

Parental Perception on COVID-19 Vaccination for Children: A Cross-sectional Survey

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ABSTRACT

Aim and objective: To assess parental perceptions of COVID-19 vaccination in children.

Materials and methods: An anonymous survey on COVID-19 vaccination in children was sent to 3,900 parents. Parents were divided into three groups and compared.

Results: Over two-thirds of parents (70.7%) were willing to vaccinate their child immediately which changed to 94.1% if clinical trials were completed and results were published. Half of the parents said they would be willing to send their child to school in person, after a successful vaccination rollout. Further measures required by other parents included maintaining proper social distancing, mandatory masks, and those schools would be run in a hybrid (part online, part offline) manner. 91.7% of parents were willing to pay for their child to be vaccinated. Hospitals and clinics were preferred sites by parents to have their children vaccinated.

Conclusion: Clinical trials involving children are important for a successful COVID-19 rollout in children. It is also seen that most parents would require extra measures to be implemented even after vaccination to be comfortable in sending their child to school.

Keywords: Children, COVID-19, Parental perceptions, Survey, Vaccination.

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INTRODUCTION

COVID-19 vaccines are being developed, clinically tested, and rolled out in countries around the globe. In India, the COVID-19 vaccination rollout is well underway in adults but children (<18 years) are yet to receive any. This has raised concerns that COVID-19 infection might disproportionately affect children and they may serve as a reservoir, which would undermine efforts to end the pandemic.¹ Children, in general, cannot make choices as minors, and parents decide on behalf of the child. Hence, parental perceptions play a major role in the uptake of any vaccination in children.² This survey was conducted to explore parents' views on COVID-19 vaccination in children in India to help provide information to policymakers while formulating and implementing COVID-19 vaccination strategies.

MATERIALS AND METHODS

The survey was circulated online with a network of 3,900 parents registered in three pediatric clinics in Bengaluru, Chennai, and Gurugram. The study duration was for a period of 1 week in May 2021. The survey questionnaire consisted of 8 questions, preceded by information regarding the current situation of COVID-19 vaccination in children. Two thousand three hundred and seventy-nine (61%) parents responded to the survey anonymously and were included in the study. Parents were divided into three groups based on the age of the child into those with children aged <5 years, between 5 years and 12 years, and between 12 years and 18 years. Statistical analysis was done using SPSS. Chi-square was applied to determine significance in the change of perception and analysis of variance was used to determine significance between the three groups.

RESULTS

Table 1 shows the response of parents to questions on their perception of COVID-19 vaccination in children. Of the total 2,379

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responses, 536 (22.5%) had children <5 years, 1,106 (46.4%) had children between 5 years and 12 years of age, and 736 (30.9%) had children between 12 years and 18 years of age.

70.7% of parents agreed that they would vaccinate their child with the COVID-19 vaccine with the available evidence. There was a significant increase ($p < 0.0001$) in the number of parents (94.1%) who agreed they would vaccinate their child if more trials were available. There was no significant difference ($p = 0.3$) in perception between the three groups based on the age of the child.

Only 50.5% of parents agreed to send their child to school after the COVID-19 vaccination, while the others preferred online classes to continue. When further asked, what measures would need to be in place in schools for parents to be confident to send their children, 30.5% of responses here required that all the students

Table 1: Response of parents to questions related to COVID-19 vaccination in children based on age

Questions	Parents with children aged < 5 years (n = 536) who answered Yes	Parents with children aged 5–12 years (n = 1,106) who answered Yes	Parents with children aged 12–18 years (n = 736) who answered Yes	Total number of parents who answered Yes
Would you vaccinate your child against COVID-19 with the limited available evidence?	350 (65.3%)	760 (68.7%)	573 (77.8%)	1,683 (70.7%)
If more trials were available, would you vaccinate your child against COVID-19?	515 (96.1%)	1,027 (92.9%)	697 (94.7%)	2,239 (94.1%)
If your child was vaccinated against COVID-19, would you allow them to attend school in person?	266 (49.6%)	529 (47.8%)	407 (55.2%)	1,202 (50.5%)
Would you be willing to pay for a COVID-19 vaccine for your child?	498 (92.9%)	1,008 (91.1%)	676 (91.8%)	2,182 (91.7%)

would be vaccinated, proper social distancing was enforced, and those schools ran in a hybrid (part online, part offline) manner. 7.3% of parents would be happy with any measures suggested by the school, and the remaining 62.2% of parents required some combination of the three aforementioned measures. There was no significant difference ($p = 0.4$) in the responses between the three groups.

91.7% of parents were willing to pay for a vaccine when it is available for children. 48.5% of parents preferred to vaccinate their child only in a clinic, 24% in a hospital, 18% in the school, and 9% were agreeable to any of the three places.

In their remarks on more parental concerns in the open-ended question, few parents commented on the need for more robust trials in children to gain more evidence and confidence. Others were concerned about the need for children to attend “physical” school and socially interact with peers for proper physical and mental development while few wanted faster vaccine delivery for children before the potential “third” wave.

DISCUSSION

The COVID-19 pandemic has affected the health of children more significantly in the second wave compared to the first. It further posed other consequences such as cancellation of board examinations, prolonged online schooling, and lack of social interaction, which could have a long-term psychological impact on children. Vaccination against COVID-19 could play a major role in helping children go back to normalcy.

A significant proportion of parents (70.7%) in our study were willing to vaccinate their children with the existing evidence, as reported in other surveys in China³ and the UK⁴ as well. More trials in children were found to be criteria to significantly increase the acceptance rates of vaccination in our study. Other studies have also shown an increase in the willingness to vaccinate their children by 47%, with more evidence available.⁵ This emphasizes the need for completing and publishing results from the ongoing trials in children to increase vaccine acceptance amongst parents. Previous studies have shown that any enforcement of mandatory vaccination was perceived negatively and as an infringement of parental rights.⁶

We found that only 50% of parents in our study were ready to send their children to school even after COVID-19 vaccination despite the known challenges associated with online classes.⁷ Similar reluctance was shared by parents in the US for sending their children to school in a recent national survey.⁸ Nearly a third

of parents in our study expected all students to be vaccinated, with proper distancing measures enforced and the school running hybrid classes (part online, part regular) to reduce the number of pupils in the school at any given time. Nearly two-thirds wanted a combination of the above three measures. Our study hence provides information for schools to prepare their strategies before starting physical classes.

A faster rollout of vaccines could be expected with better evidence, as nearly 91% of parents were willing to pay for a vaccine. Models for the optimization of vaccine pricing have been developed with several factors including subsidization for the less affluent groups of society.^{9,10} Parents were comfortable having their child vaccinated in pediatric clinics as a first choice followed by hospitals in our study. This shows that merely rolling out the vaccine to large hospital groups would not be the best response and that pediatric clinic rollout can improve vaccine coverage and parental access and acceptance.

CONCLUSION

Parents are very willing of COVID-19 vaccination for their children and this improves significantly with the availability of more evidence. Full school attendance may require putting in place other measures like social distancing. Using large hospitals and small clinics may aid in more complete vaccination coverage.

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