

Awareness and apprehension about COVID 19 vaccine among healthcare workers and medical students in a Medical college Hospital at West Bengal

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I. INTRODUCTION:

Pandemic, the word that define the year 2020 took the world by storm when a deadly virus was found to be spreading like Wildfire since its emergence in Asia in 2019.¹

The novel coronavirus which previously was not found in humans had its first human interaction in December 2019 in the city of Wuhan in China. Being a zoonotic disease it engulfed the entire world making it the greatest challenge in the face of humanity since World War II. India reported its first case on January 27,2020 in Kerala where a 20 year old female presented in the emergency department of a General Hospital with dry cough and sore throat.²

Since then the virus had led to a staggering death toll of 2 million and 105 million cases in the world. India too reported more than 2 lakh deaths and around 11 million cases.³

Following the Chaos the whole world was put in a complete lockdown making this pandemic much more than just a Global Health crisis. In India many people lost their jobs and sources of income with no way of knowing when normality will return leading to unprecedented socio economic crisis. In the midst of the terror, WHO along with the other organisations directed their sources into developing vaccines to put a stop to the sufferings of the mankind.⁴ Their constant efforts led to the unfolding of two vaccines namely covishield and covaxin in India and finally the we could see the light at the end of the tunnel. While covishield is originally developed by the Oxford University- Astrazeneca, it has been produced and marketed as covishield by Pune based vaccine conglomerate, serum Institute of India. Meanwhile covaxin is India's first fully developed and produced covid-19 vaccine made by Hyderabad based Bharat Biotech.⁵ It is also one of the fastest vaccines to have been approved and after securing early clinical nods, it head to trials and was made available to the masses earlier this year.

Needless to say the frontliners who had been risking their lives all this while were given the first priority as vaccine recipients but the queries and apprehensions that came along played a major role in the immunization process. Many of them are yet to make a decision and are waiting to see the initial results regarding the effectiveness of the vaccine before they form a solid opinion. While some of the people have come forward to take the vaccine to go back to the pre pandemic routine⁶, it is interesting to know that a large population of the health care workers are still apprehensive about the effectiveness and side effects of the vaccine.⁷ Their doubts and lack of faith will have a direct impact on the acceptance of this vaccine among the non Medicos. Also a belief is cultivating among the Healthcare professionals that covid cannot affect them because of their high immunity levels due to repeated exposure and this further decreases the desire to get vaccinated. The increasing reluctance in taking the vaccine among the Medicos will deeply influence the ideologies of the not so informed population. Keeping in mind the above scenario, a surveillance was conducted to be aware of the attitude of the Healthcare professionals towards the covid vaccination. The study was conducted before the health workers received their first dose of vaccine and similar such studies have not been published so far.

II. METHODS:

An observational cross-sectional study was done among the Healthcare workers of West Bengal which also included students of MBBS, BSc nursing and other allied courses. The study was conducted between

January 10,2021 to January 30,2021 through a thoroughly made questionnaire with the help of google forms which catered to all the queries and hindrances currently prevailing among the health care professionals regarding the ongoing vaccination. Institutional ethics committee clearance was obtained before the study.

The objective of the study was to know the mindset of the health care workers, their differences in opinion on the immunization process against covid-19 and their willingness to take the vaccine as well as encourage others for the same.

INCLUSION CRITERIA-

- Healthcare workers above 18 years of age.
- Health care workers and those studying for the same.
- Healthcare workers or students willing to participate.

EXCLUSION CRITERIA:

- Healthcare workers below 18 years of age.
- Those unwilling to participate.

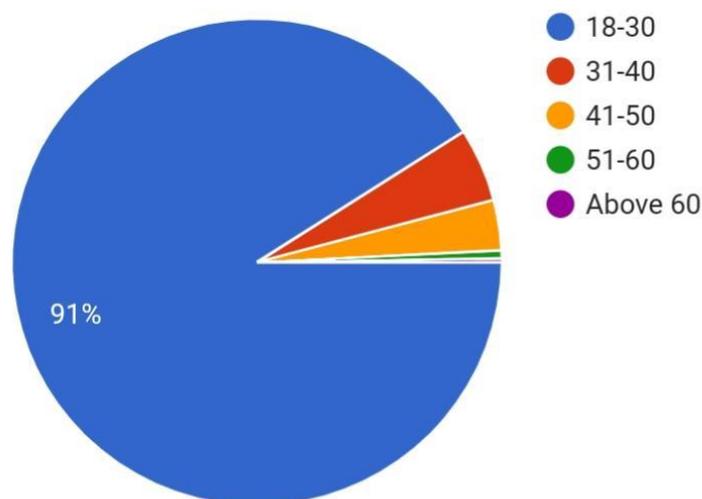
The following data was collected through a circulatory questionnaire:

- Age of the respondents
- Educational status of the respondents.
- Occupational status of the respondents.
- Registration status against the covid-19 vaccine.
- Past infection with covid-19.
- Willingness to take the vaccine now along with the reason.
- Information on the dosage of the vaccine.
- Willingness to encourage their colleagues ,spouses, parents and children to take the vaccine.
- Various comorbidities prevailing among the Healthcare workers.
- Idea about the effectiveness of the vaccine in clinical trials.
- Belief on herd immunity.
- Importance and duration of preventive measures taken even after getting vaccinated.

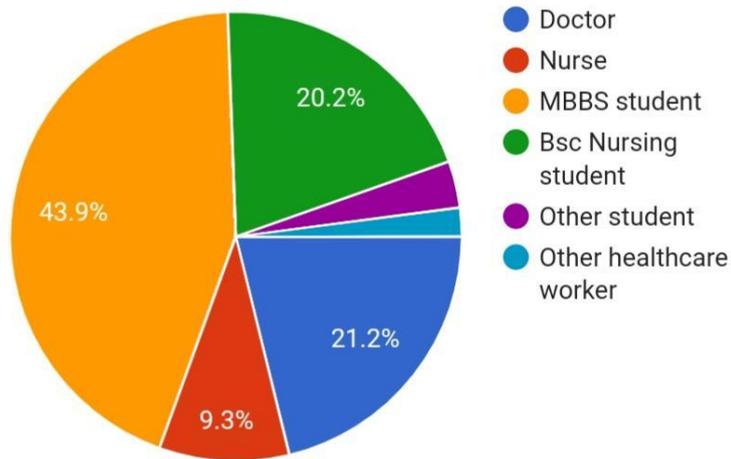
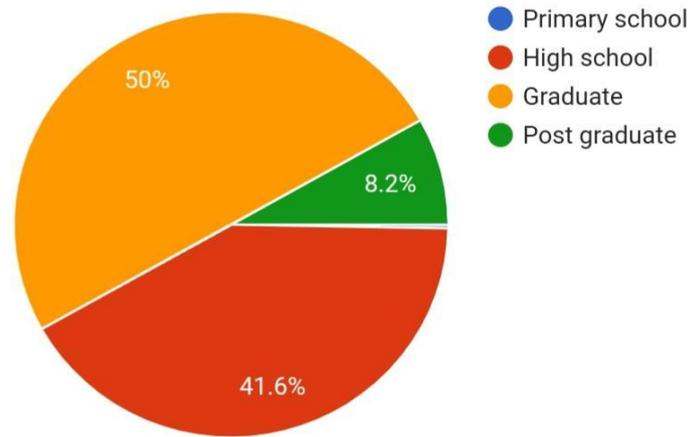
The responses then were expressed in percentage and pie diagram and one response was expressed in bar diagram.

III. RESULTS:

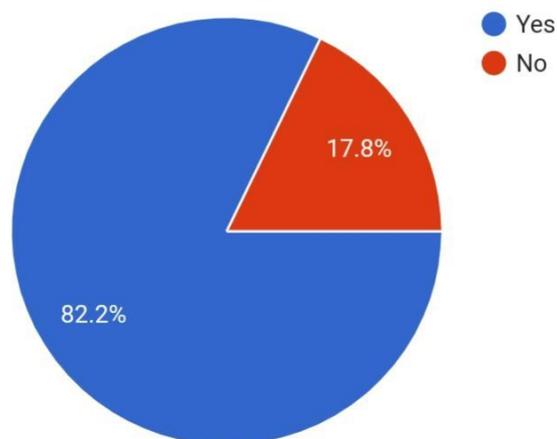
The respondents mainly constituted of 18 to 30 age group which was are targeted population as they mainly consist of the independent mass of the society, the opinions and ideologies of which play an important role in reshaping various beliefs of the common people.



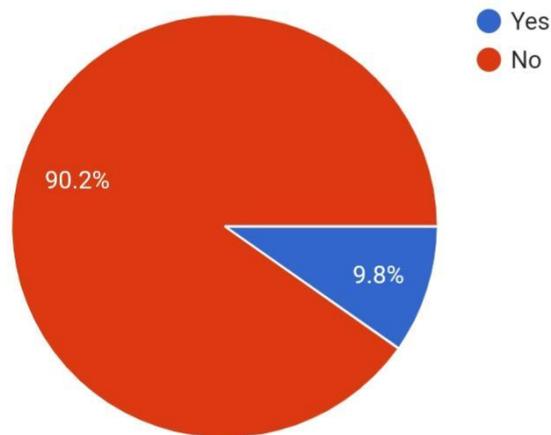
Almost half of the responding population were graduates of which 43.9 per cent and 20.2 per cent were MBBS and BSc nursing students respectively.



Out of the 387 Healthcare workers who responded ,it was seen that 82.2 percent of them have already registered themselves for the covid-19 vaccination.



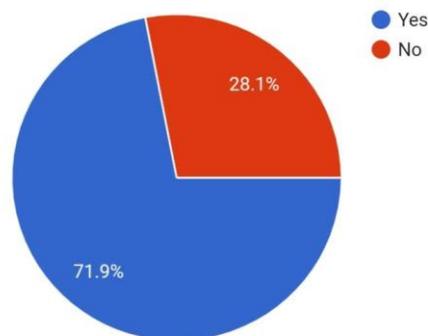
On being asked about their past infection with covid-19 we found out that in more than 90% of the Healthcare workers no such thing was recorded.



It is important to note that around 28% of the Healthcare workers are unwilling to take the vaccine and the most common reason for those who are willing to take (85.6%) is to provide better protection to themselves call because of the lack of pass covid infection or for the ability to move freely without mask and sanitizers.

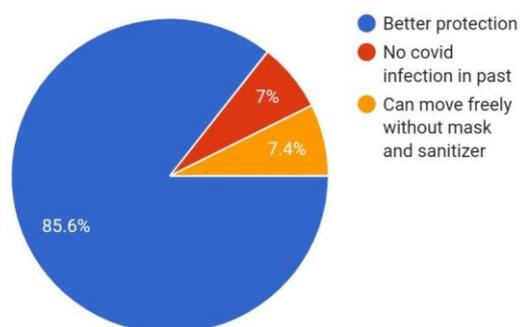
Will you take vaccine now?

385 responses



If yes, what is the cause?

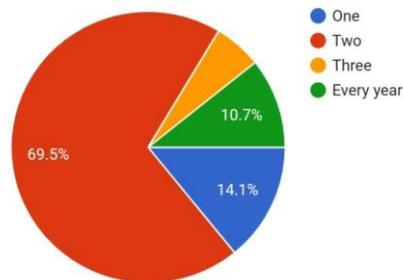
298 responses



On being asked about the number of doses is required for the vaccine, almost 70% of them were found out to be well informed about two doses.

How many doses of vaccine need to be given

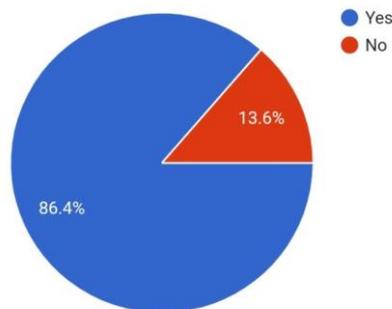
354 responses



It is also crucial to note that one side where more than 82% of the respondents were willing to encourage their colleagues, parents and spouses to get vaccinated but only a mere population of 37.5% were ready to get their children vaccinated.

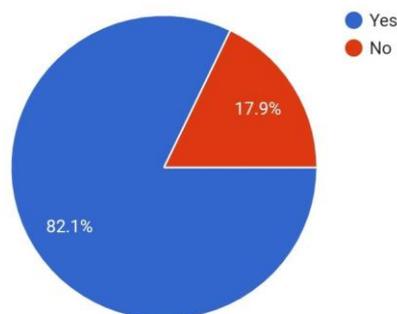
Will you encourage your colleagues to take the vaccine

367 responses



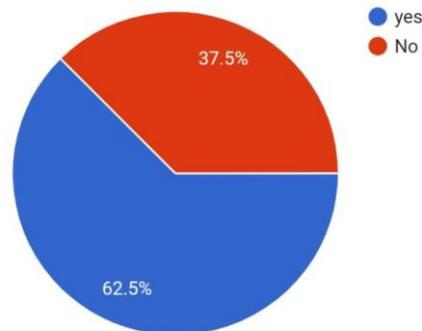
Will you give it to your spouse and parents?

364 responses



Will you give it to your children?

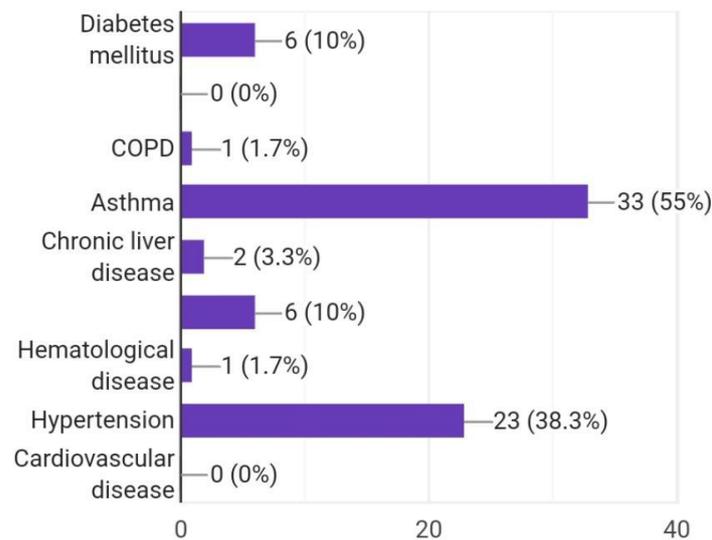
283 responses



Through this survey we also found out that 55% of the health professionals (those who have comorbidities) are asthmatic while 38.3 % and 10% are dealing with hypertension and diabetes respectively.

Are you suffering from any of the following comorbidity?

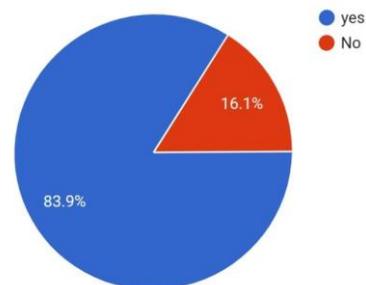
60 responses



It is to be noted that around 84% of the respondents were willing to wait and see the effectiveness of the vaccines before taking it themselves as a major percentage of them (39.6 %) admitted to have no knowledge about the effectiveness of the vaccine in clinical trials.

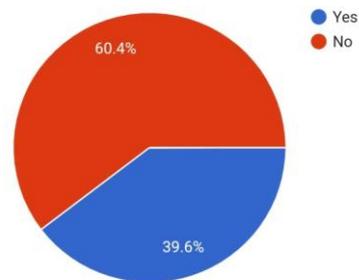
Would you want to see the effectiveness of the vaccine in recipients before taking it yourself?

373 responses



Do you have idea about effectiveness of vaccine in clinical trials?

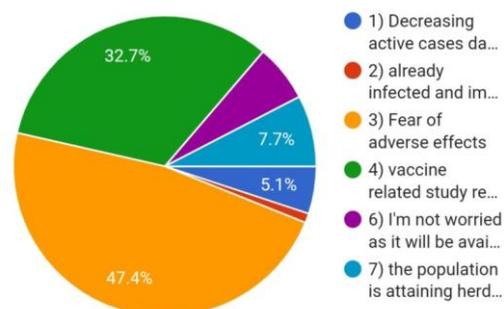
381 responses



The main reason for not taking vaccine is found to be fear of adverse effects followed by less knowledge about vaccine related study.

If you dont want to take vaccine now, what is the reason?

196 responses

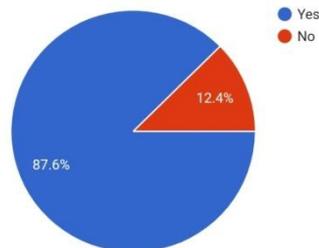


Awareness and apprehension about COVID 19 vaccine among healthcare workers and ...

Out of the 371 respondents, 7.6% believe that the population is gradually moving towards herd immunity in a natural manner.

Do you believe that the population is gradually moving towards herd immunity in a natural manner?

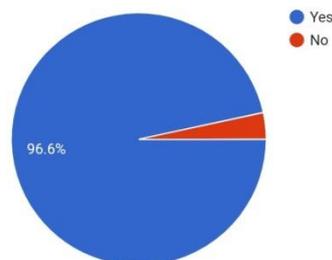
371 responses



When asked about the willingness to continue preventive measures like wearing masks ,using sanitizersand maintaining social distancing even after the first dose of the vaccine, around 97% agreed to continue these, of which 81.2% would always be careful during their hospital duty hours while others would wait until the second dose or a little more.

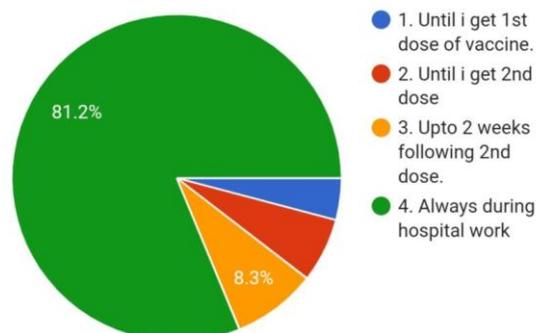
Will you continue preventive measures (mask, sanitizer use, social distancing) even after vaccination ?

382 responses



If yes, how long?

362 responses



IV. DISCUSSION:

We can see that most of the respondents were either MBBS or BSc nursing students which depicts the increased curiosity among the students regarding the ongoing immunization process as compared to the other Health Care workers. The lack of records of covid-19 infection among the Healthcare workers can be because of the optimum level of precautionary measures taken by our frontliners or due to repeated exposure they might have become unknowingly immune to the virus.

The unwillingness to take the vaccine among a significant percentage of the Healthcare workers might be due to the fear of unknown Side Effects and lack of knowledge about clinical trial results as well as its efficacy. The willingness of so many health workers to get the vaccine, does add some positivity to the situation as increased vaccination among the Healthcare workers would really help in curbing the spread and it Highly decreases cross infection among patients.

We also noticed that the percentage of population who opted for encouraging their colleagues. Parents and spouses to get the vaccination was way more than those willing to do the same in case of their children. This again brings us to this discussion about the contraindications of this vaccine as well as efficacy and safety in children which is still not clear to the masses. This does call for the need of Healthcare organisations to come up with informative articles regarding the safety ,side effects and contraindication of the vaccine that is being provided to the masses.

It can also be noted that a major part of the population are willing to wait to see the effectiveness of the vaccine before going ahead and taking it. The reason behind this can be again the lack of details and particulason the same as well as the unwillingness among the health professionals to be self informed about the covid-19 immunization.

In a pandemic situation like this herd immunity often plays an important role in limiting the spread of infection and shaping the mindset of the people regarding the vaccination. The increasing belief among the respondents that the population is gradually moving towards herd immunity in a natural manner might be an important reason for those who did not express a desire to get vaccinated now.

The question about the willingness to continue preventive measures even after the vaccination was important as with a virus like this with changing strains ,it is always better and convenient to follow the preventive measures while working in the high risk environment despite getting vaccinated. Not only would it give the health care workers a better protection but it would also ensure a safer life for their patients as well as the family.

V. CONCLUSION:

- A majority of the the people are taking vaccines in order to provide themselves a better protection but still a significant number of study population is still not convinced about the ongoing vaccination process.
- Most of the health professionals are well informed about the vaccine and its doses.
- People are open to encourage their colleagues, spouses and parents for the vaccine but when it comes to their children they are still quite reluctant.
- Asthma is the most common this order prevalent among the health professionals followed closely by hypertension and diabetes.
- A considerable proportion of the study population are willing to wait and see the effectiveness of the vaccine in the masses before getting vaccinated as they are not quite informed about its efficacy in the clinical trials.
- Almost every healthcare workers have agreed to continue taking preventive measures when carrying out their duty at the hospital despite getting vaccinated.

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