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Version 2 of A Digital Survey on the Acceptance and Affordability of COVID 19 Vaccine among the People of West Bengal, India- A Survey Based Study

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¶ Research Guide

Funding: This Research Project doesn't have any fundings

Ethical Approval: Ethical Committee of St Xavier's College, Kolkata have given the Ethical Approval for this study

Conflict of Interest: Authors doesn't have any conflict of Interest

Consent of the respondents: All Consent have taken digitally at beginning of the Questionnaire

Permission from the Dept: Dept of Microbiology, St. Xavier's College [Autonomous], Kolkata has given the permission.

ABSTRACT

Overview: Currently, multiple vaccines for coronavirus disease 2019 (COVID-19) are in clinical trials. In Oct-Nov 2020, 1078 individuals in West Bengal surveyed to evaluate possible acceptance rates, affordability and the factors affecting the acceptance of a vaccine for COVID-19.

Method of Study: The google form is prepared with the questions on acceptance and affordability of COVID 19 vaccines. The form is circulated digitally among the people and then we have collected the data in excel. Based on the result we have prepared our statistical graphs.

Result: 77.27% of respondents reported that they are very interested to take a vaccine for COVID-19, 5.3% don't want to take vaccine and 12.24% don't know about their decision. In that 58% respondents want to take vaccines originated in India; 19% respondents want to take foreign originated vaccine. Other respondents are ready to take any vaccines. The affordability, 40% respondents want a vaccine bellow 500 INR, 25% respondents want a vaccine of 500-1000 INR. 11% respondents want vaccine of over 1000 INR.

Conclusion: Majority of Respondents want a COVID 19 vaccine. Majority respondents want Indian originated COVID19 Vaccine. Majority respondents want a vaccine in a cost of below 500 INR.

Key Words: COVID 19, COVID 19 Vaccine, Acceptance, Affordability, Digital Survey

Introduction:

It is expected that the COVID-19 pandemic will begin to inflict immense morbidity and mortality pressures, thus seriously affecting populations and economy worldwide. Governments must be prepared to ensure access and delivery of COVID-19 vaccines uniformly on a wide scale when safe and reliable vaccines become available. Now many vaccines got approved in India, USA, UK and other countries and the vaccination has been started already. This would include ample capacity for the health sector, as well as strategies to increase trust and understanding of the vaccine and those people who administer it. In 2015, considering the availability of vaccination facilities, the World Health Organization (WHO) Strategic Advisory Committee of Immunization Experts described vaccine hesitancy as a 'delay in approval or denial of vaccination'(1), which may

differ in type and severity depending on when and where it occurs and what vaccine is involved, has been verified in several studies (2,3). Vaccine hesitancy issues are rising globally (4); in particular, in 2019, WHO recognized it as one of the top ten global health risks. Vaccine hesitancy and disinformation in many countries poses major challenges to the achievement of coverage and population immunity (5,6). Governments, public health agencies and awareness organizations must be prepared to tackle hesitancy and improve vaccine awareness so that, where possible, the population supports immunization. Anti-vaccination groups are now lobbying against the need for a vaccine in several nations, with others questioning the presence of COVID-19 entirely. Misinformation sent across multiple networks may have a major effect on the approval of a COVID-19 vaccine. (7,8). Governments and communities must assess existing levels of readiness to obtain a COVID-19 vaccine that is potentially safe and successful and identify causes of hesitancy and or approval of the vaccine. Pfizer COVID 19 vaccine is 90% effective in SARS-COV2 infection and it will be distributed from dec. (9) We are surveying on 1078 respondents focusing on willingness and affordability of the vaccine.

Methodology of the study

This is a survey based study which is done in West Bengal, a state in India. In this survey a questionnaire is prepared on the acceptance and the affordability of COVID 19 vaccine. The questionnaire is prepared in google form and the google form is circulated among the people of West Bengal. The Data is taken in Excel sheet and the statistical graph is prepared in SPSS.

The Questionnaire is

Consent form: This is a Survey based study where we want to know that you want to take vaccine or not when it will be available in market. Your all details will be confidential. This will take 2 minutes only. Thank You	YES/NO
Age group	15-25/25-35/35-45/45-55/55-65/65+
Educational qualification	Up to 10 or below/ Up to 12/ Graduation/Post Graduation/ Doctoral/ Post-Doctoral
Gender	Male/Female/Others
Do you want to take COVID 19 vaccine when it will be commercially available?	Yes/No/Don't know
If No then why don't want?	
If Yes, then You want vaccine of	Indian Vaccine/Foreign Vaccine/Any Vaccine
Your affordable cost of vaccine	below 500/below 1000/ above 1000

###Detail Methodology is described after the reference

Result

Data of 1078 people are collected and 1078 people are from West Bengal, a state in India.

The acceptance rate of Vaccine: (n=1078)

Want to take vaccine	Don't want to take vaccine	Still Not Decided
77.27% (833)	5.3% (58)	12.2% (132)

55 (5.1%) Respondents place this blank as they don't want to convey any decision

Fig1: The acceptance rate of COVID 19 Vaccine

Indian Vaccine or Foreign Vaccine, Preference upon the manufacturing of the vaccine (n=1078)

Majority of respondents want an Indian vaccine. Although many people want a vaccine which will be available first in the market.

Indian Vaccine	Foreign Vaccine	Any Vaccine
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58% (628)	19% (205)	23% (245)
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Fig: 2.1, 2.2: Preference upon the manufacturing origin of the vaccine

Affordability of the Vaccine: (n=1078)

Most of the responders want a cheap Vaccine which costs below 500 INR.

Below 500 INR	500-1000 INR	>1000 INR	Don't want to mention
40% (437)	25% (271)	12% (125)	23% (245)

% of Responses upon Cost of affordability by COVID19 Vaccine

Fig3.1,3.2: Affordability of COVID19 vaccine

Discussion

This study is based on a Spanish study which is published in Nature. (10) Our study is focused on only one state in India that is West Bengal. We have seen that most of the respondents eagerly waiting for a vaccine, which is a good sign. Although some respondents have many misconceptions and educational gap for which they don't want to take a vaccine. A proper awareness is needed to them. Responders will prefer an Indian vaccine although they informed that which vaccine will come first in the market they will take irrespective of any origin. The responder's affordability is checked in this study where most of the responders wants a cheap vaccine or a free vaccine from the government.

This study shows people eagerly waiting for a COVID19 vaccine. Although there is some limitation in the study. The Responders are less. It is a digital survey, so the class of respondents have a basic level of education and have a smart phone. Due to COVID 19 situation we are

unable to reach the slum area community people. Some people don't know anything about vaccines so there was an educational gap. A proper awareness about vaccination is needed.

Conclusion

Majority of Respondents want a COVID 19 vaccine. Majority of respondents want Indian COVID19 Vaccine. Majority respondents want a vaccine in a cost of below 500 INR.

Author's Contributions

Project Guide: Dr AK Mitra

Conceptualization of Project: D Mukherjee

Project Heads: A. Gautam, B Dhara, D Mukherjee

Protocol Preparation: All the Authors

Google Form Preparation: S. Roy

Survey: All the Authors

Statistics: D Mukhopadhyay, A Gautam

Paper Writing and Review: B Dhara, D Mukhopadhyay, D Mukherjee

Review and Proof reading: A Gautam, A Dutta Chowdhury, S Chatterjee, SS Ganguly, S Chatterjee, Srijan Das, Mahima Dey

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Detailed Methodology:

Our team has prepared a questionnaire and a Study proposal. The proposal and questionnaire were approved by the ethical committee of St Xavier's College, [Autonomous], Kolkata and also the dept of Microbiology of that esteemed college had given us the permission to conduct the study.

In the study, we have used Google form. All the consent had been taken from the participants. The personal details of the participants were kept confidential. Sampling was done randomly [15+ age group, gender] but sample are only from West Bengal.

In this study, we have seen,

1. How many people of West Bengal wants to take a COVID 19 Vaccine?
[Acceptance]
2. Affordability
3. Preference of Vaccine Type

Statistics:

We have analyzed the data with SPSS and simple percentage, pi Chart and Bar graphs were used to address the study result.

All the authors have approved the Version 2 of the manuscript.