Biological Forum – An International Journal **12(2): 74-78(2020)**

ISSN No. (Print): 0975-1130
ISSN No. (Online): 2249-3239

Awareness Towards COVID 19 among undergraduate Environmental Students of Kashmir Valley: A Case Study

Khursheed Ahmad Wani[1], Md. Khursheed[2], Irfan Jamila[3] and Javid Manzoor[4]
[1]Department of Environmental Science, GDC Bijbehara (Jammu & Kashmir), India.
[2]Kazimi International Laboratory Muscat, Oman.
[3]Department of Zoology, Govt College for Women, Cluster University, Srinagar, (J&K), India.
[4]Department of Environmental Science, JJT University Rajasthan, India.

(Corresponding author: Khursheed Ahmad Wani)
(Received 09 September 2020, Accepted 24 November, 2020)
(Published by Research Trend, Website: www.researchtrend.net)

ABSTRACT: The objective of the study was to investigate the awareness towards COVID 19 among the student community of Kashmir valley. An online questionnaire was circulated among 110 students who are studying in Govt Degree Colleges of Union Territory of Jammu and Kashmir. Only those students were selected who are studying environmental Science as one of their graduation subjects. The study indicated that students are aware about different modes of transmission and control strategies. However, Intervention is needed at various stages to prevent its transmission. Further, a large number of students were impacted economically and educationally due to COVID as well. Social distancing, follow medical advice, stay home as far as possible are considered best strategies to prevent the spread of COVID 19 till vaccines will be available in the market.

Keywords: COVID 19, Awareness, Students, Prevention, Impact.

INTRODUCTION

Humans are dependent on different animals from the very beginning for food and other products. There is a strong association between humans and animals for the survival and sometimes few diseases get transmitted from animals to humans generally known as Zoonotic diseases (Coleman, 2002; WHO, 2007). These types of diseases are very much prevalent in economically developing countries as compared to developed economies. Infectious diseases are accountable for about 40% and 4% of the burden on human health, sickness and death in developing and developed economies. The COVID-19 pandemic has driven humankind and the worldwide economy into an emergency unheard of since The Great Recession in 2008 (Singh *et al.,* 2020). Some of these diseases are communicable and cause mortality at large scale and reach beyond boundaries. These types of disease become very difficult to prevent, especially, when disease is unknown and treatment is unavailable. The main source for these zoonoses is animals' especially domestic and wild animals (Wheelis, 2002). These types of diseases enter in human body through various routes viz., animal bites, raw blood, milk, meat of infected animals WHO, (2007). Among the various sources food is considered to be most important source of Zoonotic disease. Zoonotic diseases have been categorised into viral (COVID 19, rabies, yellow fever, HIV infection: AIDS, and measles), bacterial (tuberculosis, brucellosis, and anthrax) and parasitic (cysticercosis, toxoplasmosis, and *leishmaniasis*) Coulibaly and Yameogo, (2000). Covid-19 has turned from epidemic to pandemic bringing the whole world to its knees (Duggal and Jain, 2020).

Awareness is considered an effective strategy to contain communicable diseases like COVID 19. The awareness of COVID-19 disease and related infection control practices among healthcare professionals and students in the Mumbai Metropolitan were studied by Modi *et al.,* (2020). Awareness, attitude and practice during the COVID-19 pandemic in Riyadh, Saudi Arabia among general public was studied by Alahdal *et al*., (2020). To best of our knowledge no study is conducted assess the awareness towards COVID -19 among Environmental Science Students. Hence, this study was aimed to investigate the awareness towards COVID 19 among the student community of Kashmir valley.

METHODOLOGY

Study Design:

This study has been conducted in the Union Territory of Jammu and Kashmir, India. The study was carried for 15 days, from the 25th of April to 10th of May, 2020. The questionnaire was designed with the already

published guidelines (Sandhya and Yaddanapudi, 2019). All the students who participated in this study were requested to sign a consent form before filling the questionnaire. The survey was conducted in English language and took about 15-20 min to be completed.

Study Group:

A Cohort of 100 under graduate students from Govt Degree College Bijbehara was chosen for the present study. Only those students were involved who study environmental Science as one of the subject in undergraduate course. The study group consisted of both male and female students aged between 19-23 years and who were studying science as well as social science. The students selected for the present study were from the rural areas of Kashmir valley.

Instrument used:

A pre tested questionnaire was circulated online by using Google Survey (getfoureyes). The students were invited to fill the questionnaire by using Google Class Room and whatsapp groups and the link https://getfoureyes.com/s/2dl33/ was provided to them. The questionnaire consisted of questions from personal questions, transmission, measures to restrict COVID 19.

RESULTS AND DISCUSSIONS

Many studies have identified the importance of society's understanding, mindset, and practice of rising the rate of spread during epidemics and pandemics (Rabbani *et al.,* 2020; Almutairi *et al.,* 2020). Similarly, lack of knowledge leads to unhealthy behaviors and practice, leading to negative impacts on the management of infections (Desai *et al.,* 2020).

Overall, 83.8% of the respondents are aware that COVID 19 has originated from China and only few respondents have reported that it has originated from USA and China. However, 11.7% of the respondents have not answered. This indicates a good number of students are aware about the origin of COVID 19 in Kashmir valley (Table 1).

Overall, 87.4% of the respondents are aware that virus is responsible for COVID 19 that has originated from China and only 1 % respondents think that it is a bacteria. However, 2.7% of the respondents think that it is virus as well as bacteria that causes COVID 19. It is well indication that students are aware that COVID 19 is caused by Virus that will help in prevention of this diseases as students must be aware viruses are more deadly than Bacteria (Table 1).

COVID 19 is transferred by coming in contact with infected persons and it can't be transmitted through Air. About 52.3% of the respondents are aware about this fact and hence can be an effective means that these students will remain away from such patients. However, one quarter of respondents think that it can be transmitted by both. Hence, intervention is needed in this direction so that all the students must know that it can't be transferred through air.

Most of the student (86%) in our study are aware about the symptoms of COVID 19 that will be very helpful, if any of these students and their family members will be effected by the COVID-19 that will later help in preventing community transfer of COVID (Table 1). However, in a study by Almutairi *et al.,* 2020 about 38 percent accepted that COVID-19 induces diarrhea and 35 percent did not. Moreover, about 45 percent said vomiting is not a symptom of the COVID-19 virus. In addition, nearly two-thirds of respondents (63%) and (64%) removed skin rash and bleeding from COVID-19 symptoms, respectively. Most of these symptoms were documented by Fan, *et al.,* 2020.

It is believed that Pangolins may have spread the disease to humans but 78.4% of the students think that it is transmitted through bats. Only 9.9 % think that it is transmitted by bats, hence interventions in this direction are required. No vaccine is available to treat COVID 19. However, Hydroxychloroquine and Chloroquine drugs are administrated to COVID 19 patients for recovery. 40.5 and 14.4% students reported that they have this information that Hydroxychloroquine and Chloroquine are drugs to treat this disease. 33.3% of respondents reported Hydroxychloroquine and Chloroquine, PCM is given to patients. Currently, Masks, washing hands and sanitizers are used to prevent the transmission of this disease (Table 1). 91.8% of the respondents have this information and is good indication that rate of COVID 19 may be reduced by using this mechanism. This awareness is due to the fact that various means of communication has been used by Govt. of India to spread awareness among general public and internet has played important role in this direction.

In our study 72.1% of the respondents reported that they have got this information from the internet, although only 2G internet is being provided by the Govt of India in Union Territory of Kashmir (Table 2). It is well argued by few studies that Lockdown due to COVID 19 in various countries has increased the quality of environment. A study published in Global Journal of Environmental Science and Management compared COVID -19 figures with the average daily mortality due to poor air quality. The study reported that lockdown has saved more lives than the deaths occurred due to COVID-19 (Isaifan, 2020). There are reports from every part of the world that the environmental quality has increased. The Earth's resources are healing at faster rate and its economic value will be highly significant, not for the present generation only but for the future generations as well. The lockdown has given us many days to survive on this planet that need to be counted. In our study, 63.1% of the students are in opinion, that overall, environmental quality will be improved.

72.1% of the respondents reported that they were impacted economically due to COVID 19 and 78.4% of students got highly affected in their studies by this virus as they were not able to report to their educational institutions (Table 2).

Table 1: Response towards awareness among students towards COVID 19.

Question	Answer	Percentage	R value
Origin of COVID 19	USA	0.9	-0.99
	India	3.6	
	Russia	0.0	
	China	83.0	
	No answer	11.7	
COVID 19 cause	Bacteria	0.9	-1
	Virus	87.4	
	Both	2.7	
	None	0.9	
	No answer	8.1	
Route of transfer	Air	1.8	-0.99
	Contact with COVID Patient	52.3	
	Both	25.2	
	None	0.0	
	No answer	20.7	
Symptoms of COVID 19	Fever	1.8	-1
	Shortness of Breath	2.7	
	Bodyaches	0.0	
	All	86.5	
	No answer	9.0	
Transmitting Animal	Monkey	0.0	-1
	Bat	78.4	
	Pangolian	9.9	
	Chicken	1.8	
	No answer	9.9	
Medicine given to COVID 19 patients	Chloroquine	40.5	-1
	Oxy chloroquine	14.4	
	PCM	0.9	
	All	33.3	
	No answer	10.8	
Trials of COVID vaccine	Germany	9.9	-1
	China	34.2	
	USA	42.3	
	None	2.7	
	No answer	10.8	
Precautions to avoid COVID	Masks	0.9	-1
	Keeping distance	0.0	
	Using sensitizes	0.0	
	All	91.0	
	No answer	8.1	
COVID 19 *vs* Environmental Pollution	Water Pollution	3.6	-1
	Air Pollution	8.1	
	Noise Pollution	1.8	
	All	63.1	
	None	11.7	
	No answer	11.7	

Table 2: Impact caused, perception towards red zone area, COVID -19 patients and means of information.

Question	Answer	Percentage	R value
Family impacted by COVID 19	Yes	72.1	-1
	No	19.8	
	No answer	8.1	
Impact on studies	Yes	90.1	-1
	No	1.8	
	No answer	8.1	
Severity of Impact	A Lot	78.4	-0.99
	Quite Often	7.2	
	Occasionally	2.7	
	Never	3.6	
	No answer	8.1	
Aspect affected	Teaching Method	37.8	-1
	Time Efficient	5.4	
	Learning by Doing	23.4	
	Others	11.7	
	No answer	21.6	
Like to visit red zone	Yes	3.6	-1
	No	87.4	
	No answer	9.0	
Meet with COVID recovered patients	Yes	40.5	-1
	No	46.8	
	No answer	12.6	
COVID 19 vaccine will come to market soon	Yes	61.3	-1
	No	29.7	
	No answer	9.0	
Means of information	TV	15.3	-1
	Radio	3.6	
	Newspaper	0.9	
	Internet	72.1	
	No answer	8.1	

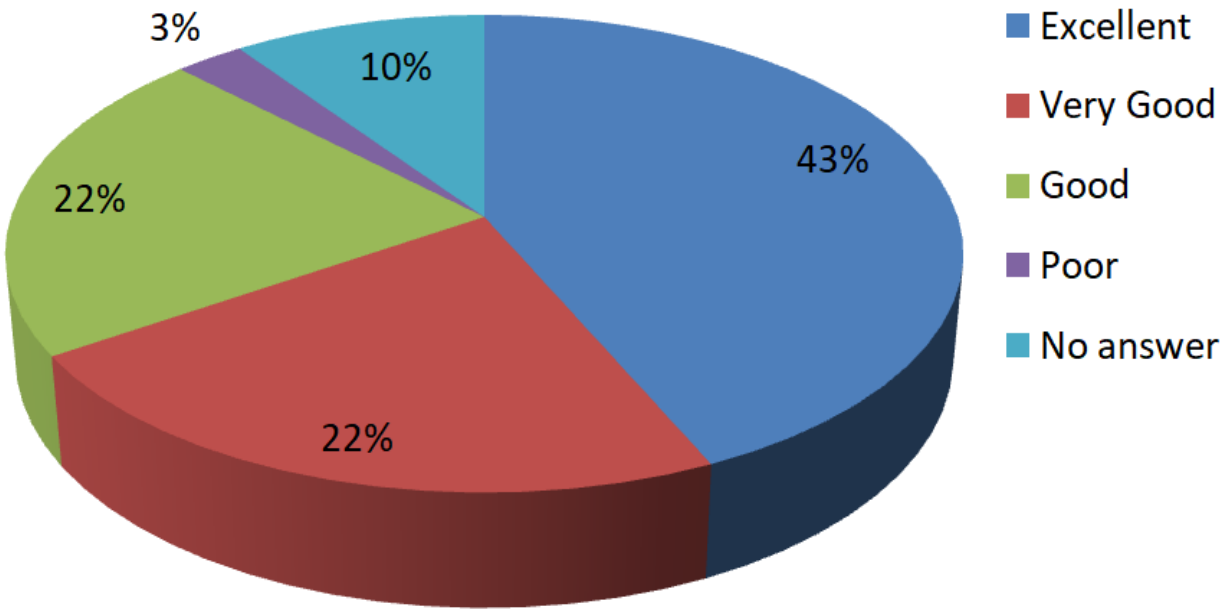

Fig. 1. Lockdown as an effective means to control COVID.

43.2% argued that lockdown is an excellent way to deal with COVID 19, 22.5% rated it very good and 21.6% ranked it good, this clearly indicated that Lockdown is an effective method to prevent community transmission (Fig. 1).

Half number of respondents was in view that they want to meet COVID 19 patients after their recovery and half of them were not ready to meet these patients (Table 2). It is very important to intervene here as after recovery COVID patients are not agents of transmission. Otherwise, they may become untouchables in the society that may have negative consequences in future. The message to the common people by the respondents were to keep social distancing, follow medical advice, stay home as far as possible to prevent the spread of COVID 19.

CONCLUSION

Given a modest understanding among the students of Environmental Science, their behaviour and practice were stronger towards the participation. Hence, to plan for disease and pandemic conditions, understanding among the students needs to be strengthened. To increase understanding and gain adequate information, it is necessary to have a robust health education programme during this type of pandemic among the graduate students.

This study was limited in approach as the sample size was less and this type of studies may be directed for other streams/professions to generate a broader view of awareness towards COVID-19 by incorporating more questions.

REFERENCES

Almutairi, K.M., Al Helih, E.M., Moussa, M., Boshaiqah, A.E., Saleh Alajilan, A., Vinluan, J.M., and Almutairi, A. (2015). Awareness, Attitudes, and Practices Related to Coronavirus Pandemic among Public in Saudi Arabia. *Family and Community Health*, **38**(4): 332-340.

Alahdal, H., Basingab, F., & Alotaibi, R. (2020). An analytical study on the awareness, attitude and practice during the COVID-19 pandemic in Riyadh, Saudi Arabia. *Journal of infection and public health*, **13**(10), 1446-1452.

Fan, C., Lei, D., Fang, C., Li, C., Wang, M., Liu, Y., ... & Yu, Y. (2020). Perinatal transmission of COVID-19 associated SARS-CoV-2: should we worry?. *Clinical infectious diseases*.

Coleman, P.G. (2002). Zoonotic diseases and their impact on the poor. In; Investing in animal health research to alleviate poverty. Nairobi. *International livestock Research Institute*, 6-12.

Coulibaly, N.D. and Yameogo, K.R., (2000). Prevalence and control of zoonotic diseases: collaboration between public health workers and veterinarians in Burkina Faso. *Acta Tropica*, **76**(1): 53-57.

Desai Angel, N., and Payal Patel, (2020). Stopping the Spread of COVID-JAMA. **323**(15): 1516. doi:10.1001/jama.2020.4269.

Duggal, S. and Jain, A., (2020). Proximity Tracing Method to reduce Community Spread of COVID 19. *International Journal on Emerging Technologies* **11**(3): 853-857.

Isaifan, R.J. (2020). The dramatic impact of Coronavirus outbreak on air quality: Has it saved as much as it has killed so far? *Global J. Environ. Sci. Manage.*, **6**(3): 275-288.

Modi P. D., Nair G., and Uppe A. (2020). COVID-19 Awareness Among Healthcare Students and Professionals in Mumbai Metropolitan Region: A Questionnaire-Based Survey. *Cureus*, **12**(4): e7514. doi:10.7759/cureus.7514

Rabbani, S.A., Mustafa, F., and Mahtab, A. (2020). Middle East respiratory syndrome (MERS): awareness among future health care providers of United Arab Emirates. *Int J Med Public Health*, **10**(1): 8-13.

Singh G, Gupta R., and Agarwal, N. (2020). Economic Re-Engineering: Covid-19. *International Journal on Emerging Technologies*, **11**(4): 01-05.

Wheelis, M. (2002). Biological warfare at the 1346 siege of Caffa. *Emerge Infect Dis.*, **8**: 971-975.

World Health organization (2007). Integrated control of neglected zoonotic diseases in Africa; applying the one health concept; report of a j pint WHO/EU/ILRI/DBL/FAO/OIE/AU meeting. *Nairobi, international livestock Research Institut.*, 8-36.

Sandhya, Y and Yaddanapudi, L. N. (2019). How to design a questionnaire. *Indian J Anaesth*, **63**(5): 335–337.

How to cite this article: Wani, K. A., Md. Khursheed, Jamila, I. and Manzoor, J. (2020). Awareness Towards COVID-19 among undergraduate Environmental Students of Kashmir Valley: A Case Study. *Biological Forum – An International Journal*, **12**(2): 74-78.