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Covid Vaccination Status Among Narikuravars in Rural Field Practice Area of Chengalpattu Medical College – A Cross Sectional Study

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Abstract

Background: The Narikuravars known as “gypsy”, are semi- nomadic community who tend to migrate from place to place for their livelihood. Their socio-cultural beliefs and practices pose a challenge even in Routine Immunization. Vaccinating this migrant population against Covid 19 is indispensable to avert the spread of infection. This study is done to estimate Covid 19 vaccination coverage among Narikuravar population in rural field practice area of Chengalpattu Medical College and to assess the various factors influencing the Covid vaccination status.

Methodology: A cross sectional study was conducted among the Narikuravar population of Manampathy PHC from November 1 st 2021- December 1 st 2021, a rural field practice area of Chengalpattu Medical College which was selected by multi stage random sampling method. 104 Narikuravars were identified in the hamlet at the time of study and data collected through a semi structured questionnaire. The data was entered in Microsoft Excel and analysed using SPSS version 25.

Results: The mean age of the study population is 35.51 years. Majority were females (55%), illiterates (67%) and employed (52%) .74% of the study population have got only their first dose of vaccination as on 12.11.2021. 72% of the study population is aware that covid vaccine prevents from getting infection, out of which 88% are vaccinated. 41% had vaccine hesitancy and have fear of getting side effects. Employment (=12.887) (p<0.000) and awareness about vaccination (=20.680) (p<0.000) were found to be statistically significant.

Conclusion: The study concludes that 71% of the vaccinated population benefited from camps in their locality, implying their success. 56% of Geriatric population were hesitant to get vaccinated giving a hint that special focus to be given in selective age groups by IEC.

Keywords: Covid 19, Covid 19 vaccination, Vaccine acceptance,Vaccine hesitancy, camps, Employment.

Introduction

Covid 19 is an infectious disease caused by coronavirus (SARS-CoV2) which mainly transmits through respiratory droplets. It was first identified in Wuhan on December 2019. On January 2020, WHO declared this disease as PHEIC (Public Health Emergency of International Concern) (1). The emergence of this disease has disrupted the whole globe such as business closure with the financial and societal cost of measures trying to control it since there is no treatment for the disease. Hand washing,

social distancing and wearing masks were the only preventive measure adopted. Vaccination is one of the key strategies to mitigate the spread of SARSCoV-2 and ending the pandemic globally. In India vaccination was started on January 16 2021(2) prioritizing Health care workers and Front line workers with the two Emergency Use Authorization(EUA)approved vacccines namely Covishield and Covaxin. Since June 2021 all the people above 18 years of age have been vaccinated by Government of India at free of cost.

Narikuravar population, a Semi – Nomadic population live across borders but mainly in Tamilnadu, India. They migrate from place to place for their livelihood. They have a low literacy rate, unemployment, poor access to welfare schemes(3). Tamilnadu, one of the highest performing states in Routine Immunization have challenges in vaccinating their children because of their socio-cultural beliefs and practices (4). The world also face challenges in vaccinating migrant population because of their conceptions and cultural beliefs (5). They also deal with low access to health care services, social vulnerability leading in turn to malnutrition, poor hygiene and living conditions, overcrowding which increases the spread of infection. To ensure equitable prioritization and health equity as a component of primary health care universal access to vaccination should be made available (6).

As on date, very limited data and journal articles discussed COVID-19 vaccination about migrant population and no such studies on Narikuravar population and this study aims to know their vaccination status and various factors influencing their vaccination status.

OBJECTIVES: To assess the Covid 19 vaccination coverage among Narikuravar population in rural field practice area of Chengalpattu Medical College and to assess the various factors influencing the Covid vaccination status among them

MATERIALS AND METHODOLOGY:

Study setting: A community based cross sectional study was conducted in Narikuravar population of Manampathy PHC, a Rural Field Practice area of Chengalpattu Medical College.

Study population: The study population are narikuravars who are above 18 years of age in Manampathy PHC area.

Eligibility criteria: Narikuravar population above 18 years of age residing in the particular hamlet were included. Narikuravar population who have active covid 19 Infection in home Isolation, who had serious allergies to vaccines or components of vaccine in the past are excluded from the study.

Estimation of sample size: According to MOHFW India(Ministry of Health and Family Welfare), 50.7% of target population have received 1st dose of covid vaccination in India as on 20.10.2021. Considering this as p, p=50.7, q=49.3

d taken as 20% of p, d=10.14 Sample size: n=z2pq/d2

n=89

Allowing a 10% for permissible error ,89+10% Minimum Sample size is 98

Sampling method: We adopted a multistage random sampling method. Chengalpattu Medical College has 3 rural field practice area (Sadras, Manampathy, Acharapakkam) . All these areas have Narikuravar hamlets. Out of these 3 areas, Manampathy PHC area was selected randomly. 104 Narikuravars who are present at the time of study in the selected hamlet are included.

Data collection tool: A semi-structured questionnaire was validated and translated to local language (Tamil) and checked for its consistency by translating it back to English language by those who are well oriented with the stated languages (language professionals or experts). The questionnaire contains: socio-demographic characteristic of the study respondents, source of information about covid-19 vaccine, vaccination status, reason for acceptance and non-acceptance of covid-19 vaccine, side effects after vaccination and their belief in continuing the other preventive measures of covid 19 disease.

Data collection procedure: Data was collected using a semi structured questionnaire by face- to-face interview after obtaining an informed consent.

Statistical Analysis: The data collected was entered in Microsoft Excel and analysed using SPSS Version 25. Appropriate descriptive and inferential statistical analysis done. p value of less than 0.05 taken as statistically significant.

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Ethical considerations: The study protocol was submitted in the Institutional Ethical committee of Chengalpattu medical college on 22.10.2021 and obtained Ethical committee approval with Number CMCH-21-PR-317. The research was conducted in adherence to the National Ethical Guidelines for Biomedical and Health Research involving Human Participants by the Indian Council of Medical Research, 2017 and the Declaration of Helsinki. The proposal was approved. Verbal informed consent was obtained from all participants before collection of data. COVID 19 precautions including face mask, hand sanitation, physical distancing was practiced during the data collection to safeguard the researchers as well as the respondents. Respondents were provided adequate privacy during the interview and confidentiality of their information was protected.

RESULTS:

TABLE 1: SOCIO- DEMOGRAPHIC DETAILS OF THE STUDY POPULATION (n=104)

Description	**Frequency n (%)**
Age in years	
19-45	76(73%)
46-60	19(18%)
>60	9 (9%)
Sex	
Male	47(45%)
Female	57(55%)
EDUCATION	
Illiterate	69(66%)
Primary	13(12%)
Middle	2 (25%)
High school	8 (8%)
Higher secondary	9(9%)
Graduate	3(3%)
OCCUPATION	
Employed	54(52%)
Unemployed	50(48%)
Marital status	
Single	18(17%)
Married	86(83%)
Type of family	

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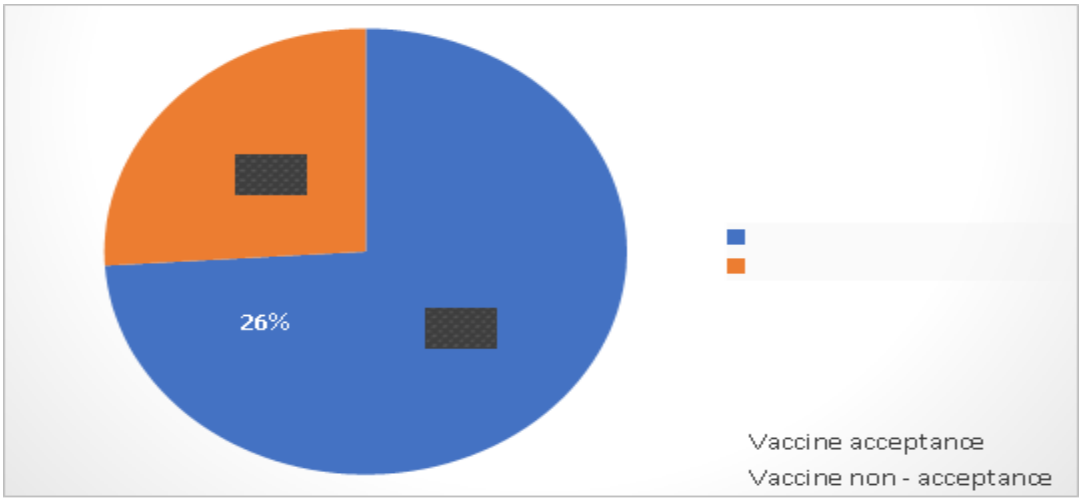
Nuclear	72(69%)
Joint	32(31%)
Socio-Economic Status	
Upper- Middle	10(10%)
Middle	34(32%)
Lower-Middle	48(46%)
Lower	12(12%)

As seen in Table. 1. 73% of the study population belong to the age group 19-45 years and their vaccination status is important since people in those age group are migrant for their livelihood.

FIGURE 1: COVID 19 VACCINATION STATUS OF THE STUDY POPULATION



As shown in the Figure 1., covid 19 vaccination 74% in the study population have got their vaccination and 26% of the study population have non acceptance towards covid 19 vaccine.

TABLE 2. ASSOCIATION BETWEEN COVID 19 VACCINATION STATUS AND SOCIO DEMOGRAPHIC FACTORS

VARIABLES		**VACCINATED n = 77(74%)**	**NOT VACCINATED n = 27(26%)**	**p value**
		n (percentage)	n (percentage)	
Age group	<35 Years	44 (79%)	12 (21%)	p = 0.255
	>35 Years	33 (43%)	15 (57%)	
Sex	Male	34 (72%)	13 (28%)	p = 0.720
	Female	43 (75%)	14 (25%)	

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Education status	Illiterate	52 (74%)	17(26%)	p = 0.720
	Literate	25 (60%)	10(40%)	
Marital status	Single	14 (78%)	4 (22%)	p = 0.967
	Married	63(73%)	23(27%)	
Type of family	Nuclear	52(74%)	20(26%)	p = 0.881
	Joint	25(75%)	7 (25%)	
Occupation	Employed	48(89%)	6 (11%)	p = 0.000
	Unemployed	29(58%)	21(42%)	

As shown in Table 2. 89% of the vaccinated population is employed and 64% are aware that vaccination prevents them from getting infection. On doing a bivariate analysis these two factors were found to be statistically significant.

TABLE 3. SOURCE OF INFORMATION ABOUT COVID 19 DISEASE AND VACCINATION

Source Of Information	Friends, Neighbours And Relatives	Health Care Workers	Television
Covid 19 Disease	27(26%)	1(1%)	76(73%)
Covid 19 Vaccine	23(22%)	25(24%)	56(54%)

As shown in Table 3., Television is the major source of information regarding covid 19 disease (73%) and vaccination (54%). Village health nurses play a considerable role in awareness about covid vaccine.

FIGURE:2 REASON FOR COVID-19 VACCINE ACCEPTANCE AMONG THE STUDY PARTICIPANTS

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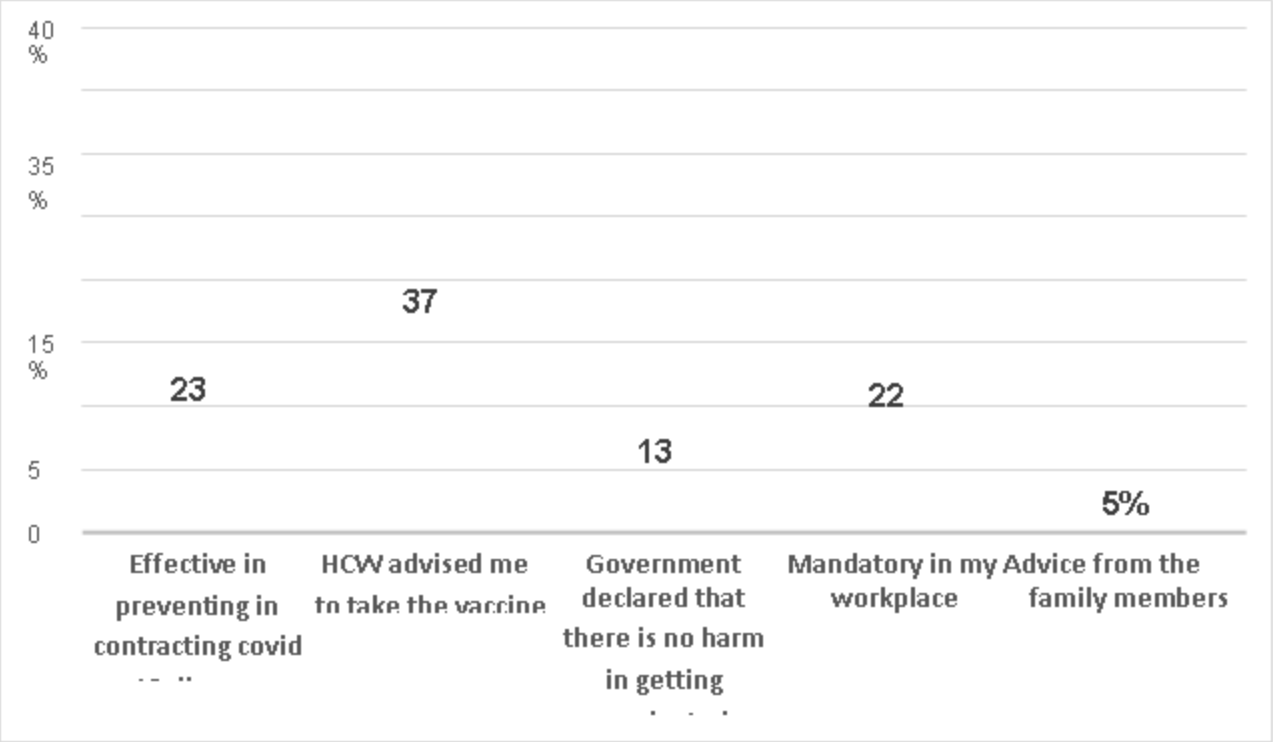
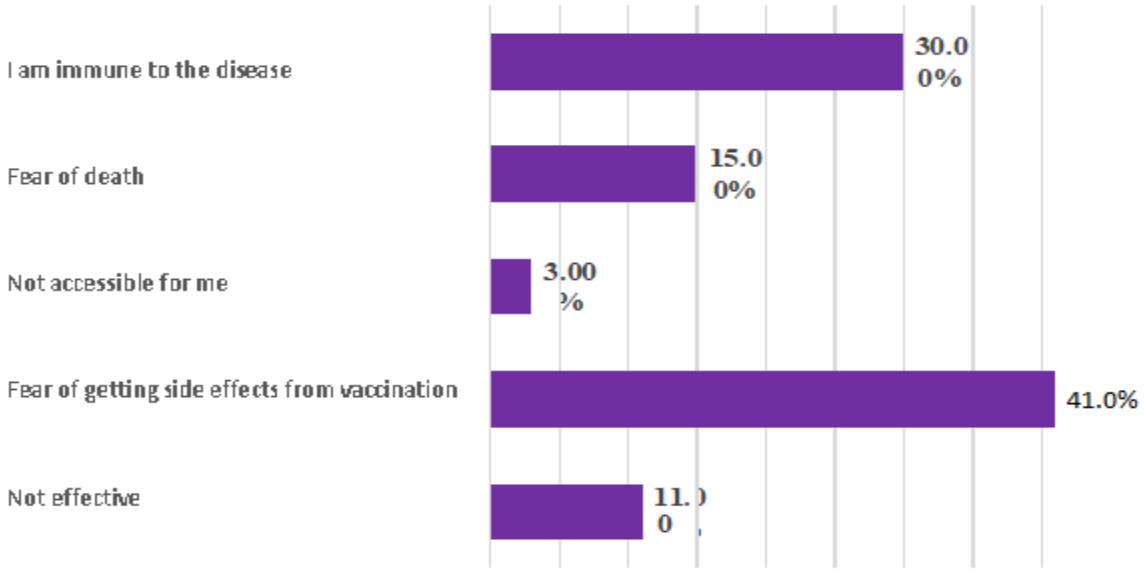


As depicted in Figure 2., 37% of the vaccinated population have got their vaccination done since their health care worker advised them to take the vaccine. 23% have taken for personal protection.

FIGURE 3., REASONS FOR VACCINE NON- ACCEPTANCE



As shown in Figure 4., fear of getting side effects from covid 19 vaccine hesitancy was found to be in 41% of the study population who have not taken the vaccine. 30% of them think that they are immune to the disease.

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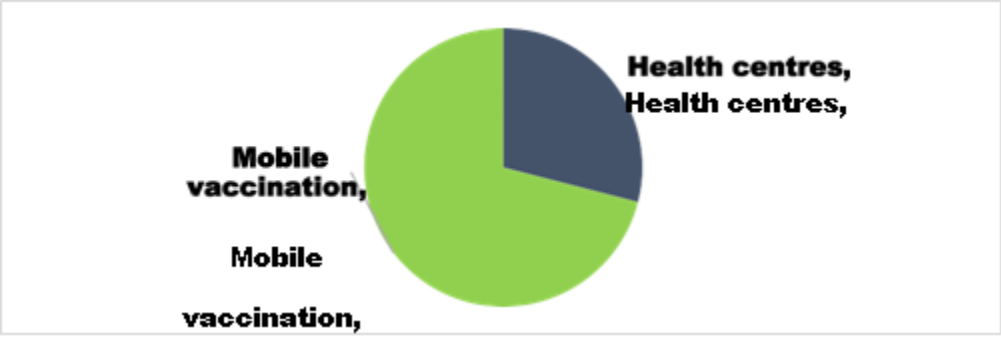
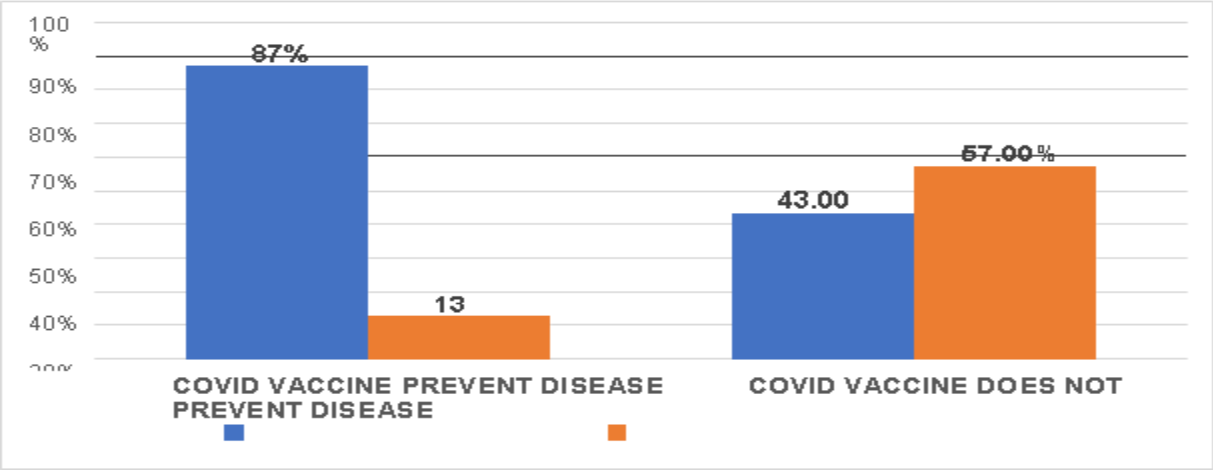
FIGURE 4., PLACE OF VACCINATION



As shown in figure 4.,71% of the vaccinated population are vaccinated through the ongoing vaccination campaign being conducted in outreach areas

Figure 5. Awareness of the study population compared to the covid 19 vaccine uptake



As shown in Figure 5., 87% of the population who think the vaccine is effective in preventing the disease have taken the vaccine while 57% of the population who think that the vaccine is not effective have not taken up the vaccine. This was found statistically significant p=0.000 in our study.

DISCUSSION: The study was conducted among 104 persons of narikuravar population. The mean age group of the study population is 35 years. 74% of them have taken up the vaccine while 26% have shown vaccine hesitancy. 77%(n=59) of the vaccinated population are in 19- 45 years who belong to the economically productive age group. In a study conducted by DPH Tamilnadu (7), India, during the month of August 2021 they found nearly 28% of the senior citizens were hesitant to get covid 19 vaccination. In our study 55% of the geriatric population were showing vaccine hesitancy giving us a hint that they should be focussed more.

In India it is said that women are left behind compared to men in response to covid 19 vaccination(8). The study conducted by Guna et al conveys the same. In contrast, vaccine acceptance was higher in females (56%) when compared to males (44%) in our study. To our knowledge, this increased coverage of vaccination in females is due to the fact that 60% of the literates in the study population are females and 9% have completed their graduation which is most welcoming and uplifting for the community.

On the other hand , 67% of the vaccinated population are illiterates .i.e., less educated respondents express higher acceptance(9) similar to the study conducted by Lazarus JV et al.

Television was found to be the major source of information regarding covid 19 disease (73%) and covid 19 vaccine (54%). 24% of them came to know about covid 19 vaccination through their Health care workers(7).

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37% of the vaccinated population have reported that they take up the covid 19 vaccine because of the advice from the health care worker. 22% of them got vaccinated because it is mandatory in their work place and colleges. While carrying out the study we came to know that apart from being self- employed or unemployed, another source of income for them in the recent days is by working under MNREGA in rural areas (100 days work) where vaccination becomes mandatory. This significantly contributed to the increased prevalence of vaccination coverage in the study population. The other common reason for vaccine acceptance is personal protection (23%).

The 5C model of the drivers of vaccine hesitancy are Confidence, Complecancy, Convenience, Risk Calculation and Collective responsibility according to SAGE(10). The results of non-acceptance to covid vaccination when applied to the above model in our study population has shown Confidence as a reason in 67%, Complecancy in 30% and Convenience in 3%.

We also observed in our study that nearly 71% of the vaccinated population have benefited from the ongoing mega vaccination campaign where vaccines are given at door step, which is a positive finding for the success of the robust ongoing immunization activities.

CONCLUSION: The Vaccinated population are predominantly in the age group of 19-45 years and females. Employment plays a significant role in their vaccination status. Nearly two- third of the vaccinated population have been benefited by the campaign mode of covid 19 vaccination in their locality. Eminent focus should be given for population above 60 years to get vaccinated emphasizing on the importance.

LIMITATIONS: Since the study population is migratory, a random sampling method was not employed to choose the study participant.

RECOMMENDATIONS: The nomadic Narikuravar community who flag the denial of dignity in most of the services including education, employment and other health care services must be given special focus by intensifying the door-to-door Covid 19 vaccination. The reasons for vaccine hesitancy could be addressed by pro - active communication. IEC to be strengthened. A non – financial incentive may be announced or integrated with the other welfare schemes for the same population to improve the coverage.

REFERENCES

1. Global_Research_Forum_FINAL_VERSION _for_web_14_feb_2020.pdf [Internet]. [cited 2022 Jan 19]. Available from: https://www.who.int/blueprint/priority-diseases/key-action/Global_Research_Forum_FINAL_VERSION_for_web_14_feb_2020.pdf?ua=1
2. MoHFW | Home [Internet]. [cited 2021 Nov 11]. Available from: https://www.mohfw.gov.in/
3. Dragomir CI, Zafiu M. Vulnerable Populations' Access to Health Care: A study of the nomadic "Gypsy' Narikuravars in Tamil Nadu, India. Int J Roma Stud. 2019 Mar 15;58–83.
4. Francis MR, Nuorti JP, Lumme-Sandt K, Kompithra RZ, Balraj V, Kang G, et al. Vaccination coverage and the factors influencing routine childhood vaccination uptake among communities experiencing disadvantage in Vellore, southern India: a mixed-methods study. BMC Public Health. 2021 Oct 7;21(1):1807.
5. Vaccinations for migrants and refugees during and after Covid-19 [Internet]. G20 Insights. [cited 2021 Dec 1]. Available from: https://www.g20-insights.org/policy_briefs/vaccinations-for-migrants-and-refugees-during-and-after-covid-19/
6. HCDH | COVID-19: Equitable vaccine access for all, including migrants, is crucial, say UN Special Rapporteurs [Internet]. [cited 2022 Jan 18]. Available from: https://www.ohchr.org/FR/NewsEvents/Pages/DisplayNews.aspx?NewsID=26684&LangID=E
7. DPH NEWSLETTER - Google Drive [Internet]. [cited 2021 Oct 13]. Available from: https://drive.google.com/drive/folders/1NuDulOyQ1kMUn0KWMVbTYvB2RUe91a7H

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8. Guha N. India's Covid gender gap: women left behind in vaccination drive. The Guardian [Internet]. 2021 Jun 28 [cited 2021 Nov 11]; Available from: https://www.theguardian.com/global-development/2021/jun/28/india-covid-gender-gap-women- left-behind-in-vaccination-drive
9. Lazarus JV, Wyka K, Rauh L, Rabin K, Ratzan S, Gostin LO, et al. Hesitant or Not? The Association of Age, Gender, and Education with Potential Acceptance of a COVID-19 Vaccine: A Country-level Analysis. J Health Commun. 2020 Oct 2;25(10):799–807.
10. Magadmi RM, Kamel FO. Beliefs and barriers associated with COVID-19 vaccination among the general population in Saudi Arabia. BMC Public Health. 2021 Jul 21;21(1):1438.

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