



Knowledge And Attitude of Pedodontists On Covid-19 Vaccination For Children In India- A Questionnaire Survey

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Abstract

Aim: This study aimed to assess the knowledge and attitude of dentists on COVID 19 vaccination for children in India.

Materials and Methods: A total of 406 Indian pedodontists participated in this cross-sectional survey following the outbreak of Covid-19 in India. A validated well-constructed online questionnaire consisting of 20 questions was distributed through different social networking websites to measure the pedodontist’s Knowledge, and Attitude Regarding the Covid 19 Vaccination in India. Subsequently, the collated data was

statistically analysed using SPSS software including the Independent Chi-Square test.

Results: A majority of pedodontists’ know about herd immunity. They believe children are at risk of contracting Covid 19 even though they are indoors during the lockdown. They believe children should be vaccinated and children with debilitating diseases should be vaccinated at priority.

Conclusion: Most pedodontists’ would recommend children vaccinated against Covid 19 as they believe to be at high risk of contracting the diseases.

Keywords: Children, Vaccination, India, COVID-19.

Introduction

Dentistry is prone to the highly contagious viral infection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), commonly known as Covid 19. World Health Organization (WHO) on March 11, 2020, declared Covid 19 a pandemic, leading to curfews and lockdowns being implemented worldwide overnight. The various modes of transmission of the virus are: by direct exposure to bodily fluids of the infected person such as aerosols produced during surgical or dental procedures and bodily secretions from mother-to-child. The infection could also spread by indirect modes such as touching objects or surfaces that have been in close proximity with an infected individual. [1]

Covid 19 has changed the scenario of dentistry, especially the branch of paediatric dentistry, by new laws that have been enforced for all dentists and dental staff such as to don personal protective equipment (PPE) kits, N-95 face masks, as well as wear face shields. Dentists had to reduce aerosol procedures to the minimum, have a well-ventilated room or operatory for procedure, along with strict policies about bio-waste management and infection control. [1]

From the trend we see today, it appears that children account for a lesser percentage (1-5%) of the cases when compared to the adults. Children have different immune responses mechanisms, broader levels of antibodies against viruses, and less exposure to the virus in contrast to adults, this could be some of the reasons that children are less prone to Covid 19. [2]

Apart from these restrictions that have been enforced on the public, another safe and effective way to eradicate this virus or reduce the number of cases is vaccines. Most of the nations' today have either borrowed or

produced their own vaccines to fight the pandemic. India is one such country that has successfully developed a vaccine, within a year's time frame, followed by the clinical trial of the drug, approved and permitted for mass vaccination drive. [4]

There are 2 types of vaccination that got approval in India for Covid 19 vaccination drive which are Covishield® (AstraZeneca's vaccine manufactured by Serum Institute of India) and Covaxin® (manufactured by Bharat Biotech Limited). Initially when the vaccination drive was launched, citizens were advised to take 2 doses of the vaccines 28 days apart but later on citizens who received Covishield vaccine were advised to take the 2nd dose within 4-8 weeks and citizens who received Covaxin were asked to take the 2nd dose by 4-6 weeks apart. [4]

According to the data that we have observed Covid 19 vaccination has had a remarkable impact on the virus, which is a good reason to believe it will have similar results on children as well. The initial studies that have started on adolescents indicate 93-100% effectiveness in preventing Covid 19. [5]

If children are not vaccinated against Covid 19, they could possibly act as a reservoir for the virus which in turn will undermine the efforts to eradicate the virus. [7]

As paediatricians and pedodontists are in close contact with children and can't continue to work during the pandemic. It is vital to understand their knowledge and attitudes towards Covid 19 vaccination for children in India.

Materials and Methods

This was a cross-sectional survey conducted during Covid-19 in India, using an online questionnaire survey (available from May 2021 to October 2021). The

Questionnaire was available online till the desired sample size was achieved.

A total of 406 Indian Pedodontists participated in this cross-sectional survey following the outbreak of Covid-19 in India. A validated well-constructed online questionnaire consisting of 20 questions was distributed through different social networking websites to measure the Pedodontist's Knowledge and Attitude of Pedodontists Regarding Covid 19 Vaccination for children in India.

Subsequently, the entire data was collected and statistical analysis using SPSS software, which includes the Independent Chi-Square test.

Section 1: had four questions that explored the demographic and professional background of participants (age, gender, area of practice, and profession).

Section 2: composed of sixteen questions that were designed to evaluate the Knowledge (Yes, No, Maybe, I don't Know) and Attitude (Likert Scale: 1. Strongly Disagree, 2. Disagree, 3. Neutral, 4. Agree, 5. Strongly Agree) of Pedodontists Regarding Covid 19 Vaccination for Children in India.

The online questionnaire link was distributed through WhatsApp and emails were sent to dentists. Data collection was terminated once the desired sample size was achieved. All responded questionnaires were collected electronically via Google Form and were subjected to statistical analysis.

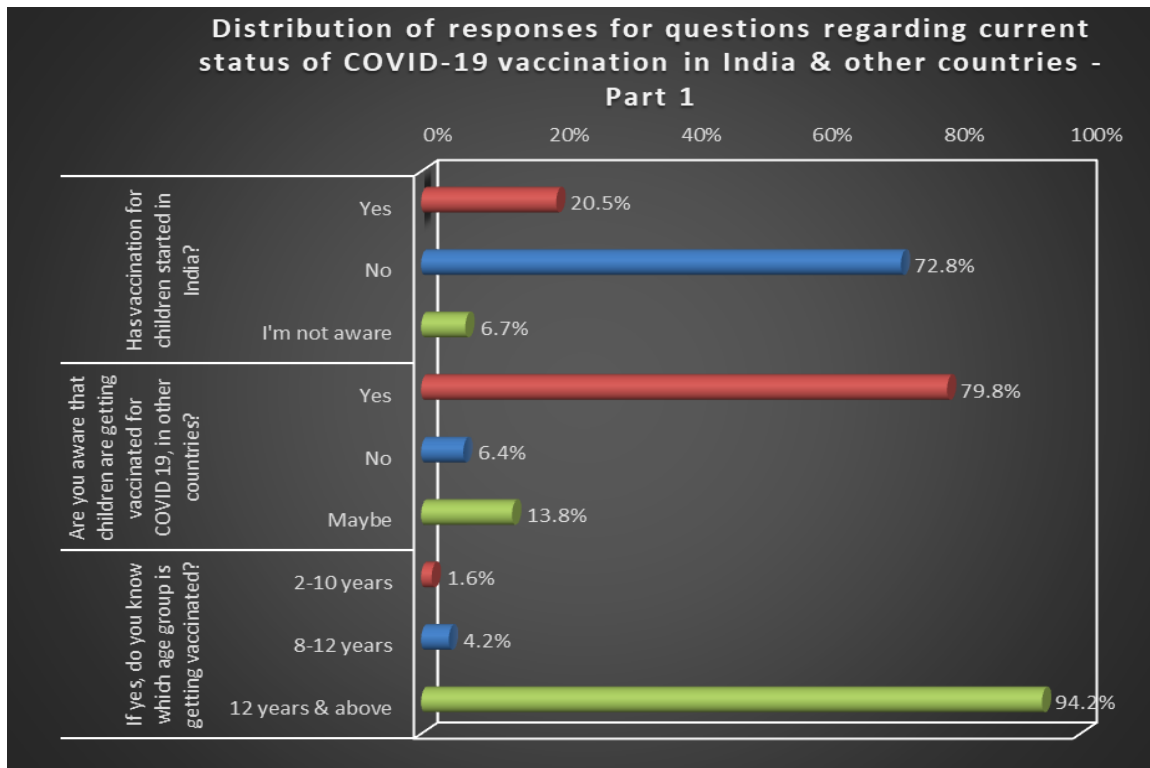
Results

A total of 406 pedodontists have taken this survey, of which 243 were postgraduate students and 163 were professionals. According to the results gathered from our study (Table 1) a majority of the pedodontists were aware of herd immunity and the vaccines being used in India for Covid 19, which was Covisheild (87.9%) and Covaxin (66.5%). They are well aware of the fact that Covid vaccination for children has not started in India (72.8%), in contrast to other countries in which Covid 19 vaccination for children has been instituted (79.8%) above the age of 12years (94.2%). (Graph 1). Most of them (92.4%) had the knowledge that Covid vaccination was being delivered to frontline workers on priority since the commencement of Covid vaccination drive. Most pedodontists' have good knowledge about the current status of Covid vaccination in India and worldwide. As vaccination of Covid 19 has not yet commenced in India, they are neutral of the effects it will have on the children but believe when it does start, children with debilitating diseases should be given the 1st priority. (Graph 2). 77.5% of the pedodontists' perceive (Table 2) that children are at a risk of getting infected by Covid, even though they stay indoors. This leads them to recommend children to get vaccinated against Covid 19 at the earliest. (Table 3)

Table 1: Comparison of distribution of responses to questions on awareness on Covid-19 vaccination in India among study participants using Chi Square Goodness of Fit Test.

Comparison of distribution of responses to questions on awareness on COVID-19 vaccination in India among study participants using Chi Square Goodness of Fit Test					
Questions	Responses	n	%	χ^2 Value	P-Value
Do you know about herd immunity?	Yes	372	91.6%	620.813	<0.001*
	No	17	4.2%		
	A little bit	17	4.2%		
Do you know which all vaccines are being used in India under COVID 19 Vaccination?	Covaxin	270	66.5%
	Covishield	357	87.9%		
	Sputnik V	62	15.3%		
	Pfizer	23	5.7%		
Who were the first to be administered the COVID 19 vaccine, in the 1st phase?	Front liners	375	92.4%	982.906	<0.001*
	Children	6	1.5%		
	> 65 years	13	3.2%		
	18-45 years	12	3.0%		

Graph 1: Distribution of responses for questions regarding current status of Covid 19 vaccination in India and other countries- Part 1



Graph 2: Distribution of responses for questions regarding current status of Covid 19 vaccination in India and other countries- Part 2

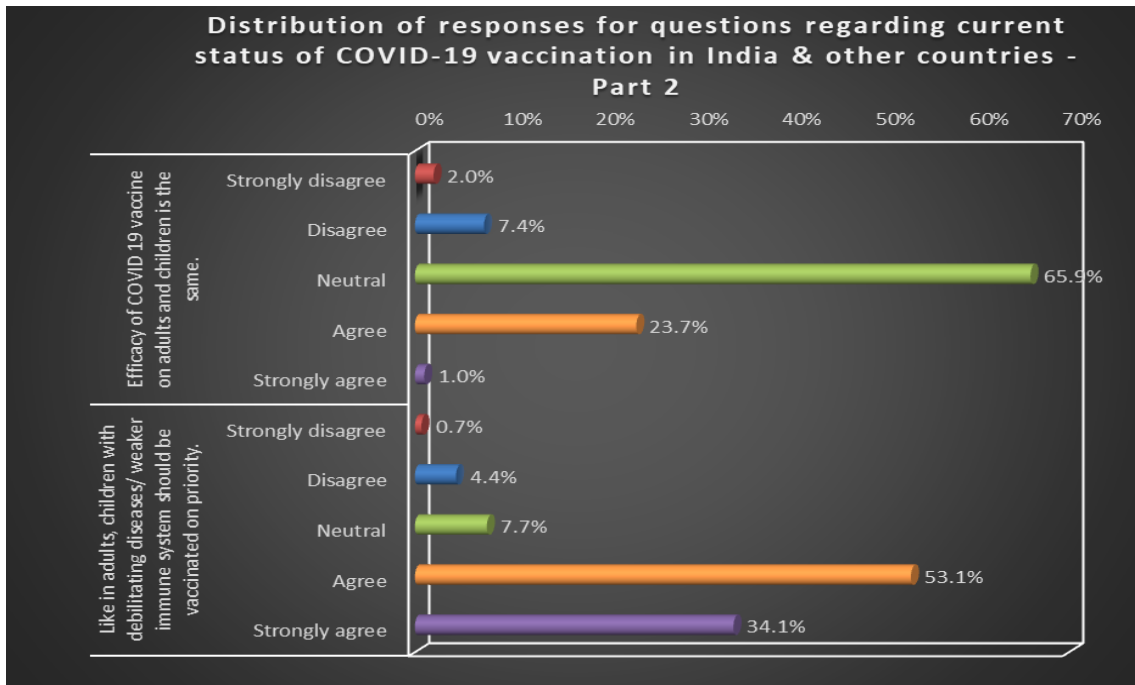


Table 2: Comparison of distribution of responses to questions on perception on risk of children for Covid 19 infection among study participants using Chi Square Goodness of Fit Test

Comparison of distribution of responses to questions on perception on Risk of children for COVID-19 infection among study participants using Chi Square Goodness of Fit Test					
Questions	Responses	n	%	χ^2 Value	P-Value
Children considered to be at high risk of getting affected by COVID 19?	Strongly disagree	8	2.0%	346.537	<0.001*
	Disagree	27	6.7%		
	Neutral	56	13.8%		
	Agree	219	53.9%		
	Strongly agree	96	23.6%		
Children are at risk for COVID 19, even though they don't go out a lot.	Strongly disagree	4	1.0%	337.128	<0.001*
	Disagree	22	5.4%		
	Neutral	51	12.6%		
	Agree	204	50.2%		
	Strongly agree	125	30.8%		
If children stay at home throughout this pandemic, they are safe from COVID 19.	Strongly disagree	93	22.9%	223.901	<0.001*
	Disagree	185	45.6%		
	Neutral	43	10.6%		
	Agree	80	19.7%		
	Strongly agree	5	1.2%		
Children should be recommended to get vaccinated.	Yes	361	88.9%	568.468	<0.001*
	No	6	1.5%		
	Maybe	39	9.6%		

Table 3: Comparison of distribution of responses to questions regarding perception on getting Covid 19 vaccination to their children, pursue to relatives, friends and patients’ parents among study participants using Chi Square Goodness of Fit Test.

Comparison of distribution of responses to questions regarding perception on getting COVID 19 vaccination to their children, pursue to relatives, friends & patients' parents among study participants using Chi Square Goodness of Fit Test					
Questions	Responses	n	%	χ^2 Value	P-Value
I will get my child/children vaccinated for COVID 19 vaccination.	Yes	345	85.2%	495.926	<0.001*
	No	10	2.5%		
	Maybe	50	12.3%		
If yes, then when?	Yes, as soon as the vaccination starts in India	217	63.1%	23.547	<0.001*
	Wait for 1st phase of vaccination for children to complete	127	36.9%		
I will pursue my patient's parents to get their children vaccinated.	Strongly disagree	8	2.0%	434.469	<0.001*
	Disagree	8	2.0%		
	Neutral	32	7.9%		
	Agree	218	53.8%		
	Strongly agree	139	34.3%		
I will advise my relatives and friends to get their children vaccinated, with COVID 19 vaccination	Strongly disagree	4	1.0%	404.416	<0.001*
	Disagree	8	2.0%		
	Neutral	34	8.4%		
	Agree	180	44.6%		
	Strongly agree	178	44.1%		

Discussion

The decision to vaccinate children under 18 years is mainly the parent’s role.. Hence the importance to appreciate the fears, and perceptions of Covid 19 vaccination for their children, the related roadblocks or facilitators of the same. [7]

Vaccine doubtfulness and disinformation in various parts of the world has led to a downfall in achieving absolute

coverage and incomplete immunization of the population. [4]

It has been perceived that children have reduced susception to COVID 19, but the reasons remain unclear. A study done by Sidiq et al hypothesized that the MMR vaccination might have an effect on children, shielding them from Covid 19. [8]

Another study done by Zhang KC et al, stated that some of the vital reasons for guardians to count on covid

vaccination for children were first and foremost to protect their child and family, secondly the fact that this might return them to their former or regular routine. [7]

The results of this study showed a positive correlation of knowledge about vaccination and its acceptance which was as per a study done by Arumuganainar Suresh et al. [4]

One of the best ways to manifest the decrease of a virus during a pandemic like Covid, is to produce herd immunity, which has been well established from our previous encounters with such viruses. This is in accordance to a study done by Velavan TP et al. [6]

In the long run, a pedodontist, dental technician, dental nurse and clinical staff attending or tending to a sick child will be allowing themselves to get infected by the virus and directly or indirectly spreading it to themselves and their surroundings. WHO has formulated new guidelines to keep a dental clinic running some of which are; use of appropriate PPE kits, allowing only one attended with each child patient, frequent sanitizing of the chamber preferably after each patient, postponing routine dental check-ups, use of teledentistry to the maximum, spacing out of appointments and hydroxychloroquine prophylaxis. However, if the children are vaccinated against Covid 19 it would help in removing a lot of barriers. [2]

Conclusion

Most pedodontists' recommend children to get vaccinated for Covid 19 as they believe children to be at high risk of contracting the disease although they stay indoors.

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