Original Research Article

Awareness regarding COVID-19 among auxiliary dental staff in a tertiary dental care centre in Kerala- A cross-sectional study

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ABSTRACT

Introduction: Corona virus disease officially called as COVID-19, declared a "pandemic" by the World Health Organization; became a major public health problem causing worldwide morbidity and mortality, despite various control measures. Extraordinary measures are taken universally to fight the spread of the ongoing outbreak. In such a scenario, people's adherence to preventive measures is largely influenced by their knowledge and perception of the disease. Since dental care professionals are having high chances of infectivity, which in turn has serious implications, it is essential that the auxiliary dental staff must be educated, empowered and provided appropriate and relevant knowledge of the disease.

Objectives: To assess the level of awareness regarding COVID-19 among auxiliary dental staff in a Tertiary Dental Care Centre in Kerala.

Materials and Methods: A cross sectional survey was conducted among all the auxillary staff in a tertiary dental care centre by an online questionnaire through google forms. Details regarding demographic data, knowledge about the spread, symptoms, diagnosis, prevention and safety practices related to COVID-19 were obtained after getting an online informed consent. Descriptive statistics and Chi square test were done. Associations and differences were considered significant when the p value was less than 0.05.

Results: The initial sample size was 50. Forty two participants completed the study. Out of the participants 36% (n=15) were below 40 years and were males. About 40.5% (n=17) had experience less than 5 years. Around 69% (n=23) of the participants had good knowledge regarding COVID 19. Statistically significant results were seen with mode of transmission of Covid 19 and age of the respondents (p value=.006);current treatment of Covid 19 and years of experience of the respondents (p value=.011).

Conclusion: The study concluded that there is overall good awareness level among the participants of the study.

1. Introduction

The coronavirus disease (COVID-19), internationally known as the SARS-COV2 virus, is a matter of global public health concern as it could be potentially fatal.[1] On January 30, 2020, the World Health Organization (WHO) declared COVID-19 a public health emergency of international concern.[2] The COVID-19 pandemic has affected and continues to affect, several countries in varying degrees of severity. In order to control the pandemic, patients were isolated, and extensive prevention measures were taken.[3] Health care workers who are in close contact with COVID-19 symptomatic and asymptomatic patients, are at higher risk for SARS-CoV-2 infection.[4]

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Dentistry is one of the riskiest occupations as while providing dental services a large quantity of droplets and suspended particles are created.[4] Moreover there is a high possibility of spread of and exposure to blood, saliva, body fluids and respiratory secretions while providing dental services.[5,6] Dental health care professionals(dentists, dental hygienists, dental assistants, and receptionists) need to update their knowledge and skills regarding infection control follow accurate and effective preventive protocols as normal protective measures in daily clinical practice are not effective enough to prevent the spread of COVID-19.[3,7,8] As valuable and much-needed members of society, health care workers must possess adequate awareness about COVID-19 transmission, diagnosis, treatment, prevention, and prognosis.[9]

2. Materials and Methods

A cross-sectional survey was conducted among all the auxillary staff in a tertiary dental care centre. The Institutional Ethics committee of TD Medical College Alappuzha and Review Board at the Government Dental College, Alappuzha approved the study.

2.1. Data collection

The data was collected by an online questionnaire through google forms. The questionnaire prepared was translated to local language (Malayalam) with the help of two language experts proficient in both English and Malayalam. An independent evaluator compared both the versions and finalized a Malayalam version which was then back translated. It includes two parts. The first part includes demographic data, the second part with questions related to the spread, symptoms, diagnosis prevention and safety practices related to COVID-19. The questionnaire along with the consent form was circulated online via google forms. All auxiliary dental staff, who are willing to participate in the study was enrolled, after getting the informed consent attached with the google form. After completion the questionnaire needs online submission only to the investigator. The corrected response was awarded score one.

2.2. Data analysis

The data was analysed using the Statistical Package for the Social Sciences (SPSS) for windows (version 16; SPSS Inc; Chicago IL, USA). Descriptive statistics and Chi square test were done. Associations and differences were considered significant when the p value was less than 0.05.

3. Results

Table 1 shows the demographic characteristics of the study population. A total of 42 participants were included in the

Table 1: Demographic characteristics of participants

Variable		Count (n)	Percentage (%)
Age (yrs)	Less than 40	15	36
	More than 40	27	64
Gender	Male	15	36
	Female	27	64
Experience (yrs)	Less than 5	17	40.5
	More than 5	25	59.5

study. More than 60% of the participants were above 40 years of age. Among the participants females were the majority (64%). Around 59.5% of the participants have more than 5 years of experience.
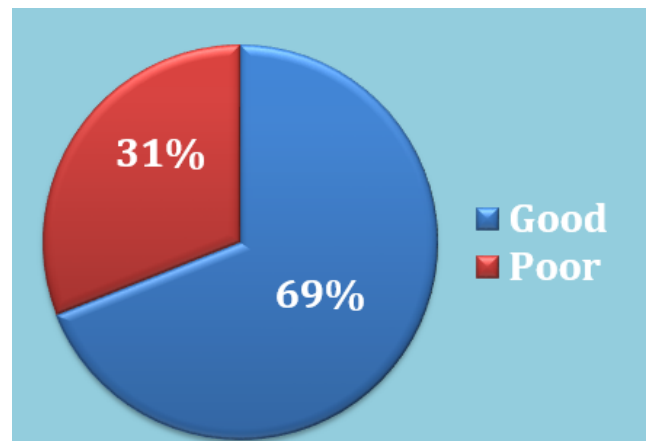

Fig. 1: Overall knowledge

Figure 1 shows the overall knowledge of the participants. Around 69% of the participants had good knowledge regarding COVID 19.

4. Discussion

The human race is threatened by the latest global epidemic caused by Coronavirus disease.[10] SARS-COV-2 is transmitted from person-to-person through inhalation of aerosols from an infected individual.[11] Primary preventive measures include regular hand washing, social distancing, and respiratory hygiene (covering mouth and nose while coughing or sneezing).[12] A poor understanding of the disease among health care workers can result in delayed identification and treatment leading to rapid spread of infections.[13]

Our study revealed that 69% of HCWs (n = 29) had good awareness. These results are comparable to some related studies conducted done by Ogolodom et al.,[10] Olum et al.,[13] Bhagavathula et al.,[14] Kamali Haghighi et al[15] Nallani VRR et al.,[16] Zhong et al[17] and Clements JM.[18] In our study, total of 42 participants were included. More than 60% (n=27) of the participants were more than 40 years of age. Among the

Table 2: Awareness of covid 19

Questions	Correct		Incorrect	
	n	%	n	%
Q1. Have you heard of COVID 19?	42	100	0	0
Q2. What is the incubation period of COVID 19?	40	95.2	2	4.8
Q3. What is the mode of transmission of COVID 19?	19	45.2	23	54.8
Q4. What are the symptoms of COVID 19?	39	92.9	3	7.1
Q5. Can COVID 19 have an asymptomatic presentation?	41	97.6	1	2.4
Q6. Which population is at high risk for COVID 19?	42	100	0	0
Q7. Which are the modes of prevention or safety practices against 19?	41	97.6	1	2.4
Q8. What is the present suggested distance for maintaining social distancing?	29	69	13	31
Q9. What is the time required for proper hand washing with soap and water?	28	66.7	14	33.3
Q10. Have you heard about the 'Break the Chain Campaign' implemented by the Government of Kerala for decreasing the spread of COVID 19?	42	100	0	0
Q11. Which mask offers greater protection from COVID 19?	36	85.7	6	14.3
Q12. Does alcohol (Isopropyl alcohol) component of hand sanitizer offers maximum protection against COVID –19?	42	100	0	0
Q13. Do you think that bleaching solution could exert a major role in protection against COVID 19?	38	90.5	4	9.5
Q14. Are you aware of the complications of COVID 19?	40	95.2	2	4.8
Q15. What is the current treatment for COVID 19?	18	42.9	24	57.1
Q16. Does, awareness regarding COVID 19 has a major role in prevention and spread of the same?	40	95.2	2	4.8
Q17. What is needed instead of fear in the battle against COVID 19?	42	100	0	0

Table 3: Overall awareness according to age, gender & experience

			Incorrect	Correct	Total	P value
Age(yrs)	Below 40	Count (%)	11 (73.3%)	4 (26.7%)	15(100%)	0.739
	Above 40	Count (%)	18(66.7%)	9 (33.3%)	27 (100%)	
	Total		29 (69.0%)	13 (31.0%)	42 (100%)	
Gender	Male	Count (%)	13(86.7%)	2 (13.3%)	15 (100%)	0.089
	Female	Count (%)	16 (59.3%)	11 (40.7%)	27 (100%)	
	Total		29 (69.0%	13 (31.0%)	42 (100%)	
Experience (yrs)	Less than 5	Count (%)	12 (70.6%)	5 (29.4%)	17 (100%)	0.086
	More than 5	Count (%)	17 (68.0%)	8 (32.2%)	25 (100%)	
	Total		29 (69.0%)	13 (31.0%)	42 (100%)	

Table 4: Mode of transmission of COVID-19 & Age (yrs)

		Incorrect	Correct	Total	P value
Less than 40	Count (%)	4 (26.7%)	11 (73.3%)	15 (100%)	0.006
More than 40	Count (%)	19(70.4%)	8(26.9%)	27(100%)	
Total		23 (54.8%)	19 (45.2%)	42 (100%)	

Table 5: Current treatment for COVID 19 & Experience

		Incorrect	Correct	Total	P value
Less than 5 years	Count (%)	13(82.4%)	3 (17.6%)	17 (100%)	0.011
More than 5 years	Count (%)	10 (40.0%)	15 (60.0%)	25 (100%)	
Total		24 (57.1%)	18 (42.9%)	42 (100%)	

participants females were the majority around 64% (n=27). Around 59.5% (n=25) of the participants have more than 5 years of experience.

Amongst the various questions, regarding the mode of transmission, incorrect response was obtained with 54.8% (n=23) and correct response was obtained with45.2% (n=19). When taken into consideration regarding the age, gender and years of experience; statistically significant results were obtained with age off which 26.7% (n=4) comes under less than 40 years of age and 70.4% (n=19) are above 40 years of age. The choices for the same question included human to human transmission, animal to human transmission, both and heredity. Majority of the responses went in favour of animal to human transmission. This could be because of a confusion sprouting up regarding the source and transmission of infection from the early report of cases. Initial cases reported in Wuhan, China, are considered to be an acquired infection from a zoonotic source from Huanan wholesale sea food market which sold poultry, snake, bats and other farm animals. [19,20]

A study revealed, based on relative synonymous codon usage (RSCU) on variety of animal species showed that bats are the most probable wildlife reservoir of 2019-nCov. [21] Human-to-human transmission occurs through common routes such as direct transmission, contact transmission and airborne transmissions through aerosols and during medical procedures. [22]

About the current treatment for Covid 19, there was incorrect response of 57.1% (n=24). Correct response was obtained with 42.9% (n=18). Incorrect response was more with those having experience less than 5 years (82.4%, n=14); compared to those with more than 5 years (40%, n=10). Those results were statistically significant with a p value of .01. Regarding the current treatment for Covid 19 the options provided were vaccination, symptomatic treatment, both and no treatment available. Majority voted for symptomatic treatment as by the time the study was conducted; in our place, vaccination was yet to launch. There was more emphasis on symptomatic management for Covid 19 that time.

In the Covid 19 scenario, health care professionals are the frontline warriors. They should be armoured with sound knowledge regarding the various aspects of the pandemic to render adequate services to the affected meanwhile lessening the chances of cross contamination, to safe guard themselves and the society with proper preventive measures. Even though the study has assessed the awareness level in Covid scenario, there are certain limitations of the same. This needs an increase in sample size as well as an elaboration of the questionnaire to include more aspects of the pandemic.

5. Conclusion

Our study concluded that there is overall good awareness level among the participants of the study. Since the prevalence of Covid 19 cases are significant in the population, update knowledge and skills are utmost mandatory. The findings of the study showed that some notable deficiencies in awareness existed among dental auxiliary staff regarding a few vital aspects of COVID-19. Awareness through social media and health education program somehow solve this. Further studies on the subject are also warranted once the pandemic situation normalizes.

6. Ethical Considerations

The study is to be started after obtaining clearance from Institutional Ethics Committee and individual consent from the students will be obtained online

7. Conflict of Interest

None.

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