

## **Perception about COVID vaccine among dental students in a private dental College**

Type of research: A questionnaire survey

Running title: COVID vaccination among dental students

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### **Abstract:**

Coronavirus disease is a newly emerging respiratory disease caused by a member of the coronavirus family. Among all the preventive measures, the vaccine shows a high rate of protection against COVID. The aim of the study is to assess the perception about COVID vaccination status among dental students in Chennai. The study was conducted through an online survey link. This study revealed that more than half of the respondents have received within 3 months of vaccination. The study showed majority of the dental students are not hesitant to receive the vaccine. The dental students also consider that vaccines are the only protective measures against COVID. This study shows dental students have positive perception about COVID vaccination.

**Keywords:** Awareness, COVID, Dental students, Vaccine.

### **Introduction:**

COVID is caused by a new member of the coronavirus family called novel coronavirus, is a newly discovered emerging respiratory disease<sup>1</sup>. The Pandemic of the disease was started in December 2019 in Wuhan area of China, and it has become one of the major public health problems of the world<sup>2</sup>. In early 2020 WHO declared it as a pandemic<sup>3</sup>. Two salient features of this virus are its high transmissibility and low pathogenicity that distinguish it from Severe Acute Respiratory Syndrome, as it is caused by other strains of coronavirus<sup>4</sup>. The clinical symptoms include fever, cold, dry cough, difficulty in breathing, muscle pain and fatigue and in severe stages it progresses to

acute respiratory distress syndrome leading to bleeding and coagulation dysfunction. Adult individuals and peoples with underlying chronic systemic illnesses are more prone to this disease.<sup>5</sup>

The COVID virus is predominantly known to affect the respiratory system of the infected person. The incubation period is from 1–14 days, and mainly 3–7 days is the most infectious period<sup>2</sup>.

There is a significant threat to the dental profession as most dental treatments are aerosol procedures, and droplet spread is the predominant mode of transmission of the COVID virus. Thus, dentists are more prone to the transmission of the disease. There are higher chances of contamination of the dental operatory with infectious viral load from saliva, blood, and aerosols<sup>6</sup> The coronavirus is reported to be viable in the air for 3hrs while 5.6hrs on stainless steel and 6.8hrs on plastic surface<sup>7</sup>. After completing the dental treatments, it is imperative to disinfect dental operatives to avoid transmitting infectious diseases adequately<sup>8</sup>.

Our team has extensive knowledge and research experience that has translate into high quality publications<sup>9-28</sup>

In the battle against COVID pandemic, the World Health Organization had made a global effort in prevention, diagnosis, and treatment against this pathogen. A simultaneously sustained race to discover an effective vaccine by more than 90 vaccine companies and over 100 countries is underway worldwide<sup>29</sup>. Development of a vaccine is the only effective means of restoring normal life to the population and restoring economic status. Nevertheless, vaccine availability does not symbolize the end of the pandemic due to ongoing vaccine hesitancy and anti-vaccination movements<sup>30</sup>. The WHO declared in 2019 that vaccine hesitancy is one of ten major threats to global health<sup>31</sup>, echoing these fears, one recent study found 76% of vaccine hesitancy is due to ety concerns<sup>32</sup>.

Hence, the aim of the study was to assess the perception about covid vaccine among dental students in a private dental college.

### **Materials and methods:**

A study was conducted during the month of march 2021 among dental students in a private dental college in Chennai to evaluate their perception on covid vaccine. This study was conducted through an online questionnaire consisting of 15 questions among a sample size of 100 participants (61 males and 39 females). Ethical approval and informed consent from the participants were obtained. The survey instrument was a questionnaire prepared after extensive review of the existing literature. The questionnaire was reviewed and amendments were made to improve clarity of the questions to eliminate ambiguous responses. The questionnaire contained a total of 15 questions that were shared to the participants using an online survey platform. Only completed surveys were taken for analysis and the uncompleted surveys were eliminated. The statistical test used is descriptive statistics. All the responses obtained were tabulated and reliability of the data was checked. The statistics done using SPSS software, chi square test was done to check the association and p value less than or equal to 0.05 was considered statistically significant.

### **Results and Discussion:**

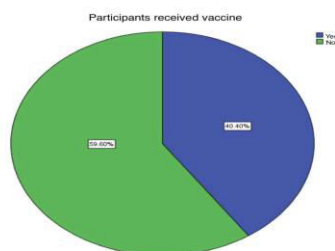


Figure 1: The pie chart depicts the percentage of dental students who received first dose of vaccine as of March 2021 . The blue colour denotes the participants who received the first dose of vaccine(40%). The green colour denotes the participants yet to receive the first dose of vaccine(60%).

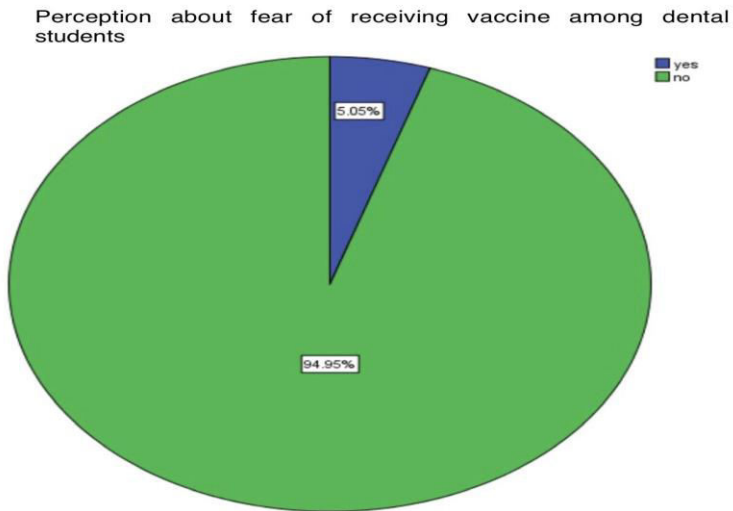


Figure 2: The pie chart shows the perception among dental students about the anxiety level of receiving vaccines. The green colour indicates the dental students who are less anxious in taking vaccines(95%).

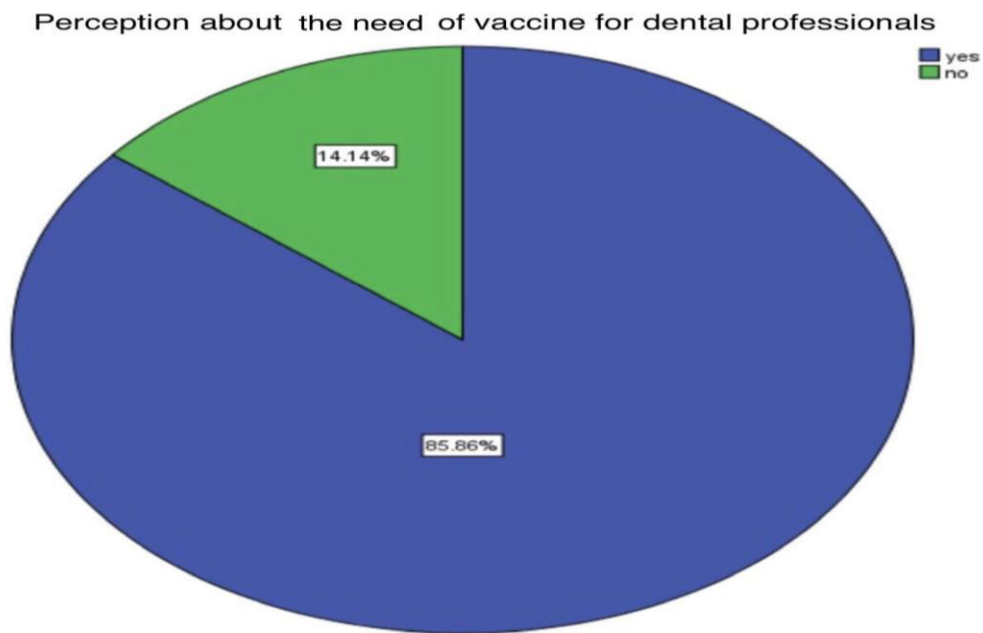


Figure 3: The pie chart depicts perception about the need of vaccines for dental students. The blue colour denotes the perception towards the need of vaccines for dental students. (86%).

Perception about effectiveness of covid vaccine among dental students

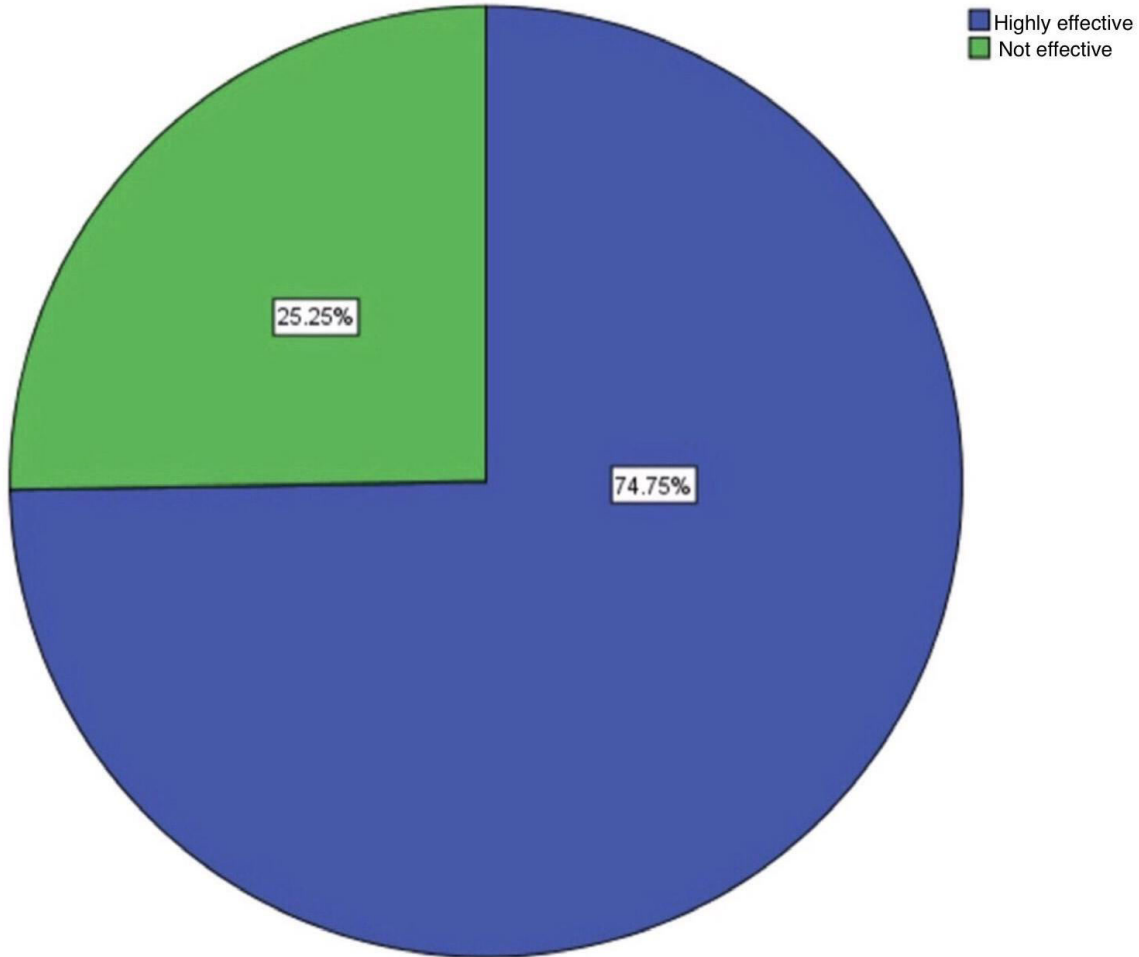


Figure 4: The pie chart depicts the perception about the effectiveness of vaccines among dental students. The blue colour denotes the percentage of participants who assume that vaccine will be highly effective and protect dentist from COVID(74.7%)

Increase in mass vaccination strategies is the effective way to overcome the COVID pandemic. Medical professionals and students have a key role in shaping public opinion about vaccines. In the present study, about 97% of the undergraduate and postgraduate students are aware about the vaccination status and it's drive in India and their use against COVID. The study conducted in Italy (2020)<sup>33</sup> and Jordan(2020)<sup>34</sup> shows a similar result. In contrast, the study conducted by Gambhir et al (2020)<sup>35</sup> have reported a low knowledge score.

In this study, the source of information used by dental students in study were government online websites (46%), more than (30%) used news and social media and (23%) family and friends as their sources of information about COVID. In contrast, the study conducted in Jordan found that the majority of them used social media as the primary source of information about COVID<sup>36</sup>. Similar to the present survey, a study conducted in Jordan, showed that the majority of people accessed government websites rather than social media. In contrast, another study conducted by Jamal(2020), showed that scientific articles were the major source of information<sup>37</sup>. These results indicate that there

is a major influence of social media and government media as a source of information about emerging diseases to the population to convey the preventive measures and awareness and to incorporate knowledge about COVID to the population.

In the present study, about 47% of the dental students reported muscle fatigue and joint pain, 40% said that fever and joint pain, 13% said that nausea and cough are the most common side effects of COVID vaccine. Similarly, the study conducted by Fujjimoto(2020), showed that the most of the medical students reported fever, muscle and joint pain are common symptoms of post COVID vaccination<sup>38</sup>. In contrast, the study done by Asuka (2020), among the Japanese dental students highlighted that nausea, diarrhoea are the most common side effects of COVID vaccine after the first dose of vaccine .

Historical perspectives suggest that most of the population might experience another pandemic(39). Hence It is important that dental students should have adequate knowledge and understanding about guidelines about vaccine and adapt themselves to one's safety and the community.

**Conclusion:**

The present study concluded that most of the dental students had adequate knowledge regarding COVID, and its vaccination drive. But still students have to change their perception about the vaccine against covid, as they have the responsibility to create awareness Covid and its preventive measures to the public. The limitations of the study include a small sample size as the study was conducted only in particular colleges. Hence further studies need to be conducted to understand the perception among dental students.

**AUTHORS CONTRIBUTION:**

Vinaya Swetha.T:Literature search, data collection, analysis, manuscript drafting. Dr. R.Pradeep Kumar: Data verification, manuscript drafting.

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**CONFLICT OF INTEREST:**

All the authors declare that there was no conflict of interest in present study.

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