

Corona Virus (COVID-19) Awareness Assessment - A Survey Study amongst the Indian Population

Shivani Pandey¹, Abhijeet Gupta², Ruchita Bhansali³, Simran Balhara¹, Pooja Katira⁴, Gabriela Fernandes^{5*}

¹Vishwanath Katti Institute of Dental Sciences, KLE Academy of Higher Education and Research, Belgaum, Karnataka, India

²Bharati Vidyapeeth dental college, Navi Mumbai, Maharashtra, India

³Private dental practice, Mumbai, Maharashtra, India

⁴Department of Pedodontics, Pacific dental college, Udaipur, Rajasthan, India

⁵Department of Oral Biology, School of dental medicine, SUNY Buffalo, Buffalo, New York, USA

***Corresponding Author:** Gabriela Fernandes, Department of Oral Biology, School of dental medicine, SUNY Buffalo, Buffalo, New York, USA.

Received Date: 04-13-2020; **Published Date:** 04-20-2020

Copyright © 2020 by Pandey S, et al. All rights reserved. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Aim: The aim of this survey study was to assess the level of awareness amongst Indian population regarding the COVID-19.

Method: A survey was conducted amongst 745 individuals to assess their level of awareness regarding COVID-19 and steps to be taken for its prevention.

Result: The results revealed that a considerable percentage of individuals learned about the pandemic through social media and news and were aware of the mode of spread of the virus and also steps to be taken to prevent it from spreading. But considerable percentage of people was also not fully aware regarding the age groups this virus will be affecting.

Conclusion: Upon understanding the percentage of people not aware about the age groups this virus will be affecting, keeping in mind good amount of knowledge amongst individuals about maintaining hygiene and social distancing, this survey would help the health care workers to create awareness regarding the effect of this virus on different age groups to help prevent carelessness amongst youth in following the regime.

Keywords

COVID-19; Health care workers; Awareness; Age groups; Virus.

FernandesG| Volume 2; Issue 4 (2020) | Mapsci-JCMR-2(4)-041| Research Article

1

Citation: Pandey S, Gupta A, Bhansali R, Balhara S, Katira P and Fernandes G. Corona Virus (COVID-19) Awareness Assessment - A Survey Study Amongst the Indian Population. J Clin Med Res. 2020;2(4):1-11.

DOI: [https://doi.org/10.37191/Mapsci-2582-4333-2\(3\)-041](https://doi.org/10.37191/Mapsci-2582-4333-2(3)-041)

Background

CORONA VIRUS DISEASE (COVID-19), was first identified in December 2019 in Wuhan, China. This disease has spread globally now and has become an ongoing 2019-2020 life threatening pandemic disease [1-4]. The WHO (World Health Organization) declared the corona virus outbreak 2019-2020 as a public health emergency of international concern (PHEIC) on 30 January 2020 and a pandemic on 11 March 2020[1, 5]. The WHO has currently also prepared guidelines to fight corona virus by introducing eight pillars of support [5]:

- 1) Country level coordination, planning and monitoring
- 2) Risk communication and community engagement
- 3) Surveillance, rapid response teams and case investigations
- 4) Points of entry
- 5) National laboratories
- 6) Infection prevention and control
- 7) Case management
- 8) Operational support and logistics

The virus named corona virus owing to its appearance of the spikes on its surface that resemble a crown [6]. This disease causes severe acute respiratory syndrome (SARS CoV-2), which presents with symptoms like fever, cough, shortness of breath, muscle pain, sputum production, sore throat, diarrhea, abdominal pain, loss of smell, and in severe conditions leading to viral pneumonia and multi-organ failure[3,4,7,8]. This virus affects the lungs majorly as it attacks the host cells via the enzyme ACE2, which is most abundant in type 2 alveolar cells of the lungs[9-11]. This virus has a surface glycoprotein called a "SPIKE" which connects to ACE2 and enters the host cells. This virus abundantly also affects the gastrointestinal organs as ACE2 is also expressed in cells of gastric, duodenal and rectal epithelium and small intestine [3,12]. Considering the current scenario, on April 6-2020, more than 12, 70,000 people are affected by this virus in more than 200 countries and territories leading to 69,500 deaths and 2, 64,000 people have been recovered by this disease till now. This virus spreads through respiratory droplets and by close contact from people to people [13]. The respiratory droplets spread through breathing but the virus is not airborne and spreads through touching the contaminated surfaces and then touching their face, nose, mouth and eyes[13]. This virus can survive on surfaces for about 72 hours. From the time of exposure to onset, the symptoms show between 2-14 days, with an average of 5 days [14,15]. The standard test to be conducted for the detection of the virus is reverse transcription polymerase chain reaction (rRT-PCR) from a nasopharyngeal swab[16,17]. The other

diagnostic methods can also be through chest X-rays by looking for pneumonia like features. There is currently no vaccine for this virus but with the help of supporting therapy, isolation, social distancing, this virus can be cured.

Materials and Method

This study was adapted from Kharma et al[18] conducted using a survey (Table 1) adopted from which was disseminated via social media and electronic mail. The survey was sent to 1000 people. The survey rendered 745 responses. This survey, which was conducted, contained 13 questions with multiple choice questions. All the individuals who answered the survey were informed about the confidentiality of their response and were also informed about the purpose of conducting this survey. Each and every individual of India of all age groups were included in this survey. The evaluation of this survey was done electronically using the interphase provided by the common survey software conducting site available on internet.

Table 1: Survey questionnaire.

Sr. No	Entity	Score
1	From where did you learn about COVID-19	Social Media
		Friends
		Health Professionals
		News Studies
		No Idea
2	Is this COVID-19 disease Contagious?	Yes
		No
		No Idea
3	What is SARS?	Severe Acute Respiratory Syndrome
		Severe Asthmatic Respiratory Syndrome
		No Idea
4	What is the incubation period COVID-19?	2-14 Days
		10-14 Days
		5-14 Days
5	From where did COVID-19 spread?	Bats
		Camels
		Domestic animals
6	From where does SARS spread?	Camels
		Bats
		Domestic animals
7	What are the symptoms of COVID-19?	Domestic animals
		Cough, Fever, Diarrhea
		All of the above
8	Is COVID-19 and SARS similar?	Yes
		No
		No idea
9	Treatment of SARS and COVID-19?	Supportive Treatment

		Vaccination
		No Idea
10	What to do for prevention of COVID-19 and SARS	Washing hands with alcohol based hand sanitizer
		Cover nose mouth while coughing and dispose it immediately
		Social distancing
		All of the above
11	How does virus spread?	Air born
		Respiratory droplet and personal contact
		No idea
12	Which is the contagious and associated with high mortality rate	COVID-19
		SARS
		No idea
13	Are all age groups affected equally	Yes
		No
		No Idea

Results

The survey generated 745 responses and showed that around 48.1% people received information regarding COVID-19 through social media, 26.9% through news studies, and 14.7% through health professionals and around 6.8% through friends. Around 87.3% people responded that COVID-19 is contagious but around 7.5% people responded that COVID-19 is not contagious and 5.1% people had no idea about it. 77.1% people knew about SARS and its full form, 10.3% didn't know about what is SARS called and around 12.7% had no idea about SARS. About 57.1% people knew about the incubation period of COVID-19 which is 2-14 days, 21.7% opted for 10-14 days and 21.3% opted for 5-14 days. 94.2% people believe that COVID-19 came from bats and 3% from camels and 2.9% from domestic animals. 89% people believe that SARS came from bats, 9% from domestic animals and 2% from camels. 32.9% population believes that symptoms for COVID-19 is only severe respiratory illness, 24.2% believes that only cold, cough and fever shows as symptoms and around 42.9% people knew that all are the symptoms for COVID-19. 52.8% people believe that COVID-19 and SARS are similar, 25.6% believes that both are different and around 21.7% had no idea about it. 68.7% people opted that for treatment of COVID-19 and SARS is supportive treatment, 17.1% thought there is vaccine available for treatment and 14.2% people had no idea regarding the mode of treatment. 23.3% believed that prevention for COVID-19 was only by washing hands with alcohol-based sanitizer, 19.6% believed that by only covering their nose, mouth with tissue or mask while coughing and disposing it immediately is the mode of prevention for spread, 16.9% believed in only social distancing and 40.2% believed all of the steps should be followed for prevention of spread of COVID-19. 48.8% people were aware that the virus spreads via respiratory droplets and personal contact, 43.2% believed the virus is Air-born and 8% had no idea. Around 68.5% believed that COVID-19 is more contagious

and associated with high mortality rate, 11.9% SARS and 19.6% had no idea. 49% people had no idea regarding COVID-19 and age groups, 32.5% believed that not all age groups are affected equally and 18.5% believed that all age groups are affected equally.

Figure 1: Source of knowledge regarding the COVID-19 in the population.

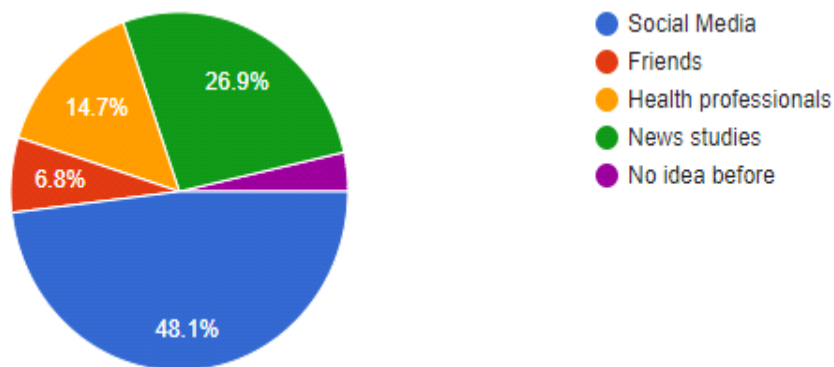


Figure 2: Knowledge regarding the contagion potential of the virus.

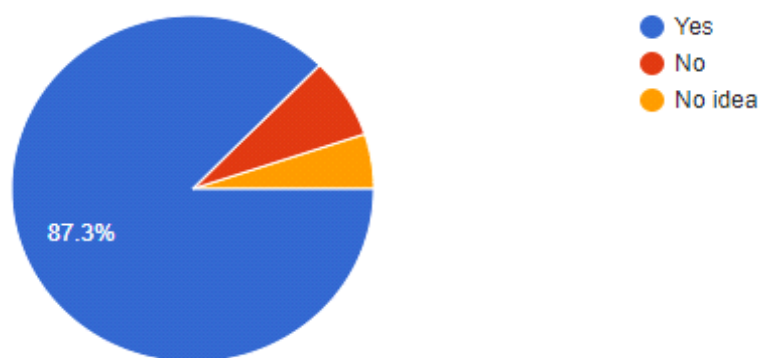


Figure 3: Knowledge regarding SARS.

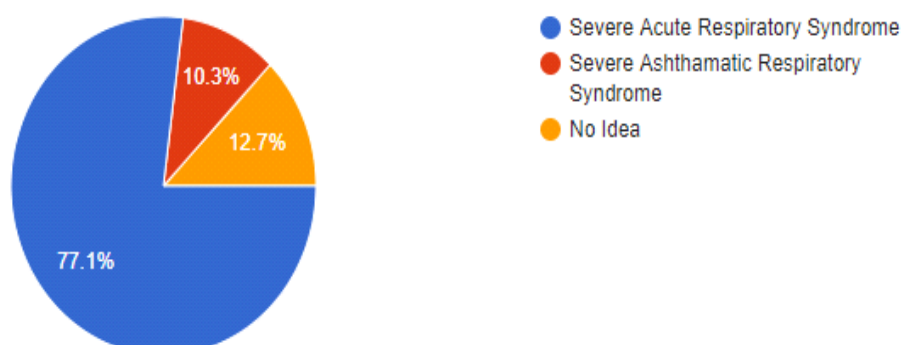


Figure 4: Knowledge regarding the Incubation period for COVID-19.

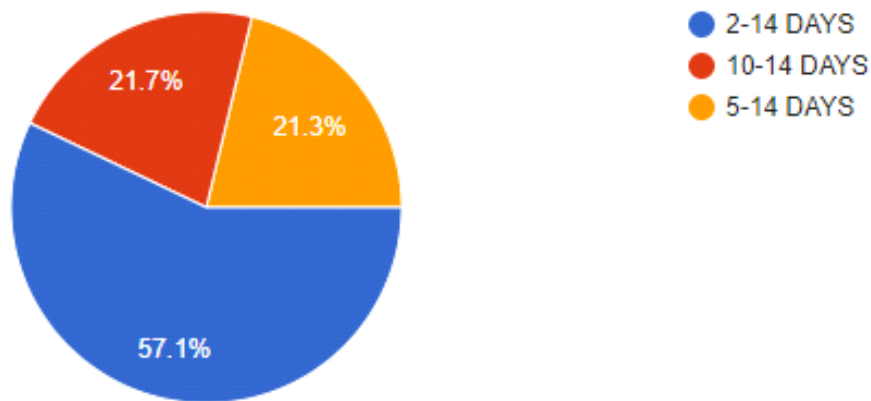


Figure 5: Knowledge regarding the source of the COVID -19 viruses.

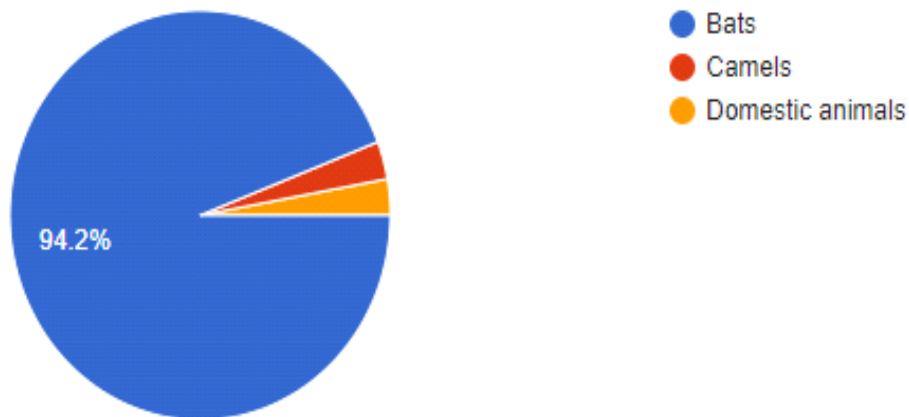


Figure 6: Knowledge regarding the source of the SARS virus.

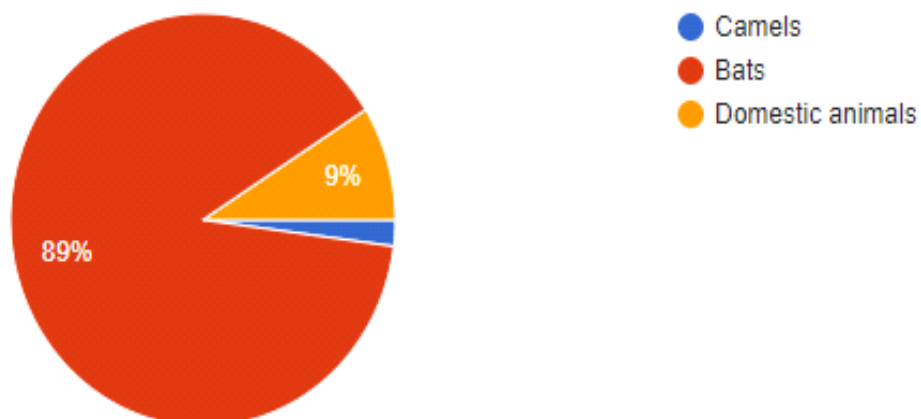


Figure 7: Knowledge regarding the symptoms of COVID-19.

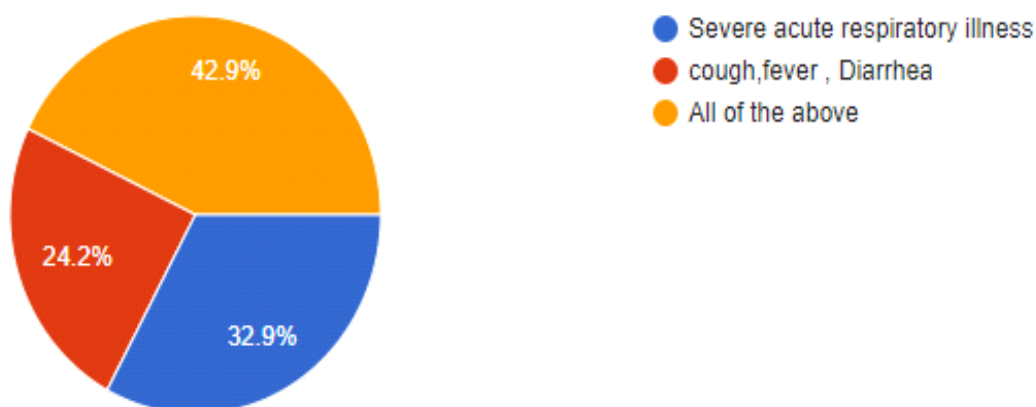


Figure 8: Knowledge regarding the dissimilarity between COVID-19 and SARS.

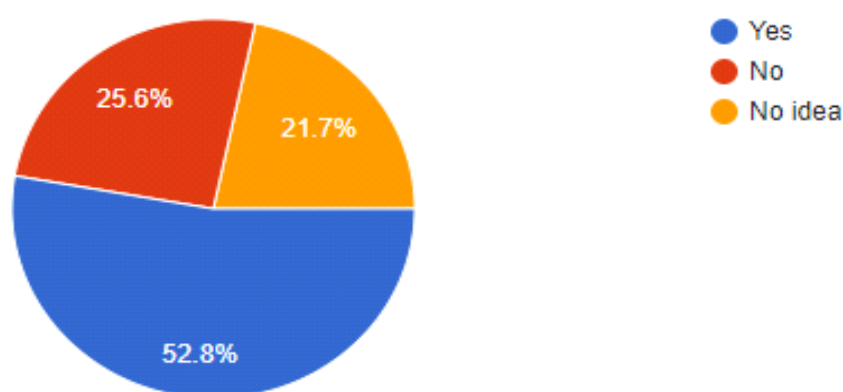


Figure 9: Knowledge the treatment of SARS and COVID-19.

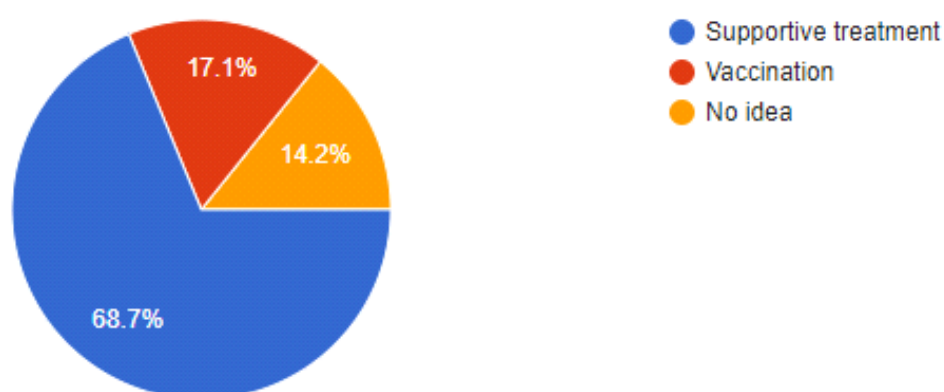


Figure 10: Knowledge regarding prevention of COVID-19 and SARS.

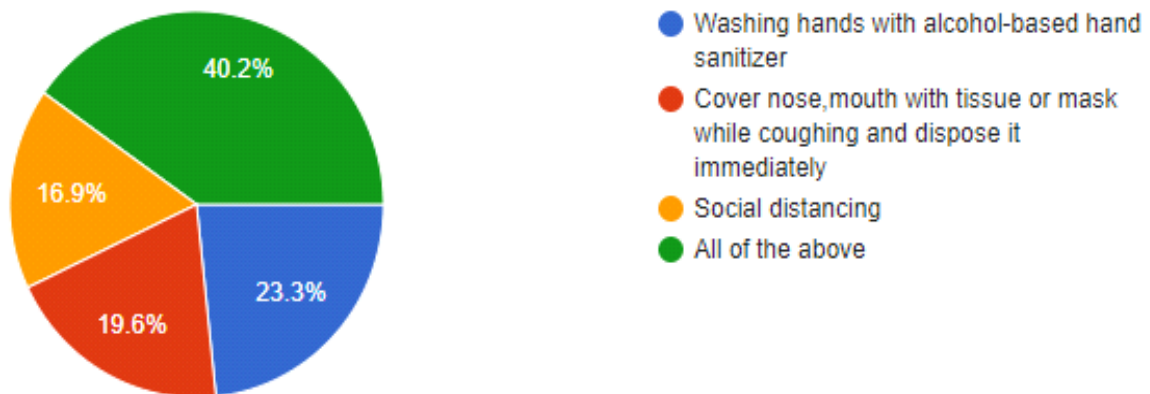


Figure 11: Knowledge regarding spread of the COVID-19.

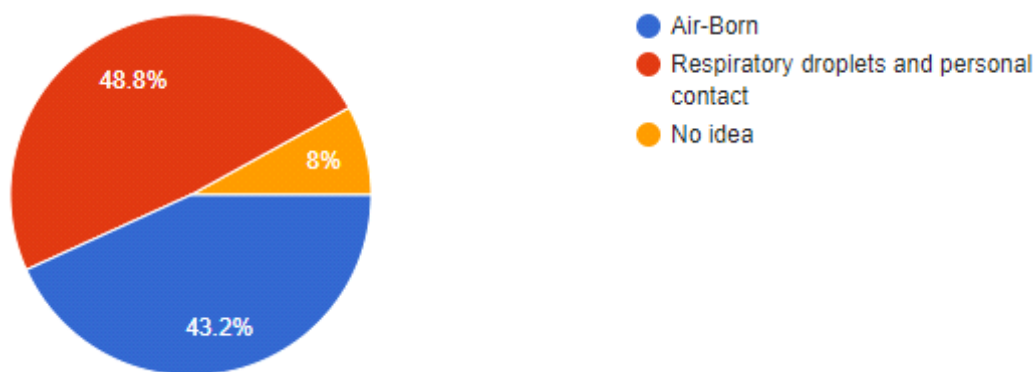
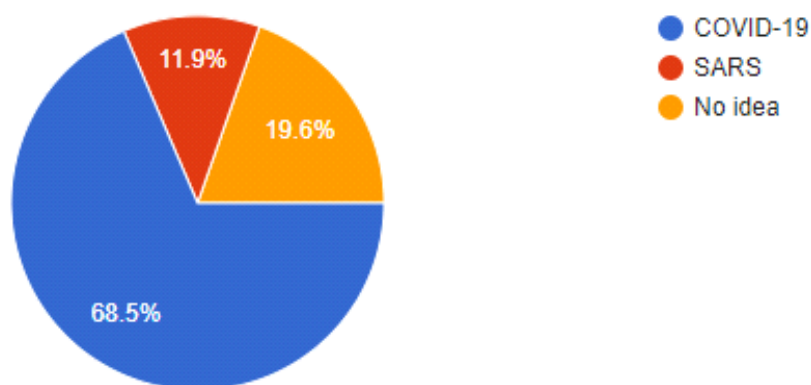


Figure 12: Knowledge regarding the contagion potential and mortality rate of the COVID-19 and SARS.



Discussion

The survey study conducted aims at assisting the health-care professionals to evaluate the lack of knowledge of the respondents and the population of India regarding the information about COVID-19 and its prevention and treatment plan as well as to create awareness regarding the age groups being affected. The disease COVID-19 spreads through respiratory droplets and personal contact with the infected person[13]. Social distancing and maintaining hygiene with alcohol-based sanitizers is the best way to prevent the spread of this virus as the person remains asymptomatic from the exposure till the first symptom is shown that is for around 2-14 days which is the incubation period of the virus[14]. This virus mainly affects the person with lower immunity levels irrespective of their age that is older people, immune-compromised people, people with chronic conditions, diabetes and people on radiation therapy[19-21]. It is believed that COVID-19 is spread from bats and civet cats but it is still not confirmed[22, 23]. SARS and COVID-19 are genetically similar viruses but the diseases they show are different. The scientists at National Institute of Virology (NIV), Pune have isolated around 11 different strains of the COVID-19, so they currently need at least 18 months to 2 years to prepare the vaccine. The Indian council of medical research (ICMR), the apex head body of research India, has stated that isolation of the virus is the first step towards expediting the development of drugs, vaccines and rapid diagnostic kits in the country. One research study conducted by [24], Beijing, China, stated that amongst all the cases registered, around 86.6% cases were aged 30-79 years. One study conducted by Al-Mohaissen, Maha, Awareness among a Saudi Arabian university community of Middle East respiratory syndrome coronavirus following an outbreak included 1541 participants stated that 78.9% individuals were able to recognize the symptoms of MERS-CoV but only 67.1% knew the recommended preventive hygiene practices[25]. Awareness of disease epidemiology, severity, fatality rate and treatment was very low. The knowledge of health care workers/students of the recommended precautions that should be applied when dealing with patients was poor (55.5%).

Conclusion

Within the limitations of this study it is clear that, by following these little steps, the prevention of spread can successfully be reduced and controlled:

- 1) Wash hands with soap, alcohol-based sanitizers
- 2) Cover nose, mouth while sneezing or coughing with mask or tissue and dispose it immediately followed by washing hands and sanitizing hands.
- 3) Do not touch face, nose, mouth, eyes with hands after touching any object on public place.
- 4) Maintain social distancing and avoid roaming on the streets and gathering in groups. This is the best way to prevent the spread of the virus.

- 5) Eat healthy, exercise at home and maintain good immunity levels to fight against the virus.
- 6) Follow the guidelines suggested by the country heads.

References

1. Mitchell EP. Corona Virus: Global Pandemic Causing World-Wide Shutdown. *J Natl Med Assoc.* 2020.
2. Zhang HW, Yu J, Xu HJ, Lei Y, Pu ZH, Dai WC, et al. Corona Virus International Public Health Emergencies: Implications for Radiology Management. *Acad Radiol.* 2020;27:463-67.
3. Sugiyama K, Suto T, Amano Y. A new corona-like virus causing diarrhea in infant mice (DVIM): morphological and biological characteristics (author's transl). *Uirusu.* 1978;28:10-18.
4. Tsunoda A. Corona virus. *Naika.* 1970;26:435-40.
5. Sohrabi C, Alsafi Z, O'Neill N, Khan M, Kerwan A, Al-Jabir A, Iosifidis C, Agha R: World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). *Int J Surg.* 2020;76:71-76.
6. Wang LS, Wang YR, Ye DW, Liu QQ. A review of the 2019 Novel Coronavirus (COVID-19) based on current evidence. *Int J Antimicrob Agents.* 2020.
7. Cao J, Tu WJ, Cheng W, Yu L, Liu YK, et al. Clinical Features and Short-term Outcomes of 102 Patients with Corona Virus Disease 2019 in Wuhan, China. *Clin Infect Dis.* 2020.
8. Nagashima K, Wege H, ter Meulen V. Early and late CNS-effects of corona virus infection in rats. *Adv Exp Med Biol.* 1978;100:395-09.
9. Amarasinghe A, Abdul-Cader MS, Nazir S, De Silva Senapathi U, van der Meer F, Cork SC, et al. Infectious bronchitis corona virus establishes productive infection in avian macrophages interfering with selected antimicrobial functions. *PLoS One.* 2017.
10. Godet M, L Haridon R, Vautherot JF, Laude H. TGEV corona virus ORF4 encodes a membrane protein that is incorporated into virions. *Virology.* 1992;188:666-75.
11. Guo JP, Petric M, Campbell W, McGeer PL. SARS corona virus peptides recognized by antibodies in the sera of convalescent cases. *Virology.* 2004;324:251-56.
12. Pospischil A, Hess RG, Bachmann PA. Morphology of intestinal changes in pigs experimentally infected with porcine rota-virus and two porcine corona viruses. *Scand J Gastroenterol Suppl.* 1982;74:167-69.
13. Wang D, Zhou M, Nie X, Qiu W, Yang M, Wang X, et al. Epidemiological characteristics and transmission model of Corona Virus Disease 2019 in China. *J Infect.* 2020.
14. Yang C, Ma QY, Zheng YH, Yang YX. Transmission routes of 2019-novel coronavirus (2019-nCoV). 2020;54:374-77.
15. Dietz L, Horve PF, Coil DA, Fretz M, Eisen JA, Van Den Wymelenberg K. 2019 Novel Coronavirus (COVID-19) Pandemic: Built Environment Considerations To Reduce Transmission. *mSystems.* 2020.
16. Ieki R. Diagnostic tests: Corona virus. *Nihon Rinsho.* 2005;63(7):339-42.
17. Kuratsuji T, Kirikae T. Diagnostic tests: SARS-Corona virus. *Nihon Rinsho.* 2005;63(7):343-45.
18. Kharma MY, Alalwani MS, Amer MF, Tarakji B, Aws G: Assessment of the awareness level of dental students toward Middle East Respiratory Syndrome-coronavirus. *J Int Soc Prev Community Dent.* 2015;5:163-69.
19. Li DL, Chen MX. Critical patients with coronavirus disease 2019. Risk factors and outcome nomogram. *J Infect.* 2020.
20. Zhang F, Liang Y. The potential risk of kidney vulnerable to novel coronavirus 2019 infection. *Am J Physiol Renal Physiol.* 2020.
21. Zhou Y, Zhang Z, Tian J, Xiong S. Risk factors associated with disease progression in a cohort of patients infected with the 2019 novel coronavirus. *Ann Palliat Med.* 2020;9:428-36.

22. Li X, Song Y, Wong G, Cui J. Bat origin of a new human coronavirus: there and back again. *Sci China Life Sci.* 2020;63:461-62.
23. Ernanides MA, Cantoni AM, Armando F, Corradi A, Ressel L, Tamborini A. Feline coronavirus-associated myocarditis in a domestic longhair cat. *JFMS Open Rep.* 2019.
24. Wang J, Liao Y, Wang X, Li Y, Jiang D, He J, et al. Incidence of novel coronavirus (2019-nCoV) infection among people under home quarantine in Shenzhen, China. *Travel Med Infect Dis.* 2020.
25. Al-Mohaissen M. Awareness among a Saudi Arabian university community of Middle East respiratory syndrome coronavirus following an outbreak. *East Mediterr Health J.* 2017;23:351-60.