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Research Article

CROSS-SECTIONAL SURVEY TO ASSESS THE BENEFICIARIES EXPERIENCE REGARDING COVID-19 VACCINATION IN VACCINATED CANDIDATES IN A TRIBAL DISTRICT OF RAJASTHAN - EMIGH PROSPECTIVE

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ABSTRACT

Objectives: A year with COVID-19 has been a harrowing breakneck journey. On 11th March 2020, the World Health Organization declared COVID-19 as a pandemic. It spread across globe in span of 3 months; this is how emergence of unknown virus became a multifaceted pandemic. Till date, no definitive treatment of covid-19 is available, except hope of vaccination. We must ensure safe and effective vaccination to protect people. It has been largest vaccination drive, that's why important to know the beneficiary's point of view regarding covid vaccination process, so that the result of this study can be used to amend the process if needed, to make the process more beneficiary friendly.

Methods: A cross-sectional study was conducted in a government covid vaccination centerto assess the beneficiaries prospective about their experience of covid-19 vaccine. The study duration was 6 months. Data were collected with the help of semi-structured pro forma.

Results: Data analysis was done with the help of SPSS-20. Approximately 93% of participants received vaccination appointment. Around 58% of participants were screened for COVID-19 symptoms. Most (90%) participants said that physical distancing was maintained during vaccination, 93% participants were informed about of vaccination process, 85% participants mentioned that staff had explained about adverse event following immunization (AEFI) before vaccination, and 76% of participants mentioned that they received Covishied, only 1 participant reported AEFI within 30 min of waiting period, and he received the preliminary treatment at vaccination center.

Conclusion: Feedback from the user is a good way to quality check; their reviews give the opportunity to improve. Most of the vaccines were satisfied with the vaccination procedure.

Keywords: Experiences, Vaccinees, Vaccination procedure, Adverse event following immunization, Covid-19.

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INTRODUCTION

Since World Health Organization (WHO) declared COVID-19 as a pandemic [1], which caused by novel coronavirus, most infected people will experience mild respiratory illness and recover without any specific treatment. Older people and those with comorbidities are more likely to develop serious illness. Mainstay is prevention by vaccination with covid appropriate behavior. That is why despite having critical unknowns regarding the efficacy of vaccination, India began administration of COVID-19 vaccines on 16 January 2021 [2]. COVID vaccination in the country commenced with vaccination to all health-care workers. The program was expanded with time to include the vaccination of front-line workers, citizens more than 60 years of age, citizens more than 45 years of age, and eventually citizens more than 18 years of age. Vaccine produces protection by developing an immune response to SARS-Cov-2 virus and reduces risk of illness and consequences. It is particularly important to prevent high-risk people as health-care providers, elderly, people with comorbidities from severe illness. Equitable access to safe and effective vaccines is critical to ending the COVID-19 pandemic. Vaccinate to such a huge population is challenging task; there may be issues such as adverse event following immunization (AEFI), method timing of vaccine administration, and many more. Beneficiary should have trust in recommended vaccine, provider, processes, and policies.While Health will be predominantly impacted, pandemics raise challenges across all sectors of government and society and necessitate a whole-of-government response. These pandemics raise challenges across health sector of government.

METHODS

The current study was conduct in a tribal district of Rajasthan in a field practice area of a teaching hospital. Ethical clearance was obtained from the institutional ethical committee. Approval was also taken from concern Government authority. Government of India allows emergency use of covid-19 vaccine in 3rd phase (Covishild) and 2nd phase (Covaxin).

Aim

The aim of this study was to assess the beneficiaries prospective about vaccination.

Objectives

Objectives were to assess the experiences of beneficiary after the 1st dose of covid-19 vaccine about vaccination that include pre, while and post-vaccination period. The study was conducted in selected government covid vaccination centers among who had come covid-19 vaccination. The study period was 6 months. Data were collected with the help of semi-structured pro forma by one-to-one interview. We recruited health-care providers as study participants cause their views and experience regarding vaccination will be more robust than common man. Participants who had come for second dose of vaccination and have given consent for

participation were included in the study. Persons having active bleeding disorder were excluded from the study. We talked to beneficiary leaving the vaccination site. The interview was short (10–15 min).

Sample size calculation

Sample size was calculated with the help of Cochran's formula [3].

$$n_o = \frac{Z^2 pq}{e^2}$$

Where e is the desired level of precision (i.e. the margin of error), p is the (estimated) proportion of the population which has the attribute in question, q is 1 – p. TheZ-value is found in a Z table. We did not have much information on this topic to begin with because of less available literature, so we assumed that half of this gives us maximum variability. Hence, p=0.5 was taken. We wanted 95% confidence, and at least 5%-plus or min-precision. A 95% confidence level gives us Z values of 1.96, as per the normal tables, so we got $([1.96]^2\ [0.5]\ [0.5])/(0.05)^2 = 385$.

Hence, random sample of 385 was found to be enough to give us the confidence levels we needed.

RESULTS AND OBSERVATIONS

Table 1 shows 63% of participants were male, 37% were female and 0.3% were others. More 76% of participants were from more than 45 years of age group and 79% of participants were from urban area.

Table 2 shows that approximately 93% of participants said that they receive vaccination appointment message/call. Around 58% of participants were screened for covid-19 symptoms at entrance of vaccination center. Most (90%) of participants said that physical distancing was maintained at vaccination center, 93% of participants said staff informed them about the process of vaccine beforehand. Nearly 85% of participants mentioned that staff had explained about AEFI before vaccination.

Table 3 shows that 76% of participants mentioned that they received Covishied, 16% received Covaxin, and around 8% were unaware about the vaccine they received. Around 91% of participants received vaccine at public sector vaccination center.

Table 4 shows that 95% of participants waited for 30 min after vaccination. Only one participant reported AEFI within 30 min of waiting period and he received the preliminary treatment at vaccination center. Most (82%) participants said that they will motivate others to take covid-19 vaccine. Almost 88% were satisfied by the procedure of covid-19 vaccination.

Table 1: Sociodemographic profile of participants

Category	Frequency (%)
Sex	
Male	241 (62.6)
Female	143 (37.1)
Others	1 (0.3)
Total	385 (100)
Age (years)	
18–45	94 (24.4)
>45	291 (75.6)
Total	385 (100)
Residence	
Urban	303 (78.7)
Rural	82 (21.3)
Total	385 (100)

Table 2: Experience of participants regarding pre-vaccination events

Experience of participants	Frequency (%)
Received vaccination appointment call/messages	
Yes	356 (92.5)
No	29 (7.5)
Total	385 (100)
Screened for symptoms of COVID-19 before vaccination	
Yes	222 (57.7)
No	163 (42.3)
Total	385 (100)
Was physical distancing maintained at vaccination center	
Yes	345 (89.6)
No	40 (10.4)
Total	385 (100)
Did the staff inform you about process before vaccination	
Yes	357 (92.7)
No	28 (7.3)
Total	385 (100)
Have you been explained about AEFI	
Yes	327 (85)
No	58 (15)
Total	385 (100)

AEFI: Adverse event following immunization

Table 3: Experience of participants during vaccination

Experience of participants	Frequency (%)
Name of vaccine received	
Covishield	292 (75.8)
Covaxin	63 (16.4)
Don't know	30 (7.8)
Total	385 (100)
Place of vaccination	
Public health institutions	349 (90.6)
Private setup	36 (9.4)
Total	385 (100)

DISCUSSION

After comprehensive literature search using various search engines, we could not find the studies with similar objectives, so we considered the other similar studies for discussion. We mainly find the exit interviews of care givers of children who came for immunization of children.

Results of the current study show more male beneficiary were found as compared to females; there may be multiple causes behind this few of the possible causes may be like male are more exposed so that more affected section of population by Covid-19. More beneficiaries find were of >45 years of age group the probable reason behind this may be our IEC which says this age group is more at risk of contracting the diseases as well as they will have severe disease with more complication once infected. Urban beneficiaries were more as compared to rural, cause of this may be urban population are more affected, and more aware as well as more motivated to take covid-19 vaccination. Around 93% of participants received pre–vaccination appointment call/messages. This is the result of good IT component in health 7% did not received may be because of network problem or some of them missed the call or unable to read the message. Only 57% of beneficiaries were screened for covid-19 symptoms, may be because of lack of staff, or may be lack of training because of lack of adherence to guidelines. Around 90% of beneficiaries said social distancing was maintained at their vaccination center, but this is not only the providers responsibility rather it is more of the individual's responsibility to maintain social distancing. Hence, 10% may be attributed to ignorance more from beneficiaries and from providers side also. Approximately 93% beneficiaries were informed about the process of vaccination prior, 7% were not informed may be because of pressure overload of vaccination specially at the initial phases. Most 85% of beneficiaries were explained about AEFI, 15%

Table 4: Experience of participants post-vaccination event

Experience of participants	Frequency (%)
Did you wait for 30 min after vaccination	
Yes	365 (94.8)
No	20 (5.2)
Total	385 (100)
Any AEFI experienced within 30 min of vaccination	
Yes	1 (0.25)
No	384 (99.75)
Total	385 (100)
If yes, you received treatment at vaccination center	
Yes	1 (100)
No	0
Total	1 (100)
Will you motivate others to take vaccine	
Yes	315 (81.8)
No	70 (18.2)
Total	385 (100)
Are you satisfied by the overall procedure of COVID-19 vaccination	
Yes	339 (88.1)
No	46 (11.9)
Total	385 (100)

AEFI: Adverse event following immunization

were not explained about AEFI; the cause may be again work pressure and ignorance. Around 76% of participants took Covishield and 16% took Covaccine and approximately 8% were not aware about the name of vaccine may be lake of education was the reason. Approximately 91% and 9% beneficiaries had taken the vaccine in public and private set–up, respectively. Initially, some of the private hospitals were also designated as covid-19 vaccination center, but now public center has taken over the covid-19 vaccination. Private centers were charging for vaccination, while in public set up, it is free of cost, so more vaccination was done in public sector as compared to private set up. Among beneficiaries, 95% waited for 30 min after vaccination. Probably, 5% were not instructed to wait by the providers. Only one beneficiary experienced AEFI within 30 min of vaccination that too of mild degree and got treatment also at vaccination center. May be the good safety of covid-19 vaccines along with the adherence to SOP is the reason behind such a low AEFI. 82% beneficiary said they will motivate others to take vaccine, remaining 18% said they will not, the reason behind may be their experience or may be their understanding about the utility of vaccine. About 88% beneficiary responded that they are satisfied by overall procedure of vaccination rest were not satisfied, there may be many reasons for this one of them may be the experience they had during the vaccination, any discomfort, waiting period, behavior of health-care providers, etc.

Mathur and Mathur [4] conducted a study to assess vaccine hesitancy among health-care providers; they also tried to explore the vaccination procedure in detail like waiting period, undesirable effect of vaccine including pain, etc. The present study did not inquire this aspect in detail. Li *et al*. [5] conducted a study by taking 677 age-eligible children exit interviews and 376 health worker knowledge, attitudes, and practices (KAP) surveys comprising exit interviews with caregivers and KAP surveys with health workers. Ndwandwe *et al*. [6]. The perspectives of parents attending health-care facilities in South Africa will be explored through exit interviews and focus group discussions. A project was conducted with the aim to assess the barriers to and drivers of immunization program performance. This survey collected information from patient exit interviews conducted with caregivers of children 9 months to 15 years of age immediately following their measles-rubella vaccination. Topics covered include sociodemographic characteristics of the caretaker; patient experiences at the facility; patient opinions of the experience; and knowledge, attitudes, and practice regarding measles and rubella immunizations, as well as knowledge of measles and rubella symptoms, prevention, and treatment. Olorunsaiye *et al*. [7] conducted an exit interview following sick child visit to assess the vaccination practices. Fatiregun *et al*. [8] they purposively selected 66 health facilities in three local government authorities, with a non-probabilistic sampling of caregivers of children 0–23 months for exit interviews, and health workers for KAP surveys. Ogbuanu *et al*. [9] using the ten-step global WHO MOV strategy, they purposively selected districts and health facilities, with non-probabilistic sampling of <24-month-old children for exit interviews of caregivers and self-administered KAP surveys of health workers. Byberg *et al*. [10] interviewed mothers of children for knowing their experience with seeking measles vaccination. Parental attitudes toward vaccine safety, reasons for reporting the AEFI and impact on future vaccination intent were assessed by Parrella *et al*. [11]. Jayadevan *et al*. [12] conducted the study to know about the real-world post-vaccination experience. A guideline by WHO [13] is also there which explain the methodology to record the beneficiary's experience.

CONCLUSION

As Covid-19 pandemic is not yet over, best bet of protection from covid-19 is vaccine. The perspective of vaccinees seemed reasonable, but there is always a scope of improvement. Level of satisfaction with vaccination process can promote/hinder the vaccination coverage and affect the dropout rates. Experience can lead to brought back the individual on scheduled date of 2nd dose and can motivate others. Bad experience may affect the individual's willingness to take vaccine, mouth to mouth publicity can spread their negative experience in community and it can reduce the trust in health system.

AUTHORS CONTRIBUTION

DR. RASHMI BHUJADE and DR. KANAK YADAV conceived of the presented idea, developed the theory, and performed the computations. DR. JIGNESH KUMAR and DR. ANIL SINGH BAGHEL conceived and planned the experiments. DR. RASHMI BHUJADE, DR. KANAK YADAV, and DR. MAHESH PUKAR verified the analytical methods, also planned, and carried out the simulations. MR. RAVI BHATT, MR. SHASHI KANT RAY, and MR. RAKESH KUMAR contributed to sample preparation, data collection, and interpretation of the results. DR. RASHMI BHUJADE, DR. KANAK YADAV, and DR. JIGNESH KUMAR took the lead in writing the manuscript. All authors provided critical feedback and helped shape the research, analysis, and manuscript.

CONFLICTS OF INTERESTS

None.

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