and female were 21.36 and 19.07 respectively and t-value is 3.542 with 78 degrees of freedom. Urban female and rural female individuals did not differ significantly, on their awareness of Covid-19. In different age groups there is no significant difference in their awareness of Covid-19. The mean value for the awareness of Covid-19 of below 30, 31-45 and above 46 subjects are 20.55, 20.70 and 21.18 respectively and f-value is 0.439 with 2 degrees of freedom, shows no significant difference in the awareness of Covid-19 of

individuals. Age below 30 male and female individuals, did not differ significantly on their awareness of Covid-19 (p value= 0.156). The mean value for the awareness of Covid-19 of male and female were 20.033 and 21.04 respectively and t-value is -1.427 with 119 degrees of freedom.

Age between 31-45 male and female individuals, did not differ significantly on their awareness of Covid-19 (p value= 0.800). The mean value for the awareness of Covid-19 of male and female were 20.76 and 20.52 respectively and t-value is 0.254 with 72 degrees of freedom. Above 46 male and female individuals, did not differ significantly on their awareness of Covid-19 (p value= 0.598). The mean value for the awareness of Covid-19 of male and female were 21.26 and 20.50 respectively and t-value is 0.533 with 36 degrees of freedom. Male individuals of different age did not differ significantly on their awareness of Covid-19 (p value= 0.30). The mean value for the awareness of Covid-19 of below 30, 31-45 and above 46 male was 20.03, 20.76 and 21.26 respectively and f-value is 1.19 with 2 degrees of freedom. Female individuals of different age did not differ significantly on their awareness of Covid-19 (p value= 0.30). The mean values for the awareness of Covid-19 of below 30, 31-45 and above 46 female were 21.04, 20.52 and 20.5 respectively and f-value is 0.238412 with 2 degrees of freedom.

The following research proposed that there is requirement of programs for spreading awareness regarding COVID-19 among individuals of different age groups. Kaushik, M. et al. (2020) studied the awareness, knowledge and attitude about COVID-19 and relate the behaviour of Indian society. The study was conducted among 21,406 adult participants of various sections of Indian society with different age groups between 18 and 80 years to introspect the level of public awareness with respect to cause, spread, prevention and treatment of disease caused by spread of COVID-19 viral outbreak. The study showed that there is a clear need for training programme with respect to locale-specific scenario targeted to a specific cluster of population explaining upon their respective lifestyle, to improve the knowledge and compliance about risk and preventions. Another research based on gender of individuals proposed that, Vijai, C. (2020) evaluated the awareness, attitudes and practices towards corona virus among the public in Chennai City, India. Total number of respondents was 225 (Male 138, Female 86). The findings showed that the majority of respondents have high level of awareness, attitudes and practices towards corona virus. There was no significant difference in gender and awareness.

Conclusion

The outcomes of the study depicted that the awareness regarding COVID-19 pandemic is sporadic in case of rural individuals as compared to urban individuals.

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