AWARENESS ON THE COMMERCIALLY AVAILABLE VACCINE IN INDIA - A SURVEY AMONG DENTAL STUDENTS

Running title: Awareness on the commercially available vaccine in india
Type of study: Survey

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Abstract
Introduction: COVID-19 , a pandemic was first reported in Wuhan, China. It is a type of pneumonia with an unknown cause. Healthcare professionals are at a higher risk of being infected. Especially dentists, perform duties not only in close contact but with aerosol and droplets that come out of a patient's oral cavity. It is being said that it is a major public health challenge not only for China but also for the countries present around the world. The main aim of this study is to assess the awareness on the treatment and vaccines for COVID-19 infection among dental students.
Materials and Methods: A self-designed survey study was conducted among 100 dental students.. The questionnaire was designed in the manner to assess their knowledge on the treatment and vaccines for COVID-19 infections. The questionnaire contains a set of 15 questions. These questions were distributed through an online survey link. The results were obtained and statistically analysed through SPSS software, Chi square test was done to check the association and a p value of 0.05 was set to be statistically significant. The survey has been conducted in the month of May 2020.
Conclusion: This survey proves that most of the dental students were aware about the treatment and vaccines for the COVID 19 infection and also found that both male and female students were equally aware of the same.
Keywords: COVID-19; covaxin, covishield, astrazeneca, vaccine, innovative method.

INTRODUCTION:

Coronavirus, also called as COVID-19, was first reported in Wuhan, China. It is a type of pneumonia with an unknown cause. It is being said that it is a major public health challenge but not only for China but for also the countries present around the world. World health organization, WHO, announces that the virus named COVID-19, constituted as a public health emergency at the international level. Thus, it becomes an international concern. Due to the characteristics of dental professionals, the risk of cross infection is high between the patient and the dental doctors(1) Currently, there is no treatment recommended for coronavirus infection. India braces for the COVID-19 as a pandemic disease. The healthcare professionals are at the frontline, who are particularly vulnerable to this infection (2)Healthcare professionals are at a higher risk of being infected.

There is some research on this pandemic disease. Healthcare professionals like almost every specialist, dentists are the one who is more exposed and are at a higher risk of getting infected due to close contact, like oral cavity, with infected patients(3) In the month of march 2020, the World Health Organization, also called WHO, declared that the virus named COVID-19 as an uncontrollable pandemic disease. Healthcare professionals are at a higher risk of getting infected because of being in close contact with the infected patients, in particular, the dentists. Dentists perform duties but not only in close contact but with aerosols and droplets that come out of a patient's oral cavity. Dentists are potentially carriers for spreading this disease among peer groups, families and other patients. Fear is an anxiety powerful emotion that is associated with this pandemic disease, COVID-19, says all the overwhelming reports. Cross infection occurs due to the transmission of infectious agents between the patient and the professionals within a clinical environment. Dental colleges are responsible for providing appropriate measures for the control of infection and proper training of dental students to protect patients and for the establishment of safe work conditions (3)Conduction of educational programs through social media, mass media, schools, public places, etc is required. These programs should involve both patients and the providers.

The government has allowed states to use around 10,000 hospitals under Ayushman Bharat-PMJAY and 687 hospitals under CGHS as Covid-19 vaccination centres (CVCs). Currently, two vaccines—Covishield developed by Oxford-AstraZeneca and manufactured by SII, and Covaxin, developed and manufactured by Bharat Biotech— are being administered in India.While the vaccine will be administered free of cost at government hospitals, the Centre has capped the price of the shot at ₹250 at private hospitals.For those who wish to receive the vaccine in this stage, states were informed about three methods of registration—advance self registration, onsite registration and facilitated cohort registration.It is a digital platform where anyone who needs to get a dose must be registered. Rarely, the vaccine has side effects that are similar to the symptoms of COVID-19,but the coronavirus vaccines won't give you COVID-19. it will not make you contagious. For most people, the side effects of the vaccine are mild or moderate and last only a day or two. The side effects show that the vaccine is teaching your immune system how to recognize and attack SARS-CoV-2, the coronavirus that causes COVID-19, if it encounters it.Experts say do not take pain relievers before your vaccine. Physical (social) distancing definitely helped us get control of the coronavirus, which was spreading rapidly throughout March. But alone it wasn’t enough to bring transmission to a halt.

Healthcare Authorities have initiated to create and spread awareness and preparedness activities beyond borders. Our team has extensive knowledge and research experience that has translated into high quality publications (4–12), (13–18) (13–18), (19–23). Currently, a very high research is going on cancer biology (24)nanotechnology (25)analysing the cytotoxicity in vivo researches nano drug modelling in silico studies analysis of the benefits of various natural products(26), and other advanced research have taken a priority in scientific world. (27), which are very novel and trend breaking. Though very high research is going on cancer biology, since the percentage of people affected by covid-19 is high, therefore, the aim of this study is to assess the awareness on the treatment and vaccines for COVID-19 infections among dental students.

MATERIALS AND METHODS:

The study was an online survey. The study setting was based on an online setting, a prospective observational study. The pros of this study is that it is cost effective, cheap and can collect more data.The questionnaire for the survey was prepared and approved by the scientific review board, Saveetha Dental College, Chennai.

Reference articles for conducting the survey were collected and analysed. A detailed questionnaire with questions related to the awareness of the dental students towards the current treatment and vaccines for COVID 19 was framed. The validity of the questions was determined. The questionnaire was circulated by google docs as an online platform to 100 dental students. The results were collected, tabulated and statistically analysed. The results were obtained and statistically analysed through SPSS software, chi square test was done to check the association and a p value of 0.05 was said to be statistically significant.The survey was conducted in the month of May 2020.

RESULTS:

The questionnaire was distributed and various responses have been collected for each and every question. The results were statistically studied and analysed.

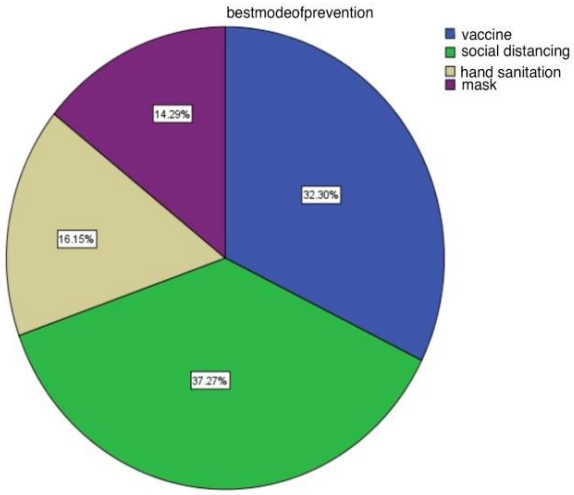

FIGURE 1:This pie chart indicates the distribution of the response for the question. when asked which is the best mode of prevention only 32% population chose vaccine, 37% population chose social distancing, 14% population chose mask, 16% population chose hand sanitation over vaccine.

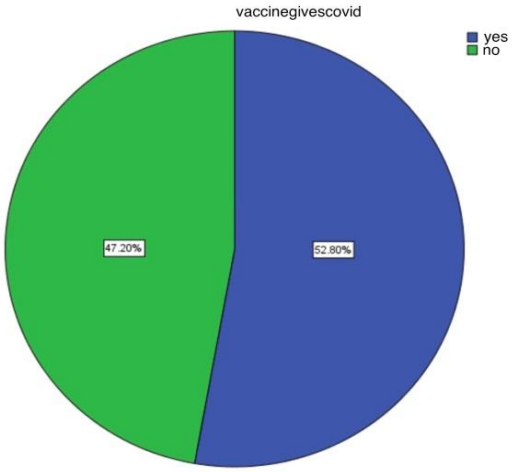

FIGURE 2: This pie chart indicates the distribution of the response for the question. When asked about the covid vaccines causing covid 53% of the population have responded that the vaccine can cause covid.

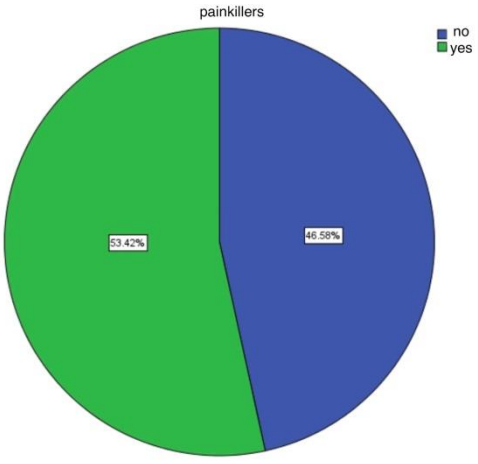

FIGURE 3: This pie chart indicates the distribution of response for the question when asked whether painkillers can be taken after vaccination to avoid vaccine effects 53.4% replied yes we can taken painkillers.

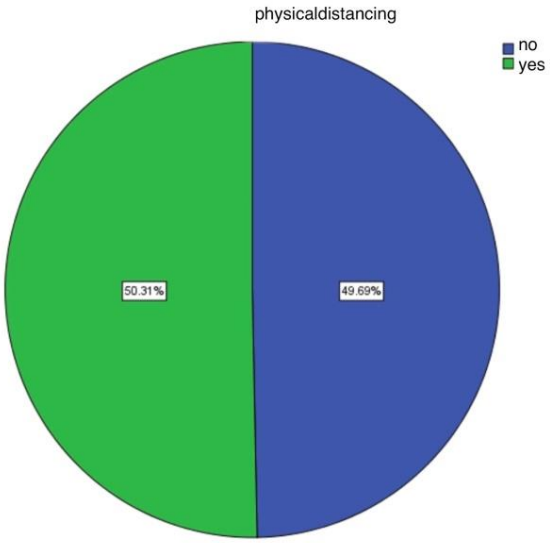

FIGURE 4:This pie chart indicates the distribution of response for the question when asked whether physical distancing without vaccination is enough 50.3% population replied tha yes it is enough.

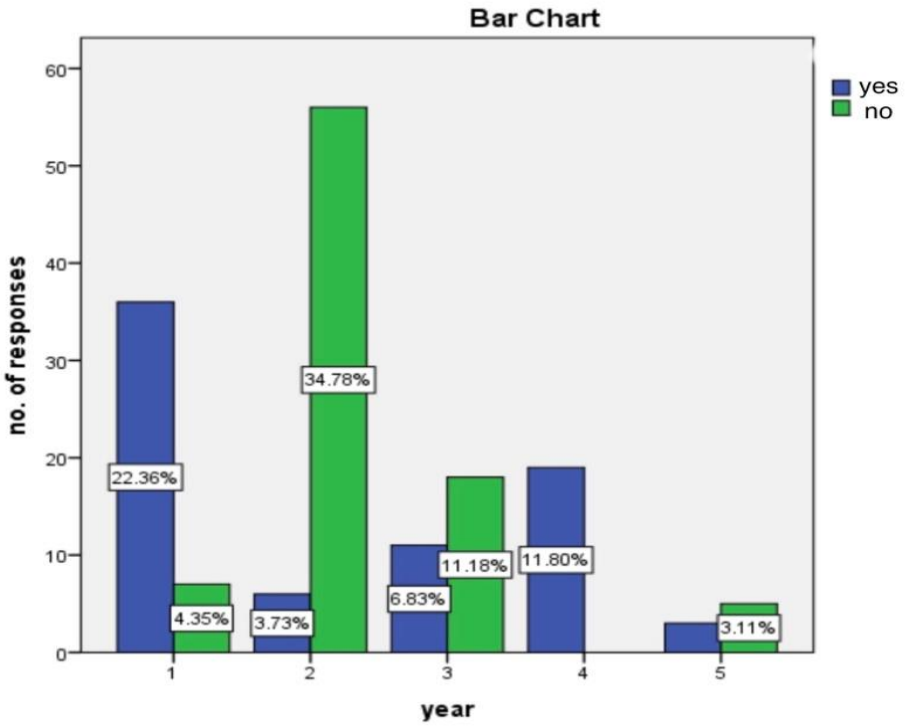

figure 5:Bar chart representing association between year and their awareness about the covid vaccine whether it causes covid. X axis represents year, Y axis represents the number of participants and the percentage of responses. 2nd year students were found to be more aware than others, however statistically significant. Chi-square test, Pearson Chi-square value - 0, df - 3, p value - 0.031 (>0.05), hence statistically significant.

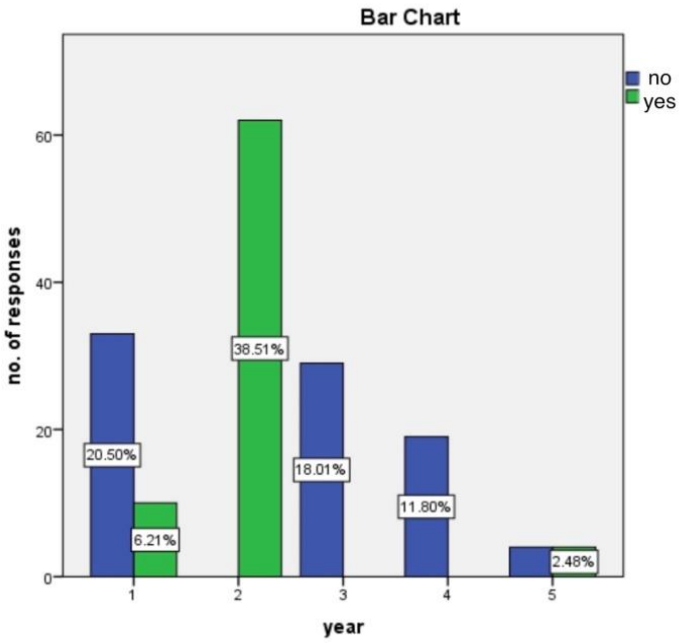

figure6: Bar chart representing association between year and their awareness about whether they can take painkillers to reduce the side effects of covid vaccine. X axis represents year, Y axis represents the percentage of responses. 1st year students were found to be more aware than others, however statistically significant. Chi-square test, Pearson Chi-square value - 0, df - 3, p value - 0.031 (>0.05), hence statistically significant.

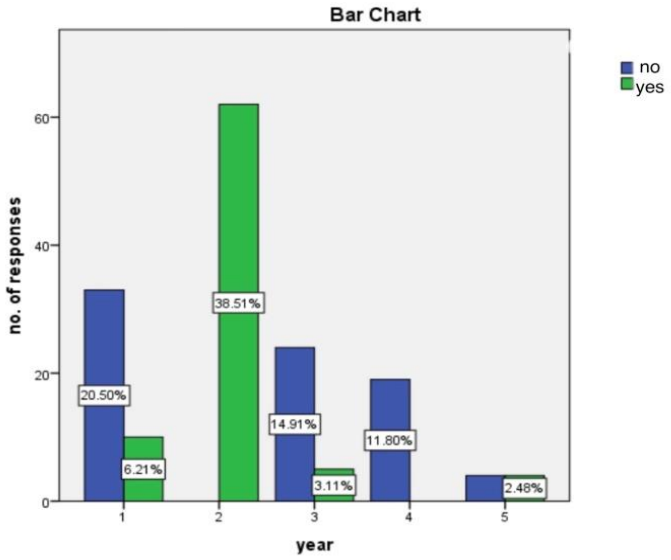

figure7: Bar chart representing association between year and their awareness about whether physical distancing without vaccination is enough. X axis represents year, Y axis represents the percentage of responses. 1st year students were found to be more aware than others, however statistically significant. Chi-square test, Pearson Chi-square value - 0, df - 3, p value - 0.031 (>0.05), hence statistically significant.

DISCUSSION:

Rarely, the vaccine has side effects that are similar to the symptoms of COVID-19,but the coronavirus vaccines won't give you COVID-19. it will not make you contagious. For most people, the side effects of the vaccine are mild or moderate and last only a day or two.Physical (social) distancing definitely helped us get control of the coronavirus, which was spreading rapidly throughout March.

But alone it wasn't enough to bring transmission to a halt. the side effects show that the vaccine is teaching your immune system how to recognize and attack SARS-CoV-2, the coronavirus that causes COVID-19, if it encounters it. Experts say do not take pain relievers before your vaccine.

Previous researches like Yilan Lin, et al,(28) in 2011, studied that a pandemic disease named H1N1, occurred in the year 2009 among the Chinese general population. The sample size of his/her study is 10669. In that, when asked about awareness to disinfect frequently, 56.9% of the total population says yes, 40.56% of the total population says no and the rest 2.5% was not clear.(29)

Another researcher like Nelson CY Yeung, et al, in the year 2009, analysed the effect of the pandemic disease named H1N1

in 2009 at the Hong Kong population, The sample size was 301. In that, when asked about the awareness about vaccine efficacy and the safety have not been confirmed by clinical trials, 95% of the population are unlikely about it and 5% where likely about it (30)

Thus, the results of the current study strongly agree with results of the above studies referred. Awareness about vaccines is a first effective method to prevent a spread of a disease. Thus this survey has created an awareness on COVID 19 infection among dental students.

CONCLUSION:

This survey proves that most of the dental students were not aware about the commercially available vaccines for the COVID 19 infection and also found that the 2nd year dental students are comparatively more aware of the covid vaccine than the other year dental students. further research has to be done on knowledge regarding the diagnosis and treatment component of the COVID-19 disease.

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AUTHORS CONTRIBUTION:

Jayavabushana: Literature search, data collection, analysis, manuscript drafting.

Dr. Dhanraj M: Aided in conception of the topic, has participated in the study design, statistical analysis and has supervised in preparation and final corrections of the manuscript.

Dr. L.Keerthi Sasanka: Data verification, manuscript drafting, preparation of manuscript.

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CONFLICT OF INTEREST:

The author declares that there was no conflict of interest in the present study

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