

Post Vaccination Adherence to Covid Appropriate Behavior: A Cross Sectional Study

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Abstract

Introduction: COVID-appropriate behavior refers to the development of those habits that may serve to limit the disease's spread and, thus, reduce the number of individuals affected. Vaccinated individuals may be less willing to comply with COVID-appropriate conduct due to their perception of a diminished health risk. Consequently, the present study was conducted to assess public's attitude regarding COVID preventive measures following vaccination.

Methodology: This cross sectional study was conducted among adults aged 18 and above. 200 individuals who had received either both doses of COVID-19 or at least one dosage of either COVID-19 participated in this survey, which was performed online and involved the distribution of a self-administered questionnaire via social media.

Results: Covishield was the most commonly administered vaccination (70%), followed by Covaxin (23%). The majority of respondents adhered to mask use after vaccination (82.5%), but 15% of respondents adhered to mask use less after vaccination than before. 2.5% of respondents reported an increase in mask use. Physical distancing was shown to be less after vaccination among (65.5%) than before vaccination. 19% of study participants reported that their frequency of hand washing with soap and water decreased following vaccination. 31% of respondents said that their usage of hand sanitizer dropped following vaccination.

Conclusion: It should be stressed to the public that getting vaccination does not make them invincible foe the various new strains in circulation of the virus. Strict policy making should be emphasized to make people follow COVID appropriate behavior at all times.

Keywords: Adherence, covid appropriate behavior, COVID 19, vaccination

Introduction

Pandemic status for the COVID 19 virus was

announced on March 11, 2020^[1]. Since then, scientists in a number of nations have been toiling away in labs to discover a vaccine that can protect citizens

from contracting the disease or finding a solution for the wide variety of symptoms and syndromes it has caused. There are a select number of countries that have achieved this goal. The World Health Organization has only given its stamp of approval to a small number of vaccines which range from RNA vaccines to inactivated ones, and some of which are still in experimental phases in different countries [2]. In addition to testing, treatment, and protection, suitable COVID preventative behaviour was important to restrict the contagion because COVID 19 is a member of the coronavirus family and is quite similar to the SARS and MERS viruses, which may spread quickly among humans.[3].

Developing COVID-appropriate behaviours refers to doing things that could reduce the spread of the disease and the number of persons who contract it. The Indian government's Ministry of Health and Family Welfare (MoHFW) proposed and implemented guidelines for how to behave appropriately around people who may be infected with the deadly coronavirus avian influenza (COVID). These include things like keeping a safe distance from others, always wearing a mask, keeping one's nose and mouth covered, regularly washing one's hands, keeping common areas clean, avoiding unnecessary travels, discouraging crowds, and other similar measures.[4] In addition, efforts are being made to vaccinate persons against COVID who are at risk. Even after vaccination, persons are advised to maintain COVID-appropriate behaviour. [5] India's goal was to vaccinate all of the population that was eligible to be vaccinated by the end of 2021; however, this goal is still in jeopardy due to a number of factors, including the availability of the vaccine, vaccine hesitancy, gender disparity, a higher rate of vaccination in urban areas, the successful transportation of vaccine to remote areas of the country, etc. According to government statistics, nearly 70% [6] of the country's eligible population has received at least one dose of the COVID vaccine [7]. India had witnessed a devastating impact of the second wave across the nation in recent times, the root causes of which have been attributed to ineffective coordination between centre, state, and national institutes, the premature easing of lockdown restrictions, difficulties in immunizing the population

due to a lack of health literacy, health inequality, reservations for receiving vaccinations, etc. Following that, country is currently experiencing a declining trend in the figures of confirmed COVID cases. [8,9,10,11] Vaccinated individuals may still be exposed to the potential for the capture and transmission of virus, including variants not inoculated against [12]. Still, however, vaccinated people may be less inclined to comply with COVID appropriate behavior, given perceived lesser danger for their health. Similar instances have been already reported in cases of influenza vaccine and Lyme's disease vaccine roll outs, where decreased compliance with protective behavior was observed after introduction of their respective vaccines [13, 14]. As vaccines are not 100 percent effective, it must always be recognized that even a fully vaccinated person can become reinfected and transfer the disease to susceptible persons [12]. Understanding why people are less compliant after vaccination is also an important component of pandemic management; thus, the present study was conducted to analyse the attitude of individuals towards COVID preventive measures after vaccination.

Methods

It was a cross-sectional study of adults who had received either both doses or at least one dose of any COVID-19 vaccination administered in India or overseas. A self-administered questionnaire was sent via social media to the authors' professional and non-professional connections during the months of August and September 2021. For data collection, snowball sampling was utilised, and participants were requested to distribute the questionnaire with their connections. Only respondents who consented to informed consent at the beginning of the questionnaire were permitted to complete the survey. Participants older than 18 years of age and who had received at least one dose of COVID vaccination were included in the study, but those less than 18 years of age and unvaccinated individuals were excluded.

The participants filled out the questionnaire; seeking information regarding their adherence to COVID-appropriate behavior following vaccination, as opposed to their behavior prior to vaccination. The questionnaire also collected information regarding

demographic characteristics, such as age, gender, socioeconomic status, etc., type of vaccine and the organization through which they received vaccination, and whether they were informed of the adverse event following immunization prior to receiving vaccination. Institutional ethics committee approval was obtained from Al-falah School of medical sciences and research centre (Ref. No. AFSMS&RC/F-01/22/101). Throughout the duration of the study, complete confidentiality was maintained and no information was shared with any third party.

The data were examined using the SPSS 21 software. For categorical variables, descriptive analysis was conducted. The Chi-square test

was performed to determine the significance of proportional differences between categorical variables. A p value of less than 0.05 was deemed statistically significant.

Results

During the study period, a total of 250 individuals were contacted, of which 200 agreed to participate in the research. The bulk of respondent participants were women. Most were between the ages of 18 and 36. By religion, the majority were Muslims, were professionals, and belonged to the top class (79%) (Table 1).

Table 1: Socio demographic characteristics of study population

Variable	Number (N)	Frequency (%)
Gender		
Male	82	41.0
Females	118	59.0
Age range (in years)		
18-36	157	78.5
37-53	31	15.5
54-72	12	6.0
Religion		
Hindu	71	35.53
Muslim	120	60.0
Others	9	4.5
Occupation		
Professional	137	68.5
Semi-professional	22	11.0
Skilled	5	2.5
Student	24	12.0
Unemployed	12	6.0
Socio- economic status		
I (Upper class)	158	79.0
II (Upper middle class)	27	13.5
III (Middle class)	6	3.0
IV (Lower middle class)	5	2.5
V (Lower class)	4	2.0

Concerning vaccination history, the questionnaire inquired about the vaccines chosen by

the participants, the place of vaccination, the number of doses, dissemination of information about adverse

effects following immunization and monitoring for at least 30 minutes after vaccination. The majority of trial participants (70%) chose for the Covishield vaccination, followed by Covaxin (23%) and other vaccines (7%). A significant proportion (69%) of study participants had received both vaccination doses.

The majority of respondents (78%) had received vaccinations at a public healthcare facility. 66% were warned about adverse events following vaccination at their specific healthcare facility, and 80.5% were instructed to remain at the vaccination site for at least 30 minutes after vaccination. (Table 2).

Table 2: Table showing variables related to COVID-19 vaccination

Variables Related To Vaccination History		Number (N)	Frequency (%)
Type of Vaccine taken	Covisheild	140	70
	Covaxin	46	23
	Sputnik V	2	1
	Others	12	6
Number of doses taken	Single dose	62	31
	Both doses	138	69
Site of vaccination	Private healthcare setup	44	22
	Public healthcare setup	156	78
Whether informed about adverse event following immunization	Yes	132	66
	No	68	34
Whether advised to stay for at least 30 minutes after vaccination	Yes	161	80.5
	No	39	19.5

42 %(84/200) respondents were found to be following all the COVID appropriate behavior practices strictly: adhering to mask usage, cleaning regularly used surfaces, frequent hand washing and use of sanitizer, and physical distancing while 58% were found to follow COVID appropriate

behavior as much as they could. The majority of responders (82.5%) adhered to the same mask usage after vaccination as before, whereas 15% reported a reduction in mask usage after vaccination. However, 2.5% of respondents used masks more frequently than in the past. (Table 3).

Table 3: Table showing variables related to adherence to COVID appropriate behavior after vaccination

Variables Related To Adherence To Covid Aproprate Behaviour		Number (N)	Frequency (%)
Adherence to mask usage	Higher than before	5	2.5
	Same as before	165	82.5
	Lower than before	30	15
Frequency of cleaning regularly used surfaces	Higher than before	14	7
	Same as before	120	60
	Lower than before	66	33
Adherence to Physical distancing	Higher than before	8	4
	Same as before	61	30.5
	Lower than before	131	65.5

Continue

Frequency of hand washing with soap & water	Higher than before	7	3.5
	Same as before	155	77.5
	Lower than before	38	19
Frequency of usage of sanitizer	Higher than before	4	2
	Same as before	134	67
	Lower than before	62	31

Sixty percent of respondents said that their frequency of cleaning frequently used surfaces after vaccination was the same as before, however one-third of respondents reported that their frequency of cleaning frequently used surfaces after vaccination decreased. After immunization, 7% of respondents reported that they were cleaning commonly used surfaces more thoroughly than previously.

The majority of respondents (65.5%) reported poorer adherence to physical separation after vaccination, while 30.5% reported keeping physical distancing at the same level as before and just 4% reported maintaining physical distancing at a higher level.

When questioned about frequency of hand washing with soap and water after vaccination, the majority of study participants (77.5%) said they are adhering to it the same as before, whereas 19% of study participants said their frequency of hand washing with soap and water after vaccination

decreased. Only 3.5% of respondents indicated that their frequency of hand washing with soap and water increased following vaccination.

The majority of study participants (67%) reported that their frequency of hand sanitizer use after vaccination remained unchanged, whereas 31% of respondents reported that their frequency of hand sanitizer use after vaccination declined. Only 2% of responders increased their usage of hand sanitizer after receiving a vaccination.

When participants were asked whether they were adhering to respiratory etiquette while coughing or sneezing after vaccination, the majority (91.5% of respondents) stated that they were adhering to respiratory etiquette while coughing or sneezing even after vaccination, while 7% of respondents were not adhering to respiratory etiquette after vaccination (Figure 1). Only 1.5% of the overall study participants were unaware of what respiratory etiquette actually entails.

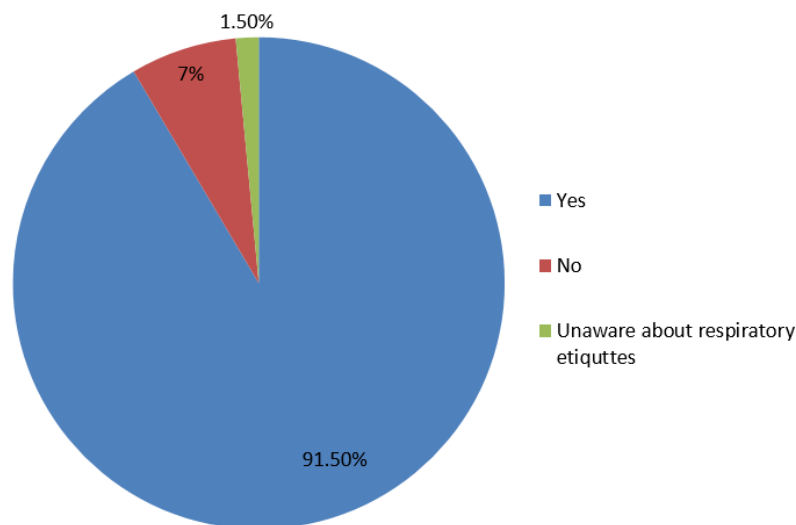


Fig 1: Showing respiratory etiquettes while coughing or sneezing post vaccination.

Figure 2: When asked about the type of mask they were using, the majority of respondents (43%) indicated that they were wearing N-95 masks,

followed by surgical masks (31.5%) and fabric masks (25%). Only 0.5% of the participants in the study were not wearing any form of mask.

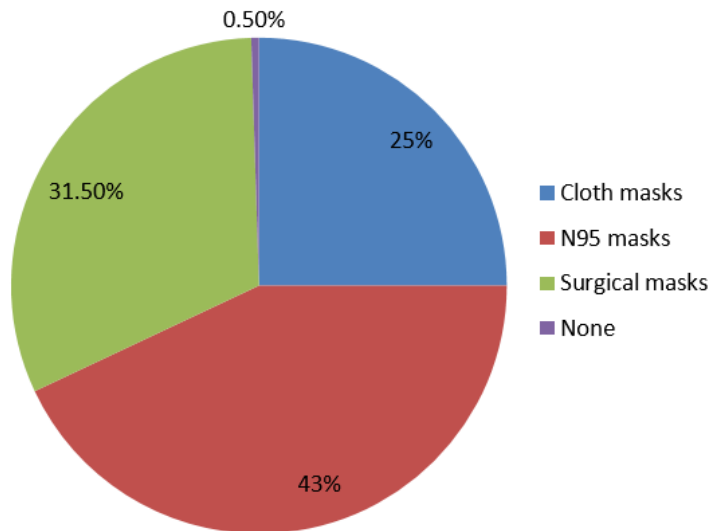


Fig 2: Type of masks study participants were using post vaccination.

Discussion

Similar to previous findings [13,14], the survey revealed a decline in adherence to physical distancing following COVID 19 vaccination, which was observed in nearly two-thirds of the surveyed population, whereas adherence to mask wearing remained the same as before in the majority of the study population. The majority of those surveyed stated that their frequency of hand-washing with soap and water remained unchanged following vaccination. In addition, the majority of those surveyed reported the same frequency of hand sanitizer use after vaccination as before. These results demonstrated that hand washing and the usage of hand sanitizer have become fundamental parts of people's lives, since the majority still adhere to these routines. After immunisation, one-third of respondents reported that they cleaned frequently used surfaces less frequently than previously. Even after vaccination, the majority of the studied population adheres to respiratory etiquette when coughing or sneezing, while just 1.5% of the overall questioned population is unaware of what respiratory etiquette actually entails. The majority of study participants reported using N-95 masks when asked about the type of masks they wore,

followed by surgical masks and then cloth masks. Only 0.5% of the total trial participants did not wear a mask. Although these findings are not surprising, they should be considered when formulating health policy regarding COVID-19 preventative behavior or COVID-appropriate behavior in populations that have been extensively immunized.

Conclusion

This survey is a preliminary attempt to evaluate vaccination recipients' adherence to COVID-appropriate behavior. In India, there has been no modification to the health policy addressing covid-appropriate behavior after vaccination with COVID-19. Thus, the majority adheres to the same health-related behaviors as previously; yet, the majority does not adhere to physical separation, which is concerning. This information is not shocking, but it should be considered when formulating and implementing health policy regarding COVID-19 preventative behavior in heavily vaccinated populations.

Ethical clearance: Institutional Ethics Committee from Al-falah School of medical sciences and research centre (Ref. No. AFSMS&RC/F-01/22/101)

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