Original Research Article

Knowledge about Mental Health and Acceptance towards COVID-19 Vaccination in Adult Individuals of Ahmedabad

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ABSTRACT

Background: The new Coronavirus disease (COVID19) emerging in China has quickly crossed borders, infected people around the world, and sparked a massive public response. Much attention has been paid to vaccination with COVID19 to control this circumstance. All of these kinds of stuff are led to a higher stratum of anxiety towards the COVID-19 vaccination Process in Adult individuals.

Aims and Objective: To determine the knowledge about anxiety and acceptance towards COVID-19 vaccination in Adults individuals of Ahmedabad.

Method: A cross-sectional study was carried out in adults in Ahmedabad. An online survey was carried out with a self-administered questionnaire. The questionnaire contains specific questions about anxiety and acceptance of the Covid-19 vaccination. A total of 10 items are rated on a 5 - point Likert scale. In which 5 items were for the anxiety component and 5 items were for the acceptance component. The data analysis was carried out with Microsoft Excel 2019.

Results: Our finding suggests that from 171 respondents 85(50%) of the adult individual were not anxious, 59(34%) were mild anxious, 24(14%) were Moderately anxious, 3(2%) were severely anxious towards the Covid-19 Vaccination process. 9(28%) adult individuals were ready to accept the Covid-19 vaccination process, 115(67%) were not sure, 47(5 %) of adult individuals were refused the Covid-19 Vaccination process.

Conclusion: Half of the people were having mild to severe levels of anxiety towards the Covid-19 vaccination process and most of the people are not sure about the Covid-19 vaccination process.

Key Words: Anxiety, Acceptance, Covid-19 vaccination, Adult Individuals, Awareness.

INTRODUCTION

The origin of the 2019 Coronavirus disease (COVID19) outbreak caused by the Severe Acute Respiratory Syndrome Coronavirus 2 (SARSCoV2) was first discovered in December 2019 in Wuhan, China. [1] This phenomenon sparked a massive public response. The World Health Organization (WHO) declared this outbreak a global pandemic on March 12, 2020, with an unstoppable increase in reported cases. [2] The pandemic had a profound and detrimental impact on various aspects of our societies, from health systems to economic growth and individual life.

India is a developing country and the current generation is never been exposed to such a massive pandemic until the first case infected with COVID19 was reported in India on January 30, 2020. Since then, further cases with 878,254 sufferers have been reported; 553,470 recoveries (including one migration); and 23,174 deaths in the country so far as of July 13, 2020. As new cases reported, the Ministry of Health and Family Welfare has put tough

measures in place to regulate the transmission of the virus, including restrictions on outdoor activities, school closings, reduced social contacts, and a ban on religious gatherings have created an atmosphere of fear and concern among the population. [2]

The first case of Covid-19 grows to be observed in Ahmedabad on March 17, 2020. [3] Malarkordi Senniyappan et al. conducted A questionnaire-based survey aimed to assess the perception and anxiety of the Indian population regarding the Covid-19 pandemic and concluded that the general public of the Indian population appears to have a negative perception of this pandemic situation and a mild to moderate level of anxiety. [4]

People infected with the new coronavirus are the primary supply of contamination. It is currently believed that most of the transmission is airborne, with a drop being released when the infected person coughs, sneezes, or speaks. The duration depends on the type of surface. Infection can also occur when a person touches an infected surface and then touches their eyes, nose, or mouth which is known as fomite transfer. The median incubation is from 1–14 days. The exact interval at which a person is infectious with Covid-19 is uncertain. According to current evidence, the infection begins 2 days before the onset of symptoms and decreases rapidly within the first week after the onset of symptoms. [5]

Covid-19 affects different age groups in numerous ways. Most infected people can develop mild to moderate health problems and recover without hospitalization. Most typical symptoms: Fever, cough, weakness, headache, muscle pain, sore throat, problem in breathing, loss of appetite, nausea, vomiting, diarrhea, altered mental status, loss of smell, loss of taste.[5] As of June 15, 2021, over 175 million COVID-19 cases, as well as over 3.8 million death, were recorded in 221 countries and territories. [6]

The government of India's Ministry of Health and Family Welfare has adopted guidelines for the prevention and control of COVID19 in the community, including maintaining the physical distance of at least 1 meter and use an alcohol-based hand sanitizer (for at least 20 seconds). This includes the strict practice of covering your mouth and nose with a handkerchief when coughing or sneezing and disposing of the handkerchiefs, to self-monitor the health of everyone, and reporting illnesses as soon as possible. [7] The face mask has been recognized as a suitable measure within the community to reduce the Covid-19 spread across the world.

The Covid-19 vaccine is one of the options to control this pandemic. On January 16, 2021, a major vaccination campaign was started in India with the two vaccines Covishield and Covaxin, but on May 1, 2021, India received the first batch of the third vaccine name Sputnik V vaccine from Russia. India's General Medicines Controller has approved these vaccines for public use. The Indian government has decided to vaccinate the population over the age of 18 by August 2021. [8, 9]

As of September 4, 2019, India had vaccinated 67.6 crore people, which is about 11% of the fully vaccinated population. [10] However, this vaccination rate is not enough to prevent this pandemic. Covid-19 Vaccine hesitancy is a growing concern around the world. Vaccination hesitation has been identified by the World Health Organization (WHO) as one of the top ten global health threats in 2019 [11] and hesitation is also a problem with Covid-19 vaccination. A survey conducted in several countries found that only 71.5% of respondents said they had a high or medium chance of receiving a Covid19 vaccine. [12] A quick systematic review of 23 peer-reviewed studies and 103 additional syndicated surveys on Covid-19 vaccine hesitancy in the US and worldwide showed that perceived risk, safety concerns, vaccine effectiveness, doctor recommendations, and inoculation history

were common Factors influencing vaccine hesitancy. [13]

In September 2021, 66% of the grown-up population in India obtained at the least the primary dose of the Covid-vaccine, and 23% obtained each dose of the vaccine. In September 2021, 66% of the adult population in India received at least the first dose of the Covid-vaccine and 23% received both doses of the vaccine. [14] Tamam el-elimat et al. did A cross-sectional study of Jordan that aimed to examine the acceptance of Covid-19 vaccines and their predictors, as well as the attitudes of the Jordanian public towards these vaccines, concluded that Jordan is one of the countries with the lowest acceptance of the Covid-19 vaccine. [15]

The present study aims to determine the knowledge about anxiety and acceptance towards Covid-19 vaccination in Adults individuals of Ahmedabad. The purpose of the Study is to intensify the awareness program and address the mental health issues of people towards the Covid-19 Vaccination drive.

METHOD
Data of 171 Adult individuals of Ahmedabad was collected. This was a cross-sectional observational study and Snowball sampling was used. A self-administered questionnaire was developed and spread through Google forms. The link of the questionnaire was sent through WhatsApp and other Social media and the link was also forwarded to people apart from the first point of contact and so on. After they accepted to take the survey they filled up the demographic details and several questions related to Covid-19 vaccine anxiety and acceptance.

Participants age 20 to 40 years, able to understand English, and those who were not taking Vaccines were included. A person with a previous history of psychiatric condition which is diagnosed by doctors and those who have uncorrected visual disabilities were excluded from the study.

The online self-administrated questionnaire was developed by the investigator. The data Collection was initiated on February 28, 2021, and closed on May 13, 2021. Total 10 items rated on 5-point Likert scale Format.

5- item for anxiety Component and 5-item for acceptance Component. For the anxiety component 5- Point Likert Scale ranging from Never-1, Rarely-2, Sometimes-3, Often-4, Always- 5. Scoring of the questions: 5 to 10 = Not Anxious, 11 to 15 = Mild Anxious, 16 to 20 = Moderately Anxious, 21 to 25 = Severely Anxious

For Acceptance Component 5- Point Likert Scale ranging from Strongly disagree-1, Disagree-2, Neither agree nor disagree-3, Agree-4, Strongly agree- 5. Scoring of the questions: 5 to 11 = Disagree, 12 to 18 = Neutral, 19 to 25 = Agree. Statistical analysis was conducted with Microsoft Excel-2019.
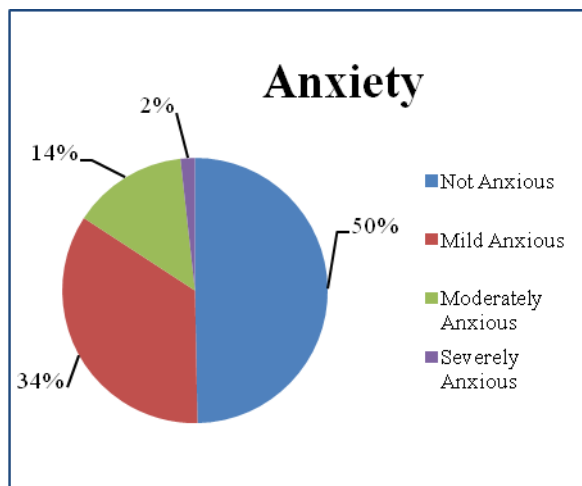
RESULTS
The results show the descriptive character of the study, From 171 responses 127(74.26%) were female and 44(25.73%) were male. (Figure-1)
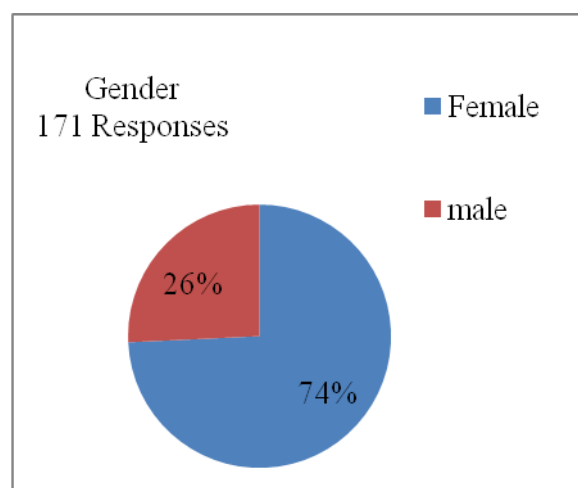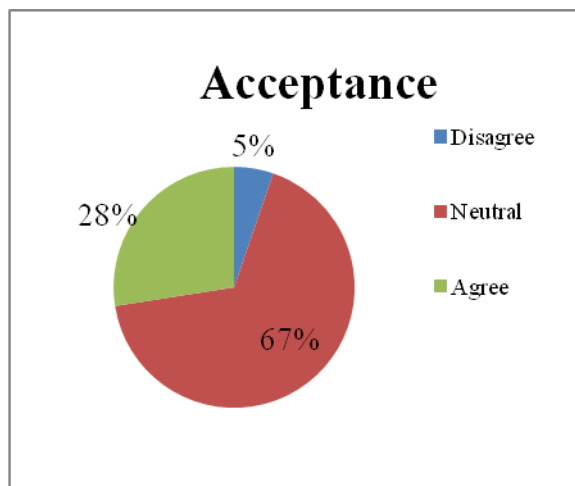

(Figure:1 Gender distribution of the respondents)

The anxiety component result suggests that 34% were mild anxious, 14% were moderately anxious,2% were severely anxious and 50% were not anxious. (Figure-2).

(Figure-2: Anxiety Component)

(Figure-3: Acceptance Component)

The Acceptance component results were 28% agreed, 5% disagreed and 67% were Neutral. (Figure-3)

Table- 1: Question Wise Analysis of Anxiety Component

Question	Never n (%)	Rarely n (%)	Sometimes n (%)	Often n (%)	Always n (%)
1) You feel anxious to take COVID– 19 vaccine because of fear of injection?	104 (61%)	26 (15%)	29 (17%)	5 (3%)	7 (4%)
2) You are worried about COVID-19 vaccine's short-term side effects like headache, fever and body aches.	58 (34%)	52 (30%)	41 (24%)	8 (5%)	12 (7%)
3) You are worried about COVID-19 Vaccine's long term side effects.	53 (31%)	36 (21%)	46 (27%)	19 (11%)	17 (10%)
4) You are anxious to take COVID - 19 vaccine because of news you have heard/read about COVID-19 vaccine.	83 (49%)	38 (22%)	37 (22%)	10 (6%)	3 (2%)
5) You think it would be nice to talk to someone about your worries for the COVID-19 Vaccine.	48 (28%)	32 (19%)	40 (23%)	28 (16%)	23 (13%)

Table – 2 : Question Wise analysis of Acceptance Component

Question	Strongly disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n(%)	Strongly agree n (%)
6) You believe only vaccination can prevent COVID-19.	19 (11%)	25 (15%)	81 (47%)	34 (20%)	12 (7%)
7) You believe only mask, sanitization and social distancing can prevent COVID-19.	13 (8%)	34 (20%)	61 (36%)	46 (27%)	17 (10%)
8) You believe along withCOVID-19 vaccine, mask, sanitization and social distancing can prevent COVID-19.	6 (4%)	10 (6%)	25 (15%)	65 (38%)	65 (38%)
9) You will only take COVID- 19 vaccine when many People in community have taken.	43 (25%)	57 (33%)	32 (19%)	28 (16%)	11 (6%)
10) You will take COVID-19 vaccine if you get chance?	8 (5%)	4 (2%)	18 (11%)	52 (30%)	89 (52%)

DISCUSSION

The present study evaluated the anxiety and acceptance towards Covid-19 vaccination in adult individuals of Ahmedabad. We found that 50% of the adult individuals were anxious, having mild to severe symptoms of anxiety, and the remaining 50% of individuals were not anxious towards the Covid-19 Vaccinations process. As a result of the acceptance component, 28 % of adult individuals accept the Covid-19 Vaccination process, 5% of adult individuals refused the vaccination process, and 67% of adult individuals are not sure about the Covid-19 vaccination process.

We found 4% of adult individuals severely anxious to take the Covid-19 vaccine because of fear of injection. Daniel Freeman et al. conducted a study on injection fears and Covid-19 vaccine hesitancy conclude that across the adult population, blood- injection-injury fears approx 10% of cases of Covid-19 vaccine

hesitancy. [16] 7% of adults individuals were severely anxious about the Covid-19 vaccine's short-term side effects and 10% of adults individuals were severely anxious about the Covid-19 vaccine's long-term side effects. Praveen SV et al. conducted a machine learning study to examines the attitudes of Indian citizens about the side effects of the Covid-19 vaccine and they concluded that only 21.3% of individuals tweets from people were feeling negative about the side effects of the vaccine. [17] 13 % of Subjects think it would be nice to talk to someone about their worries about the Covid-19 Vaccine. Shan Qiano et al. conducted a study of risk exposures, risk perceptions, negative attitudes towards vaccination against Covid-19, and acceptance of the vaccine against Covid-19 among university students in South Carolina and concluded that negative attitudes towards vaccination contributed to vaccine hesitancy. [18]

In the present study for the Acceptance component, we found that 38 % of adults individuals strongly agreed with the Covid-19 vaccine, mask, sanitization, and social distancing and believed that it can prevent Covid-19. 10 % of adults individuals strongly agreed that only mask, Sanitization, and social distancing can prevent Covid-19 and 7% of adults individuals strongly agree only Vaccination can prevent Covid-19, Whereas 52% of adult individuals think to take the Covid-19 vaccine if they get the chance and 6 % of adults individuals think that they will take vaccines when many people in the community have taken it and which suggest that people are having fear to take Covid-19 vaccine.

Malik Sallam conducted a study using a systematic search of the 31 peer reviews assessing the acceptance rates of Covid-19 vaccine from 33 different countries, amongst the adult individuals, the highest acceptance rates were found in Ecuador, Malaysia, Indonesia, and China and the lowest acceptance rates were found in Kuwait, Jordan, Italy, Russia, Poland, the United States, and France. [19] Kenneth Grace Danabl et al. conducted a community survey to understand the attitudes about COVID 19 vaccines and hesitancy about accepting them in urban and rural communities in Tamil Nadu, India, concluded that hesitancy about the vaccine in the urban and rural area of Tamil Nadu was high. [20]

In June 2020, Lazarus surveyed to determine the acceptance rate and factors influencing acceptance of a Covid-19 vaccine they concluded that 71.5% of participants said that they highly prefer or moderately prefer taking a Covid-19 vaccine, and 48.1% said that they would accept the preference of Covid-19 vaccine of their employers. [21] Antonia Bendau surveyed Covid-19 vaccine hesitancy and related fears and anxiety among adults in Germany and concluded that Covid-19 related anxiety and health fears were associated with greater vaccine acceptance, while fear of social and economic follow the opposite direction. [22]

Francisco et al. surveyed Covid-19 vaccines and mental distress to examine short-term changes in mental health following the receipt of the first dose of Covid-19 vaccine and concluded that getting the first dose of Covid-19 vaccine resulted in significant improvements in mental health. [23] Nisha et al. conducted a study in Chennai, Tamil Nadu, on the acceptance, Anxiety, and Apprehension of health workers regarding vaccination against Covid-19 concluded that there was hesitation amidst doctors and nurses regarding Covid-19 vaccination. [24]

Elise Paul et al. surveyed attitudes towards vaccines and the intention to vaccinate adults in the UK against Covid-19 and concluded that negative attitudes towards vaccines are a major public health concern. General mistrust in vaccines and concerns about future side effects will be barriers to achieve population immunity to Covid-19 through vaccination. [25] G.B. Turan et al. conducted a study to examine the association between coronavirus phobia

and attitudes towards the covid-19 vaccine in society and concluded that a moderate level of coronavirus phobia is observed in people with a positive attitude towards the vaccine. As coronavirus phobia is increased the positive attitude towards the covid-19 vaccine is also increased. [26] Fidelia Cascini, et al. conducted a systematic review regarding attitudes and hesitancy to receiving Covid-19 vaccination worldwide and their contributing factors among the general population they concluded that a variety of different factors contributed to increased hesitancy, including having a negative perception of vaccine efficacy, safety, convenience, and price. Some of the consistent socio-demographic groups identified as having greater hesitancy included: women, younger participants, and people with less education, lower incomes, uninsured, living in a rural area, and identified themselves as a racial minority. [27]

People in society face numerous demanding situations at some stage in this pandemic. A lack of awareness can harm the psychological well-being of a particular population. The government stepped up the educational program on the Covid-19 vaccination drive and built the Covid-19 vaccination center in urban and rural areas, thereby helping to reduce fears and increase acceptance of the Covid-19 vaccination drive. A study done in South Asia concluded that 96% agree that vaccination is safe among those who trust doctors and nurses. [28]

The study has several limitations. This study is limited to people who have a smartphone and could understand English as we use WhatsApp and other social media platforms, so may fail to reach people from lower socioeconomic classes and people with lower educational level. The proportion of male and female respondents is not the same. The future recommendation of the study is that it can be conducted in different age groups and different states of India for better regional/ state data.

CONCLUSION

In conclusion, our findings suggest that from 171 respondents half of the adult individuals were not anxious towards the Covid-19 vaccination drive, approximately one-third of adults were mild anxious, few people were moderately anxious, and hardly any adult individuals were severely anxious towards the Covid-19 Vaccination drive.

Large variability in Covid-19 vaccine acceptance rates was noted in adult individuals of Ahmedabad, from which 28% of adults were ready to accept the Covid-19 vaccination drive, most of the adults were not confident and only a few adults individuals hesitated towards the Covid-19 Vaccination drive. Hence, the health authorities should design awareness programs with the help of health care workers to spread more information about the safety and efficacy of the vaccines so it will help to prevent this pandemic and enhance vaccines acceptance for vaccination among the population.

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