Original Article

DOI: 10.7860/JCDR/2022/54897.16142

Public Health Section

COVID-19 Vaccine Behaviour among People Attending a Tertiary Care Centre, Punjab, India

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ABSTRACT

Introduction: Coronavirus Disease 2019 (COVID-19) appropriate behaviour and vaccination are two critical defenses in the fight against this pandemic. As these need to be followed religiously, this preventive behaviour should be thoroughly investigated.

Aim: To examine the COVID-19 vaccine behaviour amongst people attending tertiary care centre at Patiala, Punjab, India.

Materials and Methods: A cross-sectional study was conducted on 200 individuals attending the Outpatient Department of Government Medical College at Patiala, Punjab, India, from 15th July to 22nd July 2021. Individuals were administered socio-demographic questionnaire, General Health Questionnaire-12-Hindi version (GHQ-12), and COVID-19 vaccine related and COVID-19 appropriate behavior related questionnaire. Actual observation by the clinician regarding proper use of face masks, hand hygiene and social distancing was done and objectively scored on 0-10 for each item with a scale interval of 2. Analysis was conducted using IBM Statistical Package for the Social Sciences (SPSS) version 22.0.

Results: Only 40% individuals were vaccinated. After eligibility, there was a mean delay of 4.20±3.51 weeks (median: 4 weeks) and 13.40±3.33 weeks (median: 12 weeks) in the vaccinated and unvaccinated individuals. Out of 120, 86 unvaccinated participants planned to get vaccinated in future. Significantly lower scores were obtained for actually observed COVID-19 appropriate behaviour (proper mask usage, hand hygiene and social distancing) as noted by the clinician vs the scores as reported by the participants.

Conclusion: There were few takers for the COVID-19 vaccine, even weeks after eligibility. The COVID-19 appropriate behaviour was largely not being followed properly and the false sense of following the same complicated issues further. With multiple waves of the pandemic one after the other, and booster doses of vaccination, there is still an urgent need to sensitise the population at the grass root level regarding the COVID-19 vaccine behaviour to fight this pandemic.

Keywords: Coronavirus disease 2019, Pandemic, Social vaccine behaviours

INTRODUCTION

Researchers, scientists and health care workers across the world are fully engaged in discovering an effective drug and vaccine for COVID-19 [1]. In the quest and focus for a vaccine and a drug for COVID-19, people are becoming ignorant of the COVID-19 appropriate behaviour, despite repeated warnings issued by the Government from time to time. Maladaptive and adaptive behaviours are the two types of community behavioural responses seen in pandemic like situations [1]. Such responses are guided by a fine interplay of various factors: administrative, social, financial, societal, individual and so on [1,2]. As time passes by in the COVID-19 pandemic, it becomes more and more important to understand such responses, particularly the social vaccine behaviours and preventive measures being adopted by the general public.

The months from February to July 2021 have witnessed people commonly flouting the social norms, not following the COVID-19 appropriate behaviour and enjoying 'revenge' holidays [3-5]. On one end of the paradigm is the 'intentionally' careless population who is a threat to any prevention and management protocols, and on the other end is the 'unintentionally' careless one, who lives in the false sense of security of following the COVID-19 appropriate behaviours, but in reality is not doing the same and is even bigger a threat to the continuous spread of the infection [1-5]. Intentional and unintentional carelessness over a period of time will lead to multiple waves of COVID-19, one after the other [2].

In India, the vaccination drive against COVID-19 was launched in January 2021, and was ramped up time and again. In different phases, it covered the people at risk initially and then, the whole population at large [6-10]. However, since its launch, vaccine hesitancy prevailed and there were not many takers for the vaccine [11]. Subsequently, as the second wave gripped the nation, the country faced a shortage of vaccines because of panic, a sudden 'want' of vaccination by the masses and gaps in the demand and supply. Even after the case numbers fell, the shortage of the vaccines persisted by and large [12,13].

The preventive behaviour for curtailing this pandemic need to be prioritized [14]. There is an urgent need to investigate the vaccine behaviour amongst the masses so that appropriate steps can be taken and policies formulated accordingly. The Union Health Ministry reported 50% of the Indians not wearing a mask, and only 14% wearing it properly [15]. The Ministry also found nine most affected districts of Punjab, amongst others, not following the COVID-19 appropriate behaviour [16]. The data on vaccination by the end of May 2021 showed only 2.5% of Punjab population to be fully vaccinated [17]. This study was hence planned to examine the COVID-19 vaccine behaviour amongst people presenting to the outpatient departments attached to Government Medical College, Patiala, Punjab, India. COVID-19 appropriate behaviour in real life conditions has not been factually observed/recorded in the past. The COVID-19 appropriate behaviour was observed and recorded by the clinician and compared with the behaviour as reported by the participant in this study.

MATERIALS AND METHODS

This cross-sectional study was conducted in the Outpatient Departments of Government Medical College, Patiala, Punjab, India, from 15th to 22nd July, 2021. The study was approved by the Institutional Research and Ethics Committee {vide letter number (Trg).EC/NEW/.INST/2020/997/16838 dated 13th July,2021}.

Inclusion criteria: The patients and their relatives/accompanying persons more that 18 years of age and eligible for COVID-19 vaccination were presenting to the Outpatient Departments of Government Medical College, Patiala, Punjab were included in the study.

Exclusion criteria: Individuals were excluded if they were less than 18 years of age, were pregnant/lactating females, had pre-existing psychiatric illness, had lack of competency for completing the questionnaires, had evident memory deficits on clinical assessment, had lack of capacity or had organicity (delirium, dementia).

Sample size calculation: Leaving aside socio-demographic variables, there were roughly 20 other variables which were assessed. On the advice of the statistician, 10 times the sample size, i.e., 200 participants were taken in order to be able to run multivariate analysis.

Details of Assessment Parameters

After informed consent, baseline assessment was done using the following instruments:

1. **Socio-demographic performa:** A specially constructed structured Performa was used to record the relevant data.
2. **COVID-19 vaccine related questionnaire:** Eligibility for vaccination was assessed for each participant. The vaccination status and concerns regarding the same were noted. Reasons for being vaccinated/non-vaccinated were enquired. The worry of the individuals due to an increase in duration between the two doses of Covishield from a minimum of four weeks to 12 weeks [18], was also noted on a scale of 0-10. There were 15 questions in the questionnaire [Annexure I].
3. **General Health Questionnaire-12-Hindi version (GHQ-12):** It is a 12-item screening instrument which is validated in the Indian population and was used for measuring psychological distress [19]. It is scored from 0 to 12, with a score of 0/1 for each item. The total of the scores of all the 12 items of an individual is the GHQ-12 score of that individual. Any individual scoring ≥3 was defined as a case with psychological morbidity [20,21].
4. **COVID-19 appropriate behaviour related questionnaire and assessment:** Each individual was asked whether he was following the COVID-19 appropriate behaviour, "social vaccine", (by wearing masks properly, using a sanitiser or washing the hands frequently for hand hygiene and maintaining social distancing), and scored on 0-10 for each of the three items. These three parameters were also scored on 0-10 for each item with a scale interval of 2, by actual observation by the clinician. The clinician observed the participants for the use of sanitiser/hand washing as they entered the consultation room. The same was available in the visibility range of the clinician. Ideal score was taken as 10 for each item [Annexure I].

Both the COVID-19 vaccine related questionnaire and COVID-19 appropriate behaviour related questionnaire were devised by the authors. The questions were taken and adapted from literature and guidelines issued by Government of India [11,13,14,17,22-29]. They were then subjected to extensive review by three experts to add to face validity.

STATISTICAL ANALYSIS

The data was of categorical variables and was reported as counts and percentages. Group comparisons (actual mask wearing, practicing hand hygiene and maintaining social distancing) were made with the Chi-square test or Fisher's-exact test. Quantitative data were represented as mean±SD, median and interquartile range. The p-value <0.05 was considered significant. All the statistical tests were two-sided and were performed at a significance level of α=0.05. Analysis was conducted using IBM Statistical Package for the Social Sciences (SPSS) version 22.0.

RESULTS

A 113/200 (56.5%) of the participants were between 18-40 years of age. Out of total, 94 (47%) were males and 106 (53%) were females. Total 130 (65%) belonged to an urban background. The socio-demographic details of the individuals are represented in [Table/Fig-1]. An 80 individuals (40%) were vaccinated at the time of assessment, while 120 (60%) were unvaccinated. Majority of the participants (111,55.5%) had either inappropriate or no information of the benefits of vaccination. Amongst those unvaccinated,

Variable	Number	Percentage (%)
Age (years)		
18-30	60	30%
31-40	53	26.5%
41-50	41	20.5%
51-60	23	11.5%
>60	23	11.5%
Gender		
Male	94	47%
Female	106	53%
Locality		
Rural	70	35%
Urban	130	65%
Education		
Illiterate	39	19.5%
Class 1-10	48	24%
Class 11-12	55	27.5%
Beyond class 12	58	29%
Number of people in the household		
1-4	106	53%
5-6	58	29%
>6	36	18%
Occupation		
Government job	28	14%
Private job	31	15.5%
Self employed	30	15%
Laborer	24	12%
Student	4	2%
Unemployed	83	41.5%
Income per person/month (in Rupees)		
<1000	6	3%
1000-2000	62	31%
2001-5000	63	31.5%
>5000	69	34.5%
Co-morbidities*		
Present	43	21.5%
Absent	157	78.5%
History of addiction		
Yes	14	7%
No	186	93%
Special category regarding eligibility for vaccination		
Yes	53	26.5%
No	147	73.5%
General health questionnaire- 12-Hindi version		
≥3#	5	2.5%
<3##	195	97.5%

[Table/Fig-1]: Socio-demographic profile of the participants (n=200).
*Diabetes mellitus, Hypertension, Coronary artery disease
#Number of participants with Score ≥3=5 (Score: 3: n=1, Score 4: n=2, Score 5: n=1, Score 7: n=1)
##Number of participants with Score <3=195 (Score 0: n=188, Score 1: n= 2, Score 2: n=5)

38/120 (31.6%) wanted the clinician to decide for their vaccination. Amongst the vaccinated ones, majority 95% were vaccinated with Covishield. A 6% had history of family member/close relative suffering from COVID-19 or dying because of the disease in the past. A total of 15 (7.5%) participants had themselves suffered from COVID-19 in the past, 14 had mild illness and recovered at home while one had moderate illness for which they were hospitalised. In 7/15 patients, >3 months had already elapsed after recovery. Six were found worried due to increase in the interval between the two doses of Covishield. Out of the 120 participants who were unvaccinated, 86/120 (71.67%) planned to get vaccinated in future, while 34/120 (28.33%) did not want to get vaccinated even in the near future.

A 97.5% (195) patients had a GHQ-12 score of <3, and hence were not suffering from psychological morbidity [Table/Fig-1]. The number of patients with a score of 0/1 for each of the 12 items is tabulated as [Table/Fig-2]. More than 95% of the patients had a score 0 for most of the items of GHQ-12.

Item number	Number of participants with score 0	Number of participants with score 1
1	197	3
2	196	4
3	198	2
4	199	1
5	196	4
6	199	1
7	198	2
8	199	1
9	194	6
10	198	2
11	196	4
12	195	5

[Table/Fig-2]: Number of participants with 0 or 1 score for each item of General Health Questionnaire-12-Hindi version.

The beliefs of the patients regarding the protection provided by the COVID-19 vaccine and various reasons for the patients getting vaccinated or avoiding the same are shown in [Table/Fig-3]. Amongst vaccinated individuals, protection of self/family members was the main reason for getting the vaccine (70/80=87.5%). Two patients quoted the mandate of vaccination for continuing their jobs (counted in 'others' in [Table/Fig-3]). Amongst unvaccinated participants, 34/120 (28.4%) were bothered for adverse reactions. A 4/120 (3.33%) even quoted that there were some other family issues which need to be attended before going for vaccination.

After becoming eligible, there was a mean delay of 4.20±3.509 weeks (median: 4 weeks) in individuals who got themselves vaccinated, and a mean delay of 13.40±3.334 weeks (median: 12 weeks) in the unvaccinated ones.

All the participants (100%) reported following the COVID-19 appropriate behaviour in the form of wearing the masks properly, practicing hand hygiene and maintaining social distancing. However, when these 3 behaviours were evaluated by close observation by the clinician, with 10 taken as the ideal score for each of these behaviours, the scores for mask, hand hygiene and social distancing were 7.54±3.250, and 2.32±1.243 and 9.55±1.466, respectively. There were statistically significant differences in the reported vs observed practices (p-value <0.001) as analysed by Wilcoxon Signed Ranks Test) for all the 3 behaviours. The exact scores of the participants in relation to the usage of mask, practicing hand hygiene and maintaining social distancing, as observed by the clinician are depicted in [Table/Fig-4]. The clinician observed that 177/200 (88.5%) of the participants followed social distancing, 105/200 (52.5%) of the participants were using the mask appropriately; and

Variable	Number	Percentage (%)
Protection provided by the vaccine		
Against getting COVID-19	56	28%
Against severe disease/Death	89	44.5%
No protection	16	8%
Don't know	39	19.5%
Reasons for getting vaccinated (n=80)		
Self protection	64	80%
Protection of family members	6	7.5%
Peer pressure	6	7.5%
Others*	4	5%
Reasons for not getting vaccinated (n=120)		
Unavailability of vaccine	22	18.3%
Fear of adverse drug reactions	34	28.4%
Fear of getting COVID-19 because of vaccination	7	5.8%
Had COVID-19 in the past	5	4.2%
Concerns because of underlying illness	24	20%
No role of vaccination	10	8.3%
Others**	18	15%

[Table/Fig-3]: Beliefs of the patients regarding the protection provided by the vaccine and reasons for getting vaccinated/remaining unvaccinated.
*Mandatory to continue job (2/80), death in close circle because of COVID-19 (1/80), Herd immunity (1/80)
**Other important family issues (4/120), Peer pressure (4/120), waiting for more data (4/120), waiting for a better vaccine (4/120), fear of death after vaccination (2/120)

only 2/200 (1%) were practicing hand hygiene. Taking appropriate ideal score as 10 for each of the three behaviours, relationship of the score as 10 and <10 with various socio-demographic and vaccine related variables was studied and the corresponding p-values are depicted in [Table/Fig-5]. Significantly greater number of people who planned to get vaccinated in near future scored 10 in proper mask usage (p-value=0.011). Hand hygiene was significantly better in those who were living in families with >6 people per household (p-value=0.032). Social distancing was significantly better in those participants staying with 1-4 people per household than those staying with >6 people per household (p-value=0.006).

Score	Mask		Hand hygiene		Social distancing	
	Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
0	1	0.5%	0	0	1	0.5%
2	43	21.5%	186	93%	2	1%
4	5	2.5%	1	0.5%	2	1%
6	8	4%	10	5%	8	4%
8	38	19%	1	0.5%	10	5%
10	105	52.5%	2	1%	177	88.5%

[Table/Fig-4]: Exact scores of the participants in relation to the usage of mask, practicing hand hygiene and maintaining social distancing: Clinician observed.

The participants were further classified into two categories (unvaccinated and vaccinated), and the three parameters of observed COVID-19 appropriate behaviour viz., proper mask usage, hand hygiene and social distancing were compared in relation to the various socio-demographic and vaccine related variables [Table/Fig-6]. It was seen that amongst the unvaccinated people, those educated >12 classes and those who planned to get vaccinated in near future scored 10 in proper mask usage and thus fared significantly better (p-value=0.006 and p-value=0.004, respectively). No such trend was seen with the vaccinated sub-group. Hand hygiene was significantly better in those vaccinated individuals who were living in families with >6 people per household (p-value=0.012). No such trend was seen in the unvaccinated sub-group. Social distancing was significantly better in those unvaccinated individuals living in families with 1-4 people per household than those with

Variable	Mask (p-value)	Hand Hygiene (p-value)	Social Distancing (p-value)
Age	0.732#	0.380#	0.366#
Gender	0.777##	0.220##	0.933##
Locality	1##	0.543#	0.659##
Education	0.077##	0.252#	0.976##
Number of people per household	0.927#	0.032*#	0.006*##
Occupation	0.813#	0.358#	0.299##
Per person income/month	0.201#	0.782#	0.984##
Co-morbidities	1#	1##	0.592#
Addiction	1##	1#	0.207#
Vaccination status	0.563##	0.159#	0.415##
Plan for vaccination	0.011*##	0.471#	0.407#
COVID-19 in the past	0.600##	1#	0.704##
General health questionnaire-12-Hindi score	0.061#	1#	1#

[Table/Fig-5]: Relationship of appropriate usage of mask, practicing hand hygiene and maintaining social distancing- Clinician observed, in relation to various socio-demographic and vaccine related variables.
Taking appropriate ideal score as 10 for each of the 3 behaviours, relationship of the score as 10 and <10 with various socio-demographic and vaccine related variables was studied
*p<0.05, Test of significance used: #Fisher's-Exact test, ##Chi-Square test

eligibility for vaccination. Most individuals scored <3 on GHQ-12, and hence were not suffering from psychological morbidity. With the second wave of the pandemic playing havoc in India, just in the preceding few weeks, it was surprising to find that the population had seemingly adapted to the 'new normal', and the disease had primarily stopped affecting the psychology of the general public in a negative manner, over a period of time [30].

Majority (60%) were unvaccinated at the time of assessment, though the whole sample had already become eligible for getting the vaccination. A mean delay of 13.40±3.334 weeks (median: 12 weeks), as calculated in this study provides some early insights into the vaccine hesitancy of the population. Majority (55.5%) had either inappropriate or no information of the benefits of vaccination. Many wanted the clinician to decide for them regarding vaccination, without being bothered about the advantages/disadvantages, as they had 'heard' about the doses being administered, from various sources. The actual vaccine uptake of 40% found in this study is reflective of the findings seen earlier in a nationwide survey in India before the launch of the vaccination drive where 70% of the participants had concerns regarding vaccines, with 20.63% being unaware about vaccines and 37% either unsure of getting the vaccine or 10% refusing for the same [31]. Such findings signify the need for enhanced awareness regarding efficacy of the vaccine

Variables	Mask		Hand hygiene		Social distancing	
	Unvaccinated (p-value)	Vaccinated (p-value)	Unvaccinated (p-value)	Vaccinated (p-value)	Unvaccinated (p-value)	Vaccinated (p-value)
Age	0.456#	0.949#	-	0.310##	0.253##	0.906##
Gender	0.279##	0.600##	-	0.509#	0.418##	0.335##
Locality	0.551##	0.580##	-	1#	0.456##	0.985##
Education	0.006*##	0.927##	-	0.283##	0.730##	0.519##
Number of people in the household	0.080##	0.091##	-	0.012*##	0.003*##	0.456##
Occupation	0.526##	0.542##	-	0.465##	0.392##	0.536##
Per person income	0.116##	0.178##	-	0.743##	0.769##	0.913##
Co-morbidities	0.544##	0.604##	-	1#	0.698#	1#
Addiction	0.741##	1##	-	1#	0.222#	0.533#
Plan for vaccination	0.004*##	-	-	-	0.317#	-
COVID-19 in the past	0.323##	0.653##	-	1#	0.596#	0.533#
General health questionnaire -12-hindi score	0.244#	0.499#	-	1#	1#	1#

[Table/Fig-6]: Relationship of appropriate usage of mask, practicing hand hygiene and maintaining social distancing- Clinician observed, in relation to various socio-demographic and vaccine related variables in unvaccinated and vaccinated individuals.
*p-value <0.05 was considered as statistically significant: #Fisher's-Exact test, ##Chi-Square test
-p-value not calculated for some parameters because there was no patient (n=0) in the particular sub-group under consideration

>6 people per household (p-value=0.003). No such trend was seen in the vaccinated sub-group.

DISCUSSION

Vaccination against COVID-19 and COVID-19 appropriate behaviour (social vaccine) are the two cornerstones to bring an end to this pandemic [22]. In a developing nation like India, on one hand the authorities are fighting with the availability and efficacy of vaccines and sensitisation of the masses for getting vaccinated. On the other hand, they are fighting every now and then for imposition of COVID-19 appropriate behaviour. Nearing two years of the pandemic, enactment of a mask mandate, encountering a deadly second wave, facing the third wave and various mathematical models suggesting an advantage of the COVID-19 appropriate behaviour, the entire world is still struggling for acceptable use of the "social vaccine" i.e., proper use of masks, hand hygiene and social distancing practices [23-28].

The socio-demographic representation of the participants showed an almost even distribution of age, gender and educational status. Majority (65%) of the participants belonged to an urban background. Additionally, majority (73.5%) did not belong to any special group for amongst the masses, so that people come forward in the COVID-19 vaccination drive voluntarily.

As was expected, majority (87.5%) of the people who got themselves vaccinated, held protection of their own self and their family members as the reasons. Few even quoted vaccine as a mandate in order to continue with their jobs properly.

Some people were afraid of adverse drug reactions while others were afraid of getting COVID-19 because of the vaccine itself. Many individuals quoted that nobody could give them satisfactory answers for any ill-effects of the vaccine on their pre-existing medical illness. Some quoted family issues to be sorted as the reasons for staying unvaccinated. Such a concern for adverse drug reactions and trust/mistrust in vaccination was found in an earlier study too, from the Indian background [32]. In addition to the need for availability of the vaccines at the vaccination centres in abundance by meeting the demand supply chain, various such concerns at an individual level need to be discussed minutely and on priority.

The extreme variations in the reported versus observed scores of the COVID-19 appropriate behaviours should be taken as an eye-opener during preparations of the subsequent waves of the pandemic [33]. With majority of the study population not reporting

psychological morbidity (GHQ-12 <3), it is naturally expected that they will follow COVID-19 appropriate behaviour. However, this study demonstrates and highlights the biggest threat: the false sense of security the masses are harbouring within. Every study participant felt that they were following the social vaccine behaviour (COVID-19 appropriate behaviour) and hence, were safe from COVID-19. However, their observed behaviour, as noted by the clinician was just the opposite. Though 88.5% of the participants followed social distancing, only 52.5% of the participants were using the mask appropriately; and only 1% was practicing hand hygiene strictly. Such inappropriate/undesirable behaviour of individuals (as noted in reality); but with a "subjective" feeling of 'being safe within' needs immediate attention in our considered opinion. It may not be unbefitting in our assumption that the results so obtained in this study can be generalised to the masses and steps need to be taken accordingly to ensure the efficacy of the "social vaccine". This "social vaccine" is effective in not only preventing the spread of the infection, but also fighting against the new mutant strains, as they appear and pose challenges to the strategy of vaccination and overall management of the disease [34].

It was also seen that proper usage of masks, hand hygiene practices and social distancing was independent of a majority of the socio-demographic and vaccine related variables that were studied. Gender bias, with lesser males following the COVID-19 appropriate behaviour, has been reported in the past [35,36]. Those who are lesser educated and have lower income were also found not following the required behaviours [35]. However, similar findings were not seen in the present study. Proper mask usage was found to be significantly better in those people who planned to get vaccinated in near future, depicting their self-protective behaviour till vaccination. Education was found to play a significant role with respect to proper usage of mask, in those individuals who were unvaccinated, but not in those who were vaccinated. Overall, hand hygiene was significantly better in those who were living in families with >6 people per household. Similar significantly better trend for hand hygiene was seen in unvaccinated individuals, but not in vaccinated ones. Social distancing was significantly better in those participants living in families with 1-4 people per household, overall, and also in unvaccinated individuals, but not in vaccinated ones (when sub-categorised). This could be a habitual behaviour cultivated in general over time because of the number of people staying in a single household in such families.

Various Information, Education and Communication (IEC) activities are aggressively needed for concrete knowledge regarding vaccine. Taking the help of the locals in dissemination of information can be a giant leap in motivating the public. The third/booster vaccination has started, however, there have been reports of very less number of people vaccinated with the second dose even [37]. Vaccine hesitancy needs to be dealt with early, and strict COVID-19 appropriate behaviour is needed to achieve herd immunity and deal with new variants [38]. Emphasising again, COVID-19 appropriate behaviour is indeed the best "social vaccine" till we succeed in formulating an ideal drug and an ideal vaccine for the disease [39].

Limitation(s)

This study had certain limitations. it was carried out in only one part of a state from North India. The sample size was small. No major psychological correlates were examined. However, it is surprising to note that no study has evaluated the vaccine behaviour in real life conditions till date. The factual observation and recording of the COVID-19 appropriate behaviour by the clinician and its comparison with the behaviour as reported by the participant emerged as the biggest strengths of this study. A true picture of the COVID-19 appropriate behaviour being actually followed by the individuals, all of whom otherwise reported following the required behaviours fully, was deciphered.

CONCLUSION(S)

There were few takers for the medical COVID-19 vaccine, even weeks after eligibility. The knowledge regarding efficacy of the vaccine and its advantages was missing amongst general public. The COVID-19 appropriate behaviour was largely not being followed properly, and the false sense of following the same complicated the issues further. Leaving aside a few, the vaccine behaviour was largely found to be unaffected by majority of the socio-demographic variables. Community based national sampling surveys are required to yield more information on the experiences and perceptions of population of different areas regarding the uptake of "social vaccine" behaviour. Lastly, there is an urgent need to sensitise the population at the grass root level regarding the COVID-19 vaccination and COVID-19 appropriate behaviour to fight this pandemic, by employing various IEC activities.

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PLAGIARISM CHECKING METHODS: [Jain H et al.]
- Plagiarism X-checker: Jan 14, 2022
- Manual Googling: Feb 16, 2022
- iThenticate Software: Feb 24, 2022 (3%)

ETYMOLOGY: Author Origin

AUTHOR DECLARATION:
- Financial or Other Competing Interests: None
- Was Ethics Committee Approval obtained for this study? Yes
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. NA

Date of Submission: **Jan 11, 2022**
Date of Peer Review: **Jan 29, 2022**
Date of Acceptance: **Feb 22, 2022**
Date of Publishing: **Mar 01, 2022**

ANNEXURE I

COVID-19 Vaccine Related Questionnaire

1. Do you belong to any special category for eligibility for vaccination?
2. Eligibility for vaccination since:
3. Vaccinated: Yes/No
4. Name of Vaccine:
5. Date of 1st dose:
6. Date of 2nd dose:
7. If only one dose has been given, and 2nd dose is delayed because of increased gap in two doses, are you:
   Fine with it/Worried
8. If worried, rate on the scale

9. If unvaccinated, do you plan to get vaccine in near future?
10. If yes, what was the reason you didn't get it done till date:

Some family obligation presently/Was not convinced for vaccination/Vaccine useless/Don't know/Any other

11. Any death/severe disease in close circle because of COVID-19:
12. Do you think vaccination will protect you from: getting COVID-19/getting severe disease or mortality/No protection/Don't know
13. After vaccination, do you need to follow COVID-19 appropriate behavior? Yes/No
14. Predominant Reason for getting vaccinated: Self protection/Family members protection/Peer pressure/Any death or severe disease in close circle because of COVID-19/Herd immunity/Any other
15. Predominant Reason for not getting vaccinated: Did not get vaccine anywhere/Concern for ADR/Fear of getting COVID-19 because of vaccination/Had COVID-19 in the past/Concern for underlying medical illness/Vaccine doesn't have any role in preventing COVID-19 or death/Peer pressure/Waiting for more data/Waiting for a better vaccine/Any other

COVID-19 Appropriate Behaviour Related Questionnaire and Assessment

COVID Appropriate Behaviour:

Told:

Mask: Yes/No (10/0)

Sanitiser or Hand washing: Yes/No (10/0)

Social Distancing: Yes/No (10/0)

Observed:

Mask: Not wearing/using a piece of cloth/Mask completely hanging/mask below chin/Mask below nose/Fully and properly covered (Score: 0/2/4/6/8/10)

Hand hygiene:

Own sanitiser or hand wash and clean properly/Ask for it and sanitise or hand wash properly/Don't ask but sanitise or hand wash properly/Don't ask and don't sanitise or hand wash properly/Don't ask and don't sanitise or hand wash at all/Apparently dirty hands (Score: 10/8/6/4/2/0)

Social distancing:

<2/3/4/5/6/ >6 (in feet) (Score: 0/2/4/6/8/10)