

 ISSN NO. 2320-5407	Journal Homepage: - www.journalijar.com INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR) Article DOI: 10.21474/IJAR01/12624 DOI URL: http://dx.doi.org/10.21474/IJAR01/12624	 INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR) ISSN 2320-5407 Journal Homepage: http://www.journalijar.com Journal DOI: 10.21474/IJAR01
---	--	--

RESEARCH ARTICLE

ACCEPTANCE AND ATTITUDE TOWARD COVID-19 VACCINATION: A CROSS-SECTIONAL STUDY FROM UDAIPUR DISTRICT

Sandeep Garg¹, S.R. Gajendra Singh², Sunil Kumar Tailor³ and Amar C. Yadav⁴

1. Research Scholar Tantia University, Sri Ganganagar.
2. Dr. (Prof.) RV College of Nursing, Karnataka Bangalore.
3. Nursing Tutor AIIMS Bhopal, M.P.
4. Faculty of PG Nursing Govt. College of Nursing MBGH, Udaipur (Raj.).

Manuscript Info

Manuscript History

Received: 20 January 2021

Final Accepted: 24 February 2021

Published: March 2021

Key words:-

Acceptance, Attitude, Covid-19, Vaccination

Abstract

The Covid-19 pandemic is expected to continue to impose enormous burdens of morbidity and mortality while severely disrupting societies and economies worldwide. A vaccine provides the best hope for a permanent solution to controlling the pandemic. However, to be effective, a vaccine must be accepted and used by a large majority of the population.

Aim: The aim of this study was to understand the acceptance and attitudes towards Covid-19 vaccination.

Methodology: The current study used a cross-sectional design based on an online questionnaire. 944 responses were selected by non-probability snowball sampling technique. The samples were including public of Udaipur district residents during the rapid rise period of the Covid-19 outbreak. An online structured questionnaire was developed by using Google forms, with a consent form appended to it. Three point likert scale (Agree, Not sure, and Disagree) consist of total 16 statements were prepared to assess attitude towards COVID-19 vaccination. Frequency and percentage distribution was used to present the data.

Results: Results indicated that overall acceptance of Covid-19 vaccine in that majority of participant (N=750, Percentage=80.5%) would accept Covid-19 vaccine, whereas 3.4% participant (N=32) would not accept Covid-19 vaccine and remaining 16.1% participants (N=152) were neutral to get vaccine. In addition, Male participants (N=580) were more likely to accept Covid-19 vaccines compared to female participants (N=180). Majority of the participants (N=660, Percentage=69.9%) were agreed that the covid-19 vaccine is safe to receive, 64.4% respondents (N=608) were agreed that Covid-19 Vaccine undergoes enough safety and efficacy trial.

Conclusion: It is concluded that acceptance towards covid-19 vaccination is high. They believed that vaccine is safe and they will recommended to their family members also. Government effort should be made to fast distribute Covid-19 Vaccination.

Copy Right, IJAR, 2021,. All rights reserved.

Corresponding Author:- Sandeep Garg

Address:- Research Scholar Tantia University, Sri Ganganagar

Introduction:-

Covid-19 is the global pandemic disease caused by a coronavirus called SARS-CoV-2. A novel corona virus was first identified at Wuhan, china in 2019. Affected People have fever, cough associated with dyspnoea, shortness of breath, chest pain or pressure to all age group and need immediate health care facility. Among all symptomatic patients, about 80% patients not require any hospitalization and they recover at home, 15% may be seriously ill and 5% may require critical care. People of age 60 or more with any medical illnesses like hypertension, diabetes, cancer etc. are vulnerable for serious illness. Polymerase chain reaction test is most commonly used to detect the SARS CoV-2.

Covid-19 vaccination is one of many steps you can protect yourself and others from Covid-19. The Covid-19 vaccination drives were virtually launched on 16th January 2021 by prime minister Mr. Narendra Modi in New Delhi, India. The government of India decided that the health care workers and frontline workers vaccinated in the first group. In the second group, age above 50 and below age 50 with any comorbid condition.

Acceptance is the act of accepting something. Attitude refers to feelings, beliefs, and behaviour predispositions directed towards people, groups, ideas, or objects. In this study, we have asseed both acceptance and attitude towards the Covid-19 vaccination.

Immunization systems can only be effective if they have high acceptance and coverage rates. To do so, it's crucial to learn about Indians' risk perceptions of Covid-19, their acceptance of a Covid-19 vaccine, and their trust in media outlets, especially those used to learn about the Covid-19 pandemic.

Several vaccine candidates are being clinically tested in response to the 2019 coronavirus disease (COVID-19) pandemic. The aim of this study was to understand the acceptance and attitudes towards Covid-19 vaccination, when it becomes available in India, among the general public of Udaipur district.

Review of Literature:-

Emily A. Largent, J. (2020) conducted a research on US Public Attitudes Against Covid-19 Vaccine Mandates. This survey research was exempted by the University of Pennsylvania's institutional review board. The findings are based on a Gallup Panel web study conducted by 2730 consenting US adults aged 18 and older between September 14 and 27, 2020. Overall, 61.4 percent of respondents said they were likely to receive the Covid-19 vaccine. Republicans and Independents, on the other hand, were slightly less likely than Democrats to get vaccinated, and Black respondents were significantly less likely to get vaccinated than non-Black respondents. Before considering mandates, the researchers concluded that public health campaigns aimed at making Covid-19 vaccines more affordable and improving adoption should be continued. Only if Covid-19 appears to be poorly contained and voluntary vaccine uptake is insufficient should mandates be used.

Lazarus et al. (2020) conducted a survey of 13,426 people in 19 countries to assess future acceptance rates and factors affecting acceptance of a Covid-19 vaccine. 71.5 percent said they would be very or very likely to get a COVID-19 vaccine, and 48.1 percent said they would follow their boss's advice. Acceptance rates varied from nearly 90% (in China) to less than 55% (in the United States) (in Russia). Respondents who had a higher degree of confidence in government information were more likely to consider a vaccine and follow their employer's advice.

Malik, McFadden, Elharake, & Omer, (2020) conducted a study to assess the determinants of Covid-19 vaccine acceptance in the US. Researchers used an online platform to survey the adult population of the United States in May 2020 to learn about risk perceptions around the Covid-19 pandemic, acceptance of a Covid-19 vaccine, and confidence in information sources. According to the results, 450 (67%) of the 672 participants said they would consider a Covid-19 vaccine if it was recommended for them. Males (72%) were more likely to accept the vaccine than females, older adults (55 years; 78%) were more likely to accept the vaccine than younger adults, Asians (81%) were more likely to accept the vaccine than other racial and ethnic groups, and college and/or graduate degree holders (75%) were more likely to accept the vaccine than those with less than a college degree. The researchers found that despite a 67% acceptance rate for the Covid-19 vaccine, there were significant demographic and regional differences in vaccine acceptance. Prior to the introduction of a Covid-19 vaccine in the United States,

public health officials and policymakers must prioritise successful Covid-19 vaccine acceptance messaging for all Americans, especially the most vulnerable.

El-Elimat, AbuAlSamen, Almomani, Al-Sawalha, & Alali, (2020) conducted a study to investigate the acceptability of COVID-19 vaccines and its predictors in addition to the attitudes towards these vaccines among public in Jordan. Adult participants from Jordan were surveyed on the acceptability of COVID-19 vaccines using an online, cross-sectional, and self-administered questionnaire. The predictors of COVID-19 vaccine acceptability were discovered using logistic regression analysis. The survey had a total of 3,100 participants, according to the results. In Jordan, public acceptance of COVID-19 vaccines was relatively poor (37.4%). Covid-19 vaccines were more likely to be accepted by men and those who had received the seasonal influenza vaccine. Similarly, participants who believed that vaccines are generally safe and those who were willing to pay for vaccines, once available, were more likely to accept the COVID-19 vaccines. Researcher concluded that systemic approaches are needed by public health authorities to reduce the levels of vaccines' hesitancy and increase their acceptance.

Nzaji et al., (2020) conducted a study to estimate the acceptability of a future vaccine against COVID-19 and associated factors if offered in Congolese health-care workers, since they have the highest direct exposure to the disease. From March to April 2020, researchers conducted an observational cross-sectional analysis among 23 Congolese referral hospitals, including three university hospitals, in three towns. A logistic regression analysis was used to identify the associated factors of vaccination willingness. According to the findings, a total of 613 HCWs took part in the study and completed the questionnaire, with 312 (50.9%) men and 301 (49.1%) women participating. Just 27.7% of HCWs said that if a COVID-19 vaccine were available, they would consider it. Male healthcare staff (ORa=1.17, 95 percent CI: 1.15– 2.60), mainly physicians (ORa=1.59; 95 percent CI:1.03– 2.44) and having a positive attitude toward a COVID-19 vaccine (ORa=11.49; 95 percent CI: 5.88– 22.46) were significantly correlated with reporting willingness to be vaccinated, according to the logistic regression study. The acceptability of vaccination against COVID-19, among other things, education among HCWs is critical, according to the researchers, because health professionals' attitudes toward vaccines are a big factor in their own vaccine uptake and probability of prescribing the vaccine to their patients.

Harapan et al., (2020) conducted a study to assess the acceptance of a 50 or 95% effective COVID-19 vaccine, when it becomes available in southeast Asia, among the general population in Indonesia. Between March 25 and April 6, 2020, a cross-sectional online survey was conducted. The results show that 93.3 percent of 1,359 respondents (1,268/1,359) would like to be vaccinated for a vaccine that is 95 percent effective, but that approval drops to 67.0 percent (911/1,359) for a vaccine that is 50 percent effective. Being a healthcare worker and having a higher perceived risk of COVID-19 infection is correlated with higher acceptance for a 95 percent successful vaccine, adjusted odds ratio (aOR): 2.01; 95 percent CI: 1.01, 4.00 and aOR: 2.21; 95 percent CI: 1.07, 4.59, respectively; being retired was associated with less acceptance compared to civil servants. Being a healthcare worker was also linked to greater acceptance of a 50% successful vaccine. The baseline efficacy of a COVID-19 vaccine was found to have a significant impact on vaccine acceptance, according to the researchers. It can be difficult to get the general public to consider a vaccine with a low efficacy.

A study finds that the majority of people in Singapore are more likely to get vaccinated if their friends do so. A study of 1,000 nationally representative people was conducted by Kantar in Singapore, Australia the USA, UK, France Germany and Italy between 10 – 16 November. People in Singapore are the most likely to accept that catching COVID-19 will have a significant impact on their health out of all the countries surveyed (67 percent agree). However, there are concerns in Singapore regarding a COVID-19 vaccine. Despite the fact that over two-thirds of people believe their health would be severely harmed if they caught COVID-19, 28 percent of Singaporeans claim they would 'definitely' get a COVID-19 vaccine when it becomes available, and 45 percent say they would 'probably' get one when it becomes available. Singaporeans are the least likely to believe vaccines are safe in general, with just 61 percent saying so, compared to 62 percent in France and 75 percent in the United Kingdom. They are also the least likely to believe vaccines are safe. In comparison, 72 percent in France and 78 percent in Australia agree. Some of the apprehension regarding any vaccine stems from concerns about its efficacy as a result of its rapid growth. In Singapore, 65 percent of citizens agree with this assertion to some degree.

Khan, S., (2020) conducted a study to analyse the beliefs and barriers associated with COVID-19 vaccination among the general population in India. The research was carried out using an online self-administered questionnaire that was distributed to India's general population in October 2020. According to the findings, 55 percent of 351

participants believe the COVID-19 vaccine will be secure, whereas only 46.2 percent believe it will be efficient. The majority of the participants (86.3%) planned to get the COVID-19 vaccine, while 13.7 percent expressed reservations. However, only 65.8% of those polled said they would get vaccinated as soon as possible if the vaccine were affordable. Concerns about vaccine side effects were also established as a major obstacle to vaccine acceptance, according to the report. The study's main results can be used to help organise vaccine campaigns. Furthermore, if additional tests may affirm the safety and efficacy of available vaccine candidates, vaccine acceptance can be increased within the population.

Material and Methods:-

The current study used a cross-sectional design based on an online questionnaire. This was carried out in Udaipur district from December 10 to January 10. A non-probability snowball sampling technique was used for online survey. A total of 944 responses were received out of 1200. The samples were including public of Udaipur district residents during the rapid rise period of the COVID-19 outbreak. Because it was not feasible to do a community-based national sampling survey during this special period, we decided to collect the data online.

An online structured questionnaire was developed by using Google forms, with a consent form appended to it. The link of the questionnaire was sent through e-mails, WhatsApp and other social media to the contacts of the investigators. The participants were encouraged to roll out the survey to as many people as possible. Thus, the link was forwarded to people apart from the first point of contact and so on. On receiving and clicking the link the participants got auto directed to the information about the study and informed consent. After they accepted to take the survey they filled up the demographic details. Then a set of several questions appeared sequentially, which the participants were to answer. This Google form contained a brief introduction on the background, objective, procedures, voluntary nature of participation, declarations of anonymity and confidentiality, and notes for filling in the questionnaire.

The questionnaire consisted of two parts: demographics and attitude scale. Demographic variables included gender, age, area of residence, occupation and educational status. Three point likert scale (Agree, Not sure, and Disagree) consist of total 16 statements were prepared to assess attitude towards COVID-19 vaccination. Participants were asked whether they accept to receive COVID-19 vaccines when they are approved and available in Udaipur district with 3 response levels (acceptance, neutral, non acceptance). The questionnaire was initially designed in English and translated into Hindi by Google translator to match with the local colloquial Hindi terminology used by physicians and health educators in the community. Frequency and percentage distribution was used to present the data.

Findings:

Section-I Demographic distribution of participant

Table No.1:- Respondent Demographic Characteristics (N=944).

Demographic Variable	Frequency (f)	Percentage of respondents
Gender		
Male	728	77.1%
Female	216	22.9%
Transgender	0	0%
Age of Participant		
Less than 18	4	0.4%
18-30	776	82.20%
31-40	116	12.30%
41-50	40	4.20%
More than 50	8	0.8%
Area of residence		
Rural	604	64%
Urban	340	36%
Occupation		
Health care worker	872	92.4
Other than health worker	72	7.6
Education		

Less than a bachelor's degree	236	25%
Bachelor's degree or higher	696	73.7%
Uneducated	12	1.3%

Table No. 1:- presents sample demographic characteristics, which largely reflect those of the Udaipur district population as a whole.

Distribution of participant according to gender shows that majority of respondents (N=728, Percentage=77.1%) were male and remaining 22.9% respondents (N=216) were female. No one respondent was found to be transgender.

Distribution of respondents according to age, shows that majority of respondents (N=776, Percentage=82.20%) belonged to the age group between 18-30 years, 12.30% respondents (N=116) belonged to the age group between 31-40, 4.20% respondents (N=40) belonged to the age group between 41 to 50 years, 0.8% respondents (N=8) belonged to the age group of more than 50 years and 0.4% respondents (N=4) belonged to age group of less than 18 years.

Distribution of respondents according to their residence; majority of respondents (N=604, Percentage=64%) belonged to rural area and remaining 36% respondents (N=340) belonged to urban area.

Distribution of respondents according to their occupation shows that majority of respondents (N=872, Percentage=92.4%) were health care worker and remaining 7.6% respondents (N=72) were not related health care sector.

Distribution of respondents according to their educational status shows that majority of respondents (N=696, Percentage=73.7%) having Bachelor's or higher degree, 25% respondents (N=236) have less than a bachelor's degree remaining 1.3% respondents (N=12) were uneducated.

Section-II: Acceptance of Covid-19 Vaccine

Table No. 2:- Acceptance of Covid-19 Vaccine N=944.

Statement	Acceptance		Neutral		Non Acceptance	
	F	%	F	%	F	%
If the covid-19 vaccine became available in the upcoming days, would you like to get it	760	80.5%	152	16.1	32	3.4%

Table number 2:- indicated overall acceptance of Covid-19 vaccine in that majority of participant (N=750, Percentage=80.5%) would accept Covid-19 vaccine, whereas 3.4% participant (N=32) would not accept Covid-19 vaccine and remaining 16.1% participants (N=152) were neutral to get vaccine.

Table: 3:- Acceptance towards covid-19 vaccination according to demographic variables.

Socio demographic		Yes		Not Sure		No		Total
		F	%	F	%	F	%	
Age of child	Below 30 Years	620	79.49%	128	16.41%	32	4.10%	780
	More than 30 Years	140	85.37%	24	14.63%	0	0%	164
Gender	Male	580	79.67%	128	17.58%	20	2.75%	728
	Female	180	83.33%	24	11.11%	12	5.56%	216
Education	Less than a bachelor's degree	184	77.97%	44	18.64%	8	3.39%	236
	Bachelor's degree or higher	564	81.03%	108	15.52%	24	3.45%	696
	Uneducated	12	100%	0	0%	0	0%	12
Area of residence	Rural	484	80.13%	100	16.56%	20	3.31%	604
	Urban	276	81.18%	52	15.29%	12	3.53%	340
Occupation	Health care worker	700	80.28%	140	16.06%	32	3.67%	872
	Other than health worker	60	83.33%	12	16.67%	0	0%	72

Out of 780 Participants who belonged to age group below 30 years, majority of participants (N=620, Percentage=79.49%) would accept Covid-19 vaccine, 16.41% participants (N=128) were not sure and remaining 4.10% respondents (N=32) would not accept Covid-19 vaccination. Whereas out of 164 respondents who belonged to age group more than 30, majority of respondents (N=140, Percentage=85.37%) would accept Covid-19 vaccine, 14.63% respondents (N=24) were not sure and remaining no one respondents would accept Covid-19 vaccination.

Out of 728 male participants, majority of participants (N=580, Percentage=79.67%) would accept Covid-19 vaccine, 17.58% participants (N=128) were not sure and remaining 2.75% respondents (N=20) would not accept Covid-19 vaccination. Whereas out of 216 female participant, majority of respondents (N=180, Percentage=83.33%) would accept Covid-19 vaccine, 11.11% respondents (N=24) were not sure and remaining 5.56% respondents (N=12) would not accept Covid-19 vaccination.

Out of 236 Participants with less than a Bachelor's degree, majority of participants (N=564, Percentage=81.03%) would accept Covid-19 vaccine, 15.52% participants (N=108) were not sure and remaining 3.45% respondents (N=24) would not accept Covid-19 vaccination. Whereas out of 696 respondents who were Bachelor's degree or higher degree holder, majority of respondents (N=564, Percentage=81.03%) would accept Covid-19 vaccine, 15.52% respondents (N=108) were not sure and remaining 3.45% respondents (N=24) would not accept Covid-19 vaccination. 100% Participants (N=12) who were uneducated would accept Covid-19 Vaccine.

Out of 604 Participants who belonged to rural area, majority of participants (N=484, Percentage=80.13%) would accept Covid-19 vaccine, 16.56% participants (N=100) were not sure and remaining 3.31% respondents (N=20) would not accept Covid-19 vaccination. Whereas out of 340 respondents belonged to urban area, majority of respondents (N=276, Percentage=81.18%) would accept Covid-19 vaccine, 15.29% respondents (N=52) were not sure and remaining 3.53% respondents (N=12) would not accept Covid-19 vaccination.

Out of 872 Participants who were health care worker, majority of participants (N=700, Percentage=80.28%) would accept Covid-19 vaccine, 16.06% participants (N=140) were not sure and remaining 3.67% respondents (N=32) would not accept Covid-19 vaccination. Whereas out of 72 worker except health worker, majority of respondents (N=60, Percentage=83.33%) would accept Covid-19 vaccine, 16.67% respondents (N=12) were not sure and no one respondents would accept Covid-19 vaccination.

Section-III Attitude of Covid-19 Vaccine

Table No. 4:- Attitude of Covid-19 Vaccine N=944.

Sr. No.	Statement	Agree		Not Sure		Disagree	
		F	%	F	%	F	%
1.	The covid-19 vaccine is safe to receive	660	69.9%	256	27.1%	28	3.0%
2.	Covid-19 Vaccine undergoes enough safety and efficacy trial	608	64.4%	300	31.8%	36	3.8%
3.	Politics involved in covid-19 Vaccination	380	40.3%	304	32.2%	260	27.5%
4.	Pharma companies are not getting enough time and freedom for the clinical trial	444	47.0%	308	32.6%	192	20.3%
5.	Pharma companies are not following standard guidelines as Government urge to launch covid-19 vaccine	360	38.1%	312	33.1%	272	28.8%
6.	Not everyone who is eligible for the vaccine needs to receive it because herd immunity is sufficient to protect everyone	412	43.6%	220	23.3%	312	33.1%
7.	Present covid-19 vaccine will be effective for new strain of coronavirus	368	39.0%	484	51.3%	92	9.7%
8.	I would build immunity by exposure to an infected individual rather than receive the vaccine	384	40.7%	100	10.6%	460	48.7%
9.	People have mistrust in benefit of the covid-19 vaccine	384	40.7%	304	32.2%	256	27.1%
10.	I will recommend covid-19 vaccination for my	736	78.0%	164	17.4%	44	4.7%

	family member						
11.	I am worried about side effects of covid-19 vaccine for myself	536	56.8%	176	18.6%	232	24.6%
12.	Vaccination against covid-19 is not required for thos who were already infected with corona virus	248	26.3%	212	22.5%	484	51.3%
13.	Children have not need for vaccination	248	26.3%	280	29.7%	416	44.1%
14.	Two dose of Covid-19 vaccine is enough for immunity against corona virus	408	43.2%	432	45.8%	104	11.0%
15.	We have enough evidence that Covid-19 Vaccine prevents the recurrence of infection	296	31.4%	504	53.4%	144	15.3%
16.	I think day by day publicity of covid-19 vaccine is growing up	852	90.3%	56	5.9%	36	3.8%

Majority of the participants (N=660, Percentage=69.9%) were agreed that the covid-19 vaccine is safe to receive, 64.4% respondents (N=608) were agreed that Covid-19 Vaccine undergoes enough safety and efficacy trial, 40.3% respondents (N=380) agreed that Politics were involved in covid-19 Vaccination, 47.0% participant (N=444) agreed that Pharma companies are not getting enough time and freedom for the clinical trial, 38.1% respondents (N=360) were agreed that Pharma companies are not following standard guidelines as Government urge to launch covid-19 vaccine, 43.6% respondents (N=412) were agreed that not everyone who is eligible for the vaccine needs to receive it because herd immunity is sufficient to protect everyone, 39.0% respondents (N=368) were agreed that Present covid-19 vaccine will be effective for new strain of coronavirus, 40.7% participant (N=384) were agreed to build up immunity by exposure to an infected individual rather than receive the vaccine, 40.7% participant (N=384) were agreed that people have mistrust in benefit of the covid-19 vaccine, 78.0% respondents (N=736) were agreed to recommend covid-19 vaccination for my family member, 56.8% respondents (N=536) were agreed to worried about side effects of covid-19 vaccine for myself, 43.2% respondents (N=408) were agreed that two dose of Covid-19 vaccine is enough for immunity against corona virus, 90.3% participants (N=852) were agreed that day by day publicity of covid-19 vaccine is growing up.

Beside 51.3% participants (N=484) were not agree that vaccination against covid-19 is not required for thos who were already infected with corona virus, 44.1% respondents (N=248) were not agree children had not need for vaccination and 53.4% respondents (N=504) were not sure that Covid-19 Vaccine prevents the recurrence of infection.

Conclusion:-

It is concluded that acceptance towards covid-19 vaccination is high. Majority of respondents would get Covid-19 vaccine and have positive attitude towards Covid-19 Vaccine. They beleived that vaccine is safe and they will recommended to their family members also. Government effort should be made to fast distribute Covid-19 Vaccination.

References:-

1. Emily A. Largent, J. (2020, December 18). US Public Attitudes Toward COVID-19 Vaccine Mandates. Retrieved January 21, 2021, from https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2774317?utm_campaign=articlePDF&utm_medium=articlePDFlink&utm_source=articlePDF&utm_content=jamanetworkopen.2020.33324
2. Lazarus, J., Ratzan, S., Palayew, A., Gostin, L., Larson, H., Rabin, K., . . . El-Mohandes, A. (2020, October 20). A global survey of potential acceptance of a COVID-19 vaccine. Retrieved from [https://www.nature.com/articles/s41591-020-1124-9#:~:text=Of%20these%2C%2071.5%25%20of%20participants,55%25%20\(in%20Russia\).](https://www.nature.com/articles/s41591-020-1124-9#:~:text=Of%20these%2C%2071.5%25%20of%20participants,55%25%20(in%20Russia).)
3. Malik, A., McFadden, S., Elharake, J., & Omer, S. (2020, August 12). Determinants of COVID-19 vaccine acceptance in the US. Retrieved January 23, 2021, from <https://www.sciencedirect.com/science/article/pii/S258953702030239X>
4. El-Elimat, T., AbuAlSamen, M., Almomani, B., Al-Sawalha, N., & Alali, F. (2020, January 01). Acceptance and Attitudes Toward COVID-19 Vaccines: A Cross-Sectional Study from Jordan. Retrieved January 21, 2021, from <https://www.medrxiv.org/content/10.1101/2020.12.22.20248676v1>

5. Nzaji, M., Ngombe, L., Mwamba, G., Ndala, D., Miema, J., Lungoyo, C., . . . Musenga, E. (2020, October 29). [Full text] Acceptability of Vaccination Against COVID-19 Among Healthcare Workers: POR. Retrieved January 22, 2021, from <https://www.dovepress.com/acceptability-of-vaccination-against-covid-19-among-healthcare-workers-peer-reviewed-fulltext-article-POR>
6. Harapan, H., Wagner, A., Yufika, A., Winardi, W., Anwar, S., Gan, A., . . . Mudatsir, M. (2020, June 30). Acceptance of a COVID-19 Vaccine in Southeast Asia: A Cross-Sectional Study in Indonesia. Retrieved January 21, 2021, from <https://www.frontiersin.org/articles/10.3389/fpubh.2020.00381/full>
7. Attitudes towards COVID-19 vaccination in Singapore. (n.d.). Retrieved January 22, 2021, from <https://www.kantar.com/inspiration/coronavirus/attitudes-towards-covid-19-vaccination-in-singapore>
8. Khan, S., Faslu, R., C. V., H., Tiwari, R., & Dhama, K. (n.d.). Covid-19 vaccine acceptance: Beliefs and barriers associated with vaccination among the general population in India. *Journal of Experimental Biology and Agricultural Sciences*. 2020. Retrieved January 23, 2021, from https://www.jebas.org/abstract.php?article_id=439.