

AWARENESS REGARDING COVID PREVENTIVE MEASURES IN DENTAL PRACTICE DURING TREATING ASYMPTOMATIC COVID BARRIERS

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ABSTRACT

The outbreak of COVID-19 has become a severe global acute respiratory pandemic around the world in just a few months with an increasing number of infections and deaths. COVID-19 is a highly contagious and fatal disease. Almost everyone in the population is susceptible. The clinical symptoms of the COVID-19 are fever, dry cough and fatigue. Some patients are accompanied by symptoms such as nasal congestion, runny nose, sore throat, myalgia and diarrhea. Severe patients could even develop acute respiratory distress syndrome, septic shocks, metabolic acidosis and multifunctional organ failure, etc. Due to the relatively closed environment of dental clinics and the unique nature of dental procedures, both dental personnel and patients are easy to get infection through currently known respiratory droplet transmission, aerosol transmission, close contact transmission and other ways, inducing mutual cross-infection. Dental practitioners are facing unprecedented challenges due to the high risk of exposure to droplets and aerosols from saliva and other body fluids during dental procedures. The aim of this study was to assess the awareness of COVID preventive measures in dental practice during treating asymptomatic COVID carriers. This questionnaire containing 10 questions regarding awareness about the preventive measures were given to 100 students including interns, final year students, and third year students through google forms and responses were collected and results were tabulated using SPSS software. This question regarding the awareness of Covid 19, 80% of them agreed that it is caused by virus and 10% did not agree that it's by virus. 55% of the students agreed that it can be prevented and 45% did not agree to it. So through this survey we conclude that students are more aware and cautious about this global pandemic and they will be more secured and follow all safety protocols to prevent them from any disease and treat patients without any barrier.

KEYWORDS: Awareness, students, COVID -19, dental

1. INTRODUCTION:

COVID-19, the newly discovered novel coronavirus disease first diagnosed in China in 2019, has become pandemic throughout the world in a relatively short period of time due to its fuserspread . It has affected almost all aspects of human life worldwide ¹. Many protocols have been established to minimize the number of infected people, yet this virus has already spread to all continents, affecting all communities regardless of borders, nationalities, or climate conditions. Fever, cough, and fatigue have been reported as the major clinical symptoms of the infection following a median incubation period of 3 days, with a great number of infected patients also showing impairment in smell and taste as vital clinical findings in early diagnosis of COVID-19 infection. Some patients turn out to be positive without any symptoms. ²

Elderly people , children and patients with comorbidities like diabetes, heart disease and other systemic conditions are more prone to COVID-19. When compared to medical practitioners, due to the characteristics of COVID-19, and the characteristics of dental procedures, dental practitioners are facing unprecedented challenges³. The high risk of exposure to droplets and aerosols from saliva and other body fluids during the procedures may lead to cross infection between dental practitioners and patients. It is the responsibility of every dental practitioner to fully understand the characteristics of COVID-19 and strictly implement the most appropriate protective measures to reduce and control the risk of cross infection in dental procedures. The infection prevention and control practices during dental treatment are urgently needed. ⁶⁻⁸The aim of this study was to assess the awareness of COVID preventive measures in dental practice during treating asymptomatic COVID carriers.

2. MATERIALS AND METHODS:

STUDY DESIGN :

Cross sectional study

STUDY SETTING :

It was an online based questionnaire that was given among dental students of Saveetha Dental College , Chennai

SAMPLE SIZE AND SAMPLING:

The total sample size was 100 , which involved the final years,third years and interns. It was constricted to 100 samples according to the response obtained from the students .

SURVEY INSTRUMENT:

The questionnaire contained 10 awareness questions ,apart from the general demographic details of study participants, like,and which year they belong to and gender. The questions were close ended , and depending upon the number of correct responses, they were grouped into yes and no. Questionnaire was administered in Google forms to general practitioners. Questionnaire validation was done giving the survey to 10% of the study population. The reliability was assessed by cronbach's alpha .

ETHICAL CLEARANCE :

The ethical board of clearance was obtained from the scientific review board of Saveethauniversity.

DATA COLLECTION AND STATISTICAL ANALYSIS :

The responses obtained were transferred to excel sheets where it was segregated and tabulated accordingly. The data was further put in a graph based on the percentage of yes or no responses .

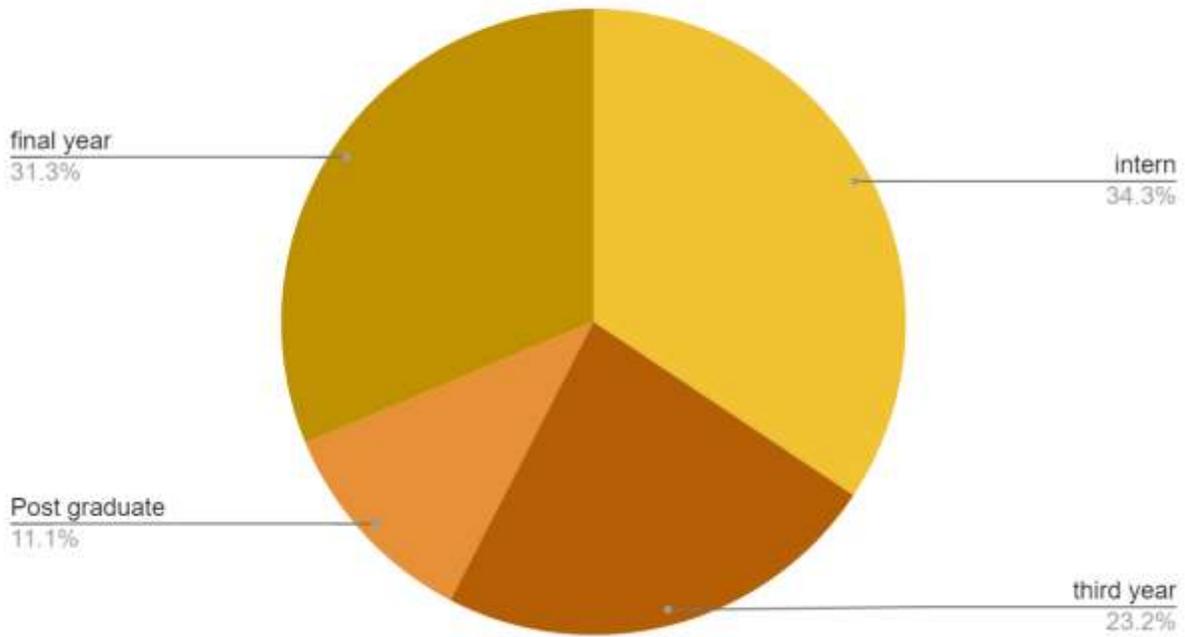
3. RESULTS AND DISCUSSION:

This study had 75.8% female and 24.2% male out of which 23.2% with third years 31.3% were final years, 34.3% of interns and 11.1% were postgraduates. This question regarding the awareness of Covid19 ,80% of them agreed that it is caused by virus and 10 % did not agree that it's by virus. 55% of the students agreed that it can be prevented and 45% did not agree to it. 62% of the students agreed that it occurs over a certain period of the year where 38% of them did not agree to it . 80% of the students know that symptoms are worst among diabetic patients where 20% were not aware of it. 82% of the students agreed that washing hands and cleaning surfaces should not be less than 20 seconds whereas 12 % did not agree to it. 85% of the students felt that clinics should check the temperature of patients before seeing the dentist where 12% did not agree to it and 3% of the students were not sure about it .⁹⁻¹¹

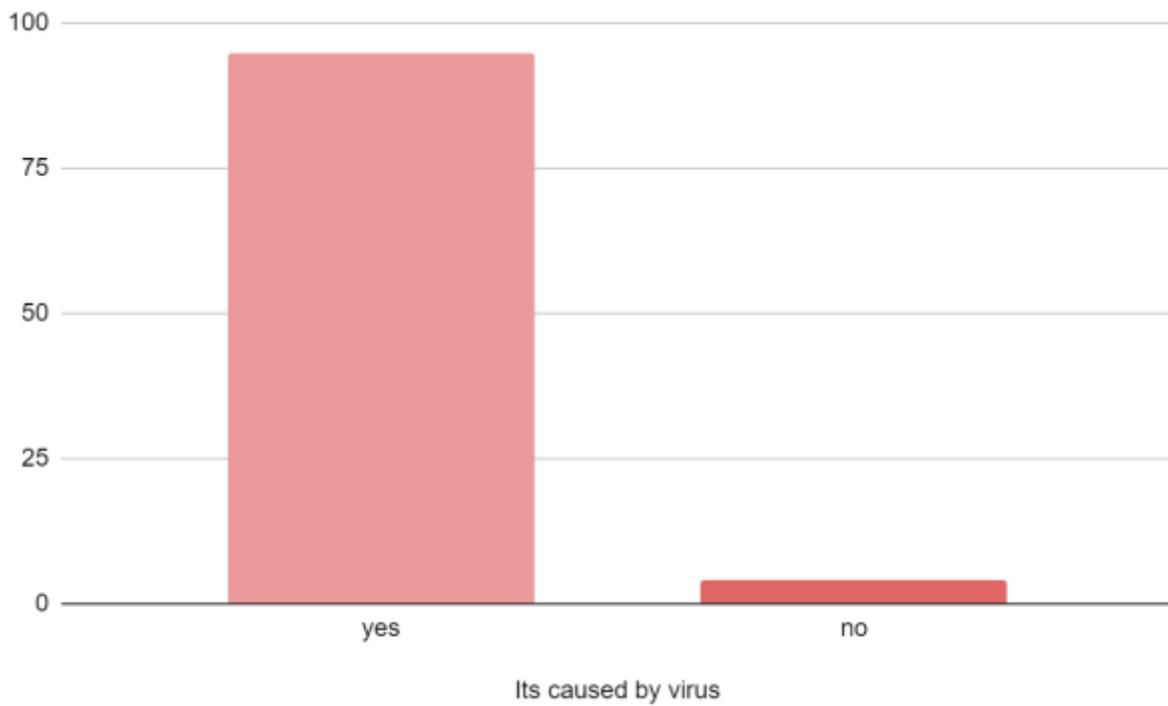
80% of the students agreed that patients should print them out before starting any treatment whereas 15% of them said it's not necessary and 5% were not sure about it. 90% of the students agreed that dentists are at high risk of infection whereas 10% did not agree to it.88% of the students agreed that dentist might be the major cause for transmission of infection to the patients whereas 6% of them said it's cant transmit because of the dentist and 6% were unsure about it.88% of the students wear PP all the time in the clinic where is 12% don't wear PPE all the time in the clinics. 80% of the students agreed that they wear gloves only while treating the patients while 15% said they wear it every time. 77% of the students wash their hands after treating every patient where is 23% of them don't wash their hands after treating every patient.

In a study conducted by Khalifa ,about half of the respondents (47%) agreed that patients need to use an antiseptic mouth rinse before the dental procedure. The requirement of wearing a face mask in the waiting area was observed by 68% of the respondents . In our study 85% of the students felt that clinics should check the temperature of patients before seeing the dentist ². In the same study 72% respondents agreed that N-95 Mask should be routinely worn in dental practice as a new precaution, and in our study 88% of the students wear PP all the time in the clinic 80% of the students agreed that they wear gloves only while treating the patients . In a study by yousefKhader, a total of 65 (17.7%) of the 368 dentists perceived COVID-19 as very dangerous, 264 (71.7%) perceived it as moderately dangerous, and 35 (9.5%) perceived it as not dangerous. 55% of the students agreed that it can be prevented and 45% did not agree to it. ⁴⁻⁶

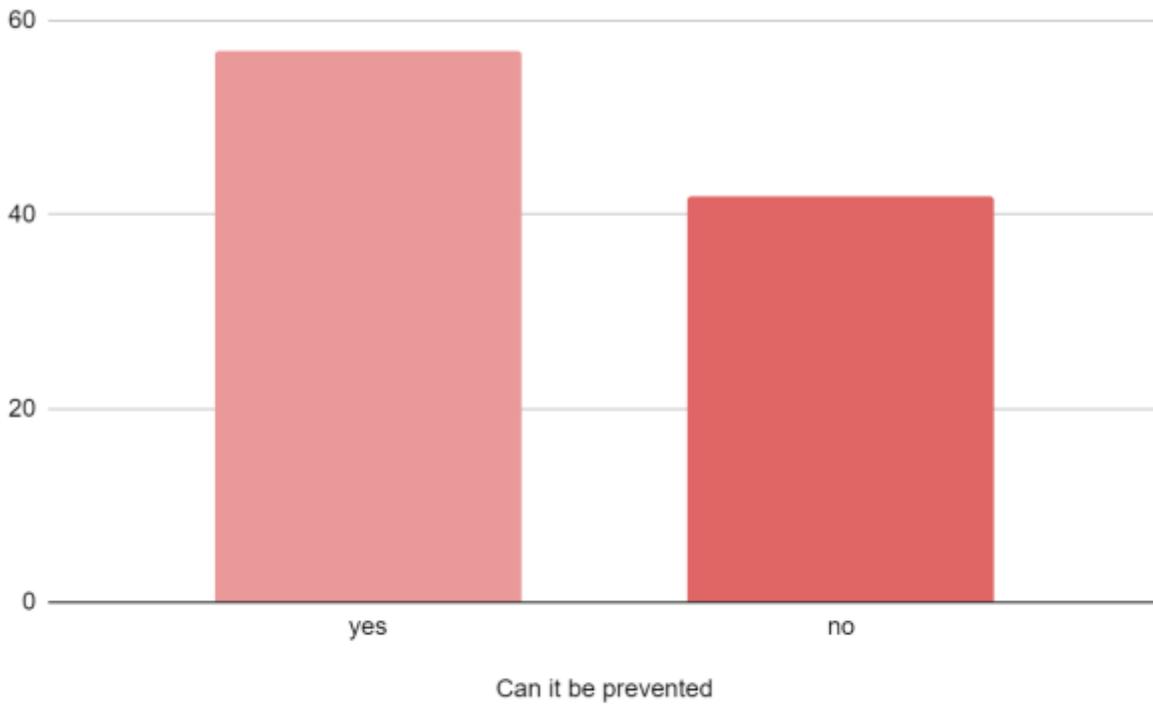
Year of study



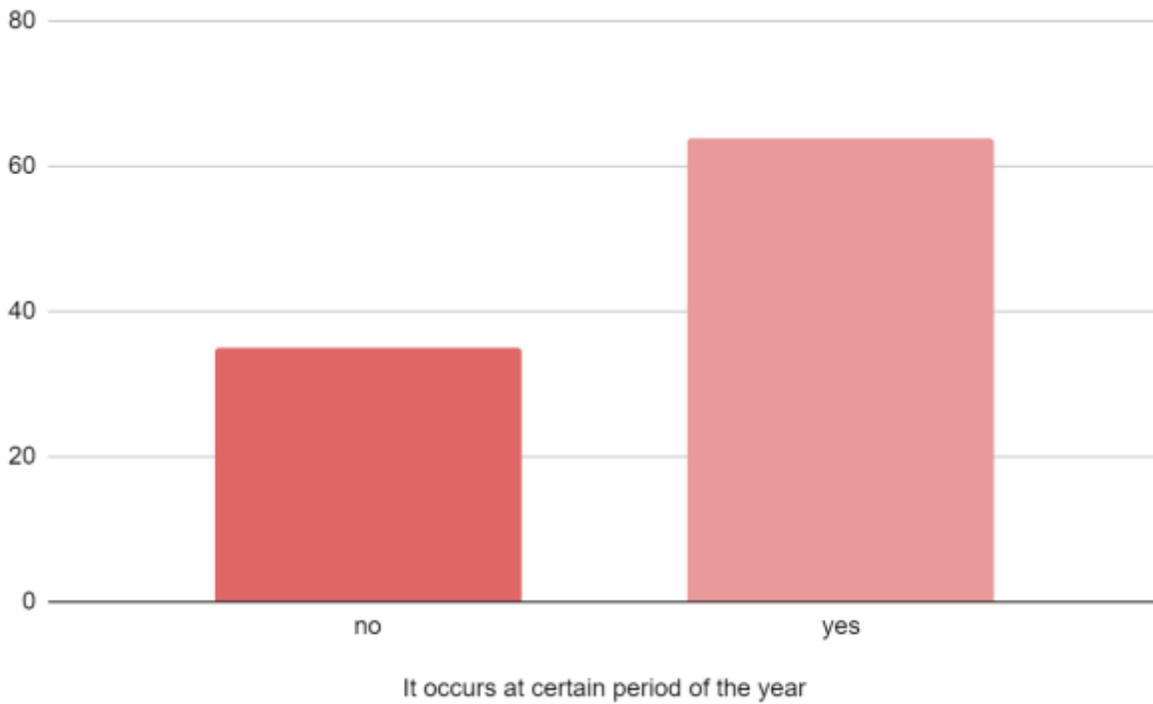
Graph 1:Representing year of study



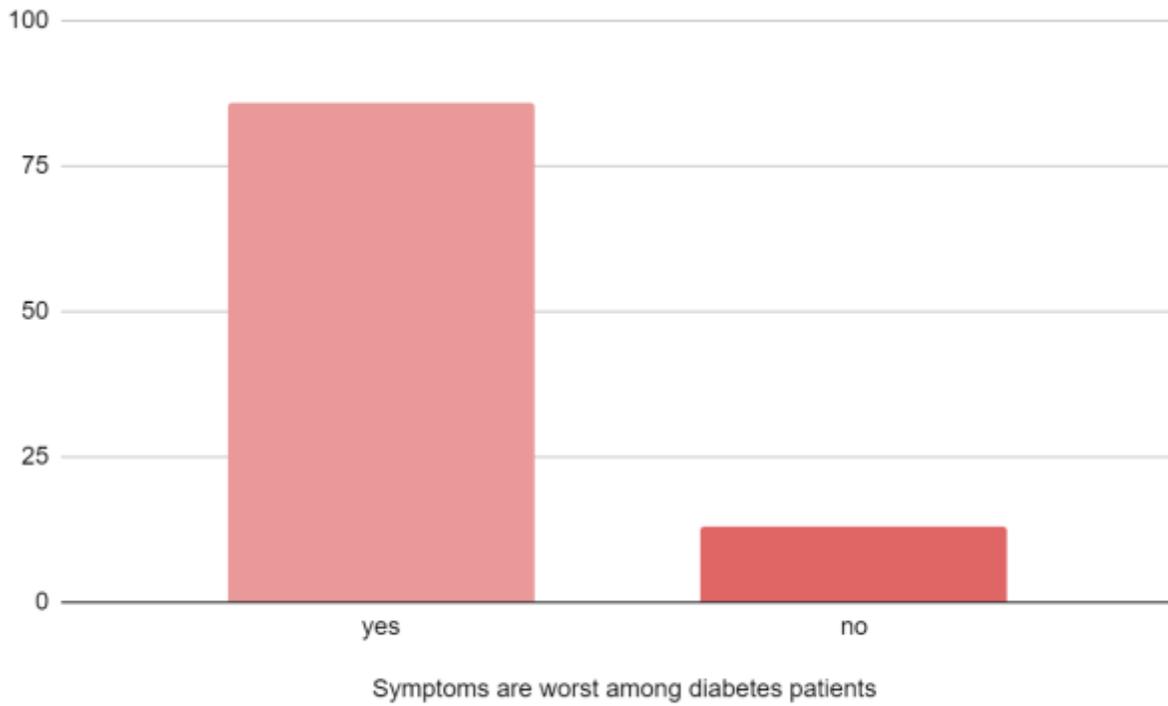
Graph 2:Representing the cause of disease



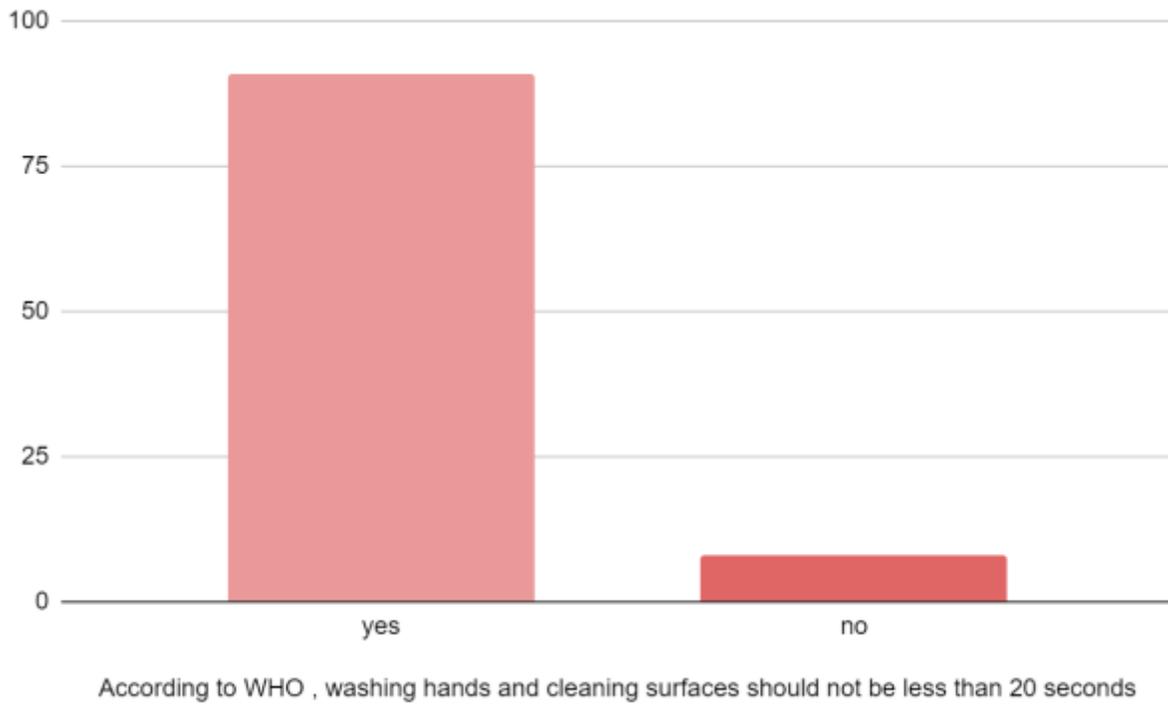
Graph 3:Representing, prevention



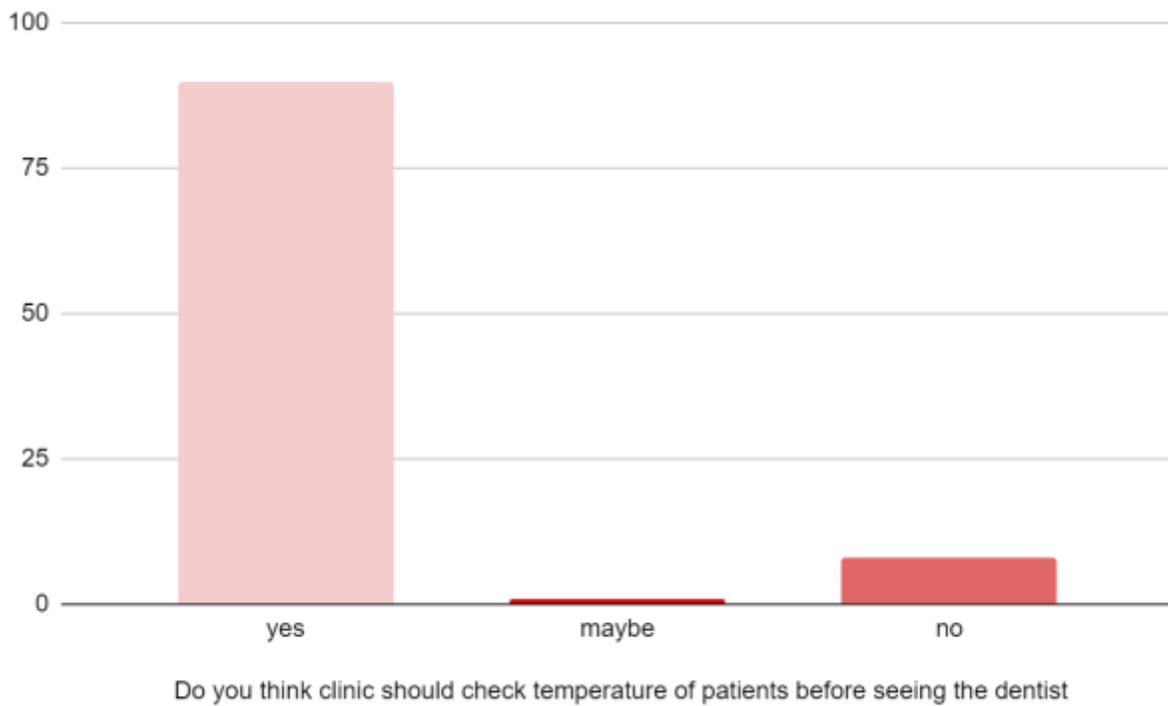
Graph 4:Representing , disease period



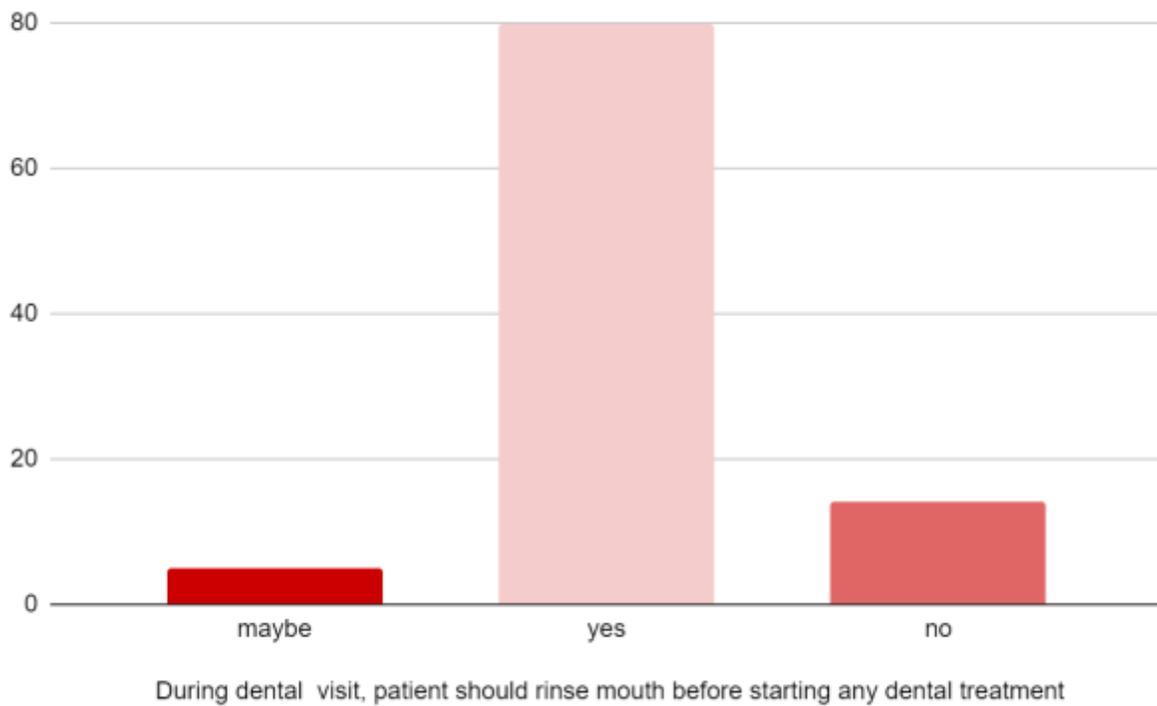
Graph 5:Representing, condition of diabetic patients



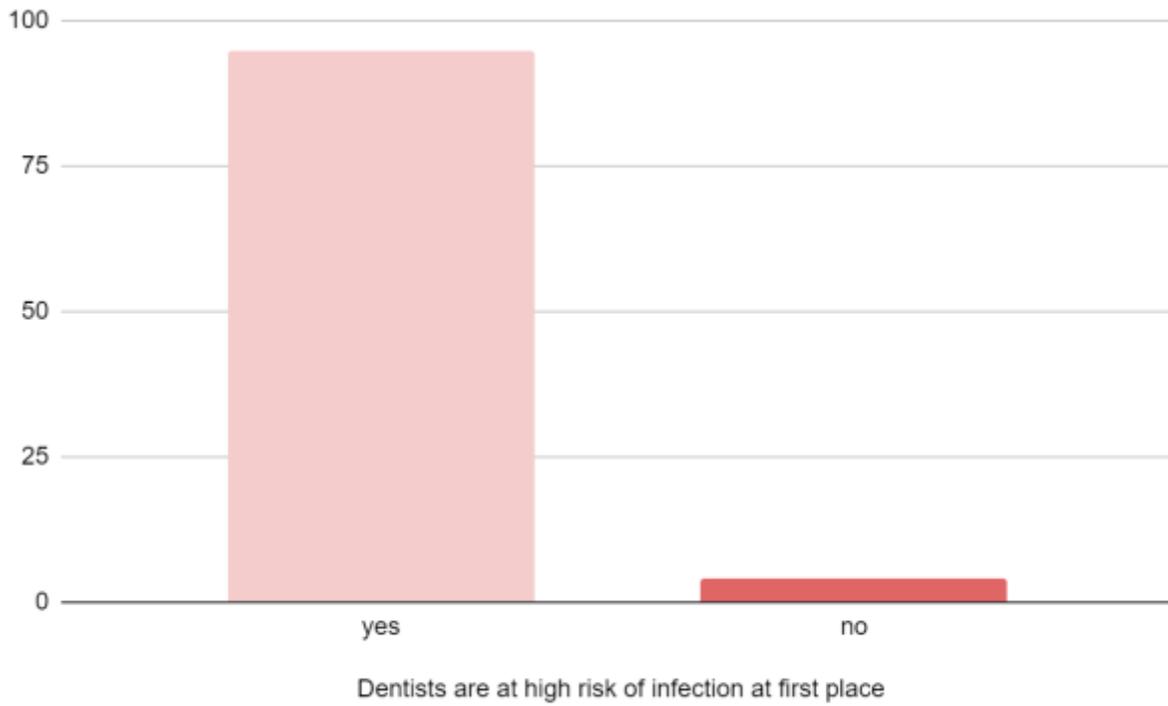
Graph 6:Representing, Hand wash



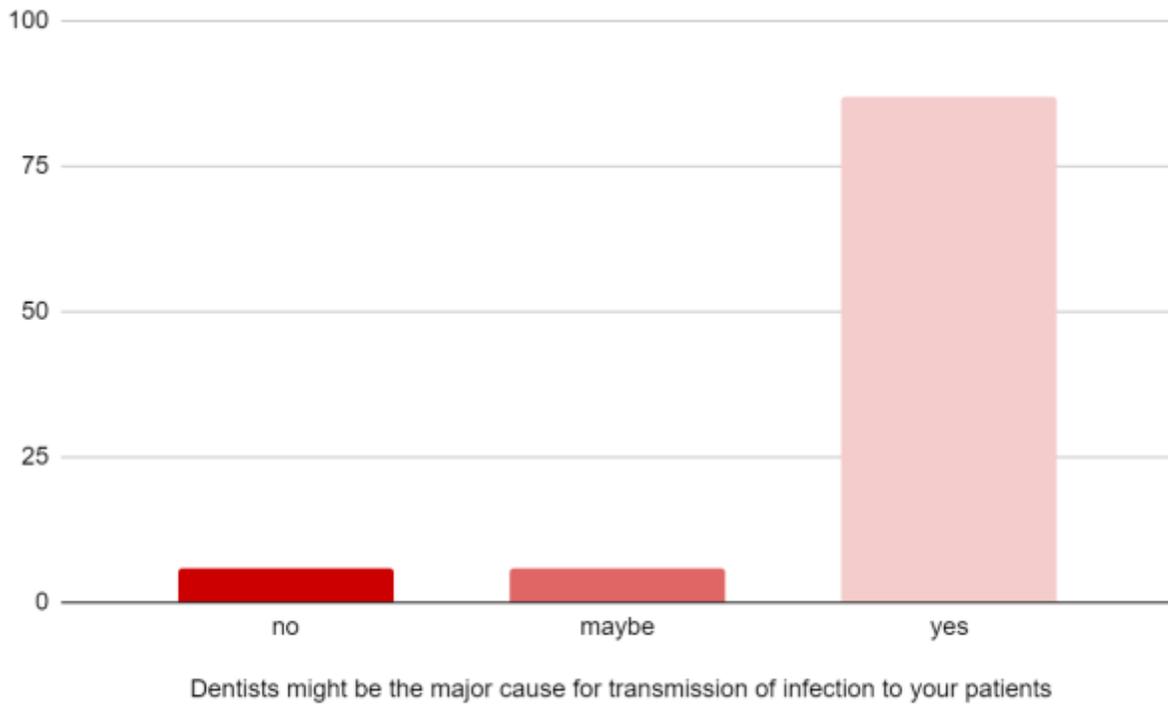
Graph 7:Representing, Clinical temperature



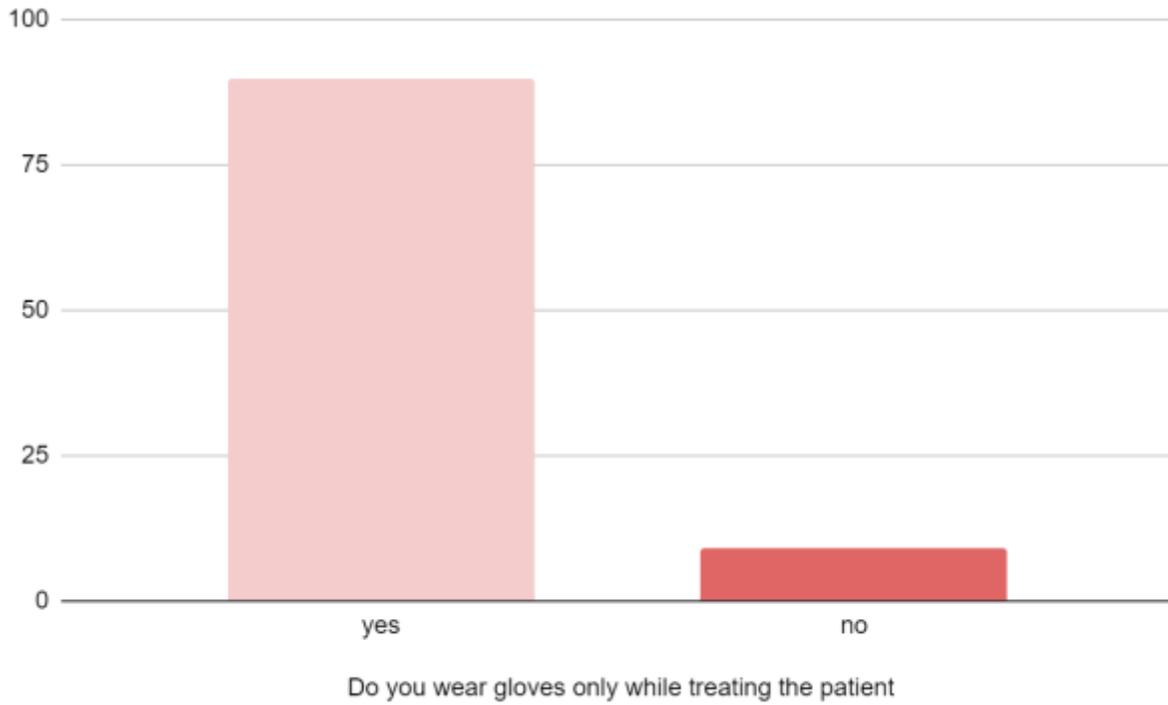
Graph 8:Representing, mouth was before procedure



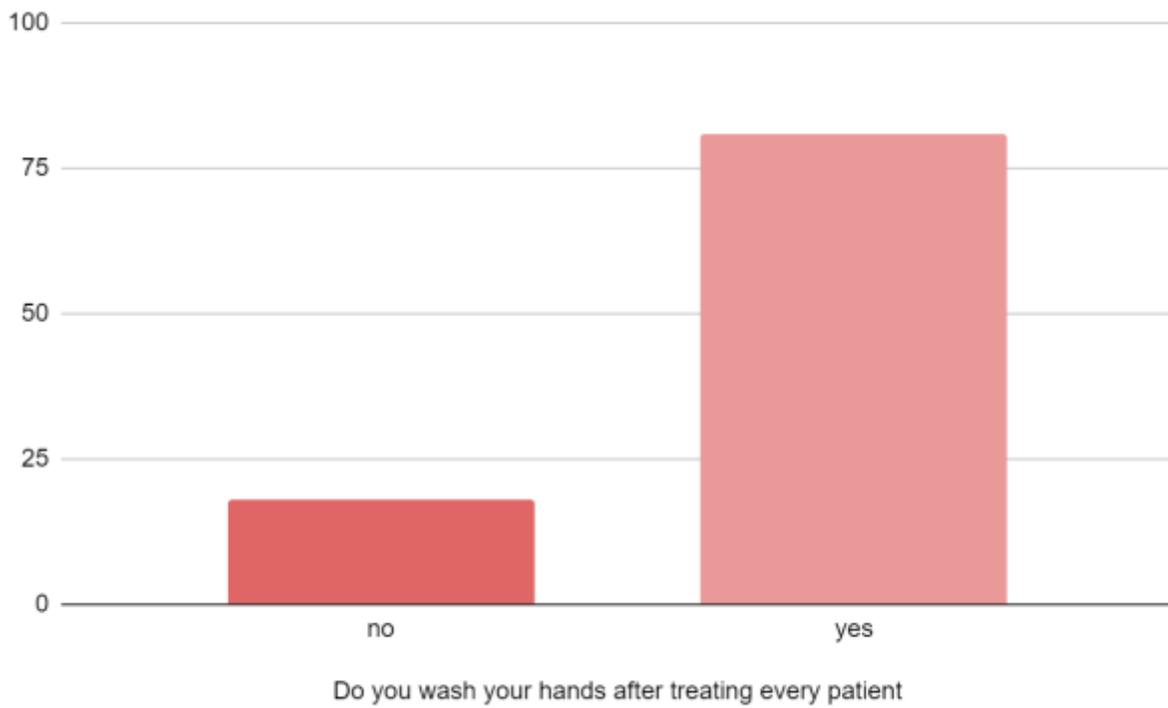
Graph 9:Representing , dentists risk of infection of transmission



Graph 10:Representing dentists as major cause of transmission of infection



Graph 11:Representing , glove time



Graph 12:Representing washing hands

4. CONCLUSION

It is very clear that we have not got any vaccine to protect us from COVID 19. With utmost care ,we have to follow all precautionary protocols to prevent further spread of the viral disease. Dentists must be aware of the serious risk of this virus because they are more vulnerable to COVID than common man . So through this survey we conclude that students are more aware and cautious about this global pandemic and they will be more secured and follow all safety protocols to prevent them from any disease and treat patients without any barrier.

5. REFERENCES :

1. Izzetti R, Nisi M, Gabriele M, et al. COVID-19 Transmission in Dental Practice: Brief Review of Preventive Measures in Italy. *J Dent Res* 2020; 99: 1030–1038.
2. Al-Khalifa KS, AlSheikh R, Al-Swuailem AS, et al. Pandemic preparedness of dentists against coronavirus disease: A Saudi Arabian experience. *PLoS One* 2020; 15: e0237630.
3. Bhumireddy J, Mallineni SK, Nuvvula S. Challenges and possible solutions in dental practice during and post COVID-19. *Environ SciPollut Res*. Epub ahead of print 7 October 2020. DOI: 10.1007/s11356-020-10983-x.
4. Khader Y, Al Nsour M, Al-Batayneh OB, et al. Dentists' Awareness, Perception, and Attitude Regarding COVID-19 and Infection Control: Cross-Sectional Study Among Jordanian Dentists. *JMIR Public Health and Surveillance* 2020; 6: e18798.
5. Villani FA, Aiuto R, Paglia L, et al. COVID-19 and Dentistry: Prevention in Dental Practice, a Literature Review. *Int J Environ Res Public Health* 2020; 17: 4609.
6. Coulthard P. Dentistry and coronavirus (COVID-19) - moral decision-making. *Br Dent J* 2020; 228: 503–505.
7. 1.Perumalsamy, Haribalan ; Sankarapandian, Karuppasamy ; Veerappan, Karpagam ; Natarajan, Sathishkumar ; Kandaswamy, Narendran ; Thangavelu, Lakshmi ; Balusamy, SriRenukadevi In silico and in vitro analysis of coumarin derivative induced anticancer effects by undergoing intrinsic pathway mediated apoptosis in human stomach cancer .*PHYTOMEDICINE* .2018; 46;119-130DOI: 10.1016/j.phymed.2018.04.021
- 8.Lakshmi, Thangavelu ;Ezhilarasan, Devaraj ; Nagaich, Upendra Acacia catechu Ethanolic Seed Extract Triggers Apoptosis of SCC-25 Cells.*PHARMACOGNOSY MAGAZINE* .2017; 13(51)S405-S411.Supplement: 3DOI: 10.4103/pm.pm_458_16
9. Lakshmi.T, Rajendran R, Krishnan V. Perspectives of oil pulling therapy in dental practice. *Dent Hypotheses* 2013;4:1314
- 10..Krishnan, Vidya ; Lakshmi, T .Bioglass: A novel biocompatible innovation*JOURNAL OF ADVANCED PHARMACEUTICAL TECHNOLOGY & RESEARCH* .2013; 4(2); 78-83

11. Lakshmi, T., Ezhilarasan, D., Vijayaragavan, R., Bhullar, S. K., & Rajendran, R. (2017). Acacia catechu ethanolic bark extract induces apoptosis in human oral squamous carcinoma cells. *Journal of advanced pharmaceutical technology & research*, 8(4), 143–149. https://doi.org/10.4103/japtr.JAPTR_73_17.