



Perception on Covid-19 vaccinations among tribal communities in East Khasi Hills in Meghalaya

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Abstract

Background: Covid-19 an illness caused by SARS- COV-2 virus, it has killed millions of people all over the world and has wreaked havoc in India too. Even today there is no confirmed drug that can successfully tackle the illness. According to WHO, efficient vaccines and equitable access to them is vital to curbing the Covid-19 pandemic.


Materials and Methods: With the help of a semi-structured question guide, six focus group discussions were conducted in several villages in East Khasi hills Meghalaya, each focus group had 6-12 participants, thematic analysis was used to analyze the data.

Results: Most of the villagers are affected by covid-19 and the lockdown measures to curb it, but their perceptions on vaccinations were negative. Certain thematic areas that seemed to repeat were, religious beliefs, lack of awareness, individual freedom to choose, not feeling like they require it as they are just agricultural laborers, fear of side effects, and the prevalence of negative propaganda on social media. Most believe if it's mandatory to take the vaccine everyone would take it. Few village heads suggested better awareness might be able to convince a few.

Conclusion: The majority said they were not ready to get vaccinated, and cited religion and individual freedom to choose as the reasons for their reluctance. Health awareness programs and more pro vaccine governmental policies may help improve coverage.

Keywords: covid-19, covid vaccination, tribal health, vaccine hesitancy, Meghalaya

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Introduction

Coronavirus disease (COVID-19) is an illness caused by virus SARS-CoV-2. People who are infected with the virus will develop mild to moderate respiratory illness. Although, some will become seriously ill and require special medical attention. Older folks and those with chronic medical conditions like cardiovascular disease, diabetes etc. are more prone to develop serious illness. Anyone can be affected by Covid-19 and become seriously ill or die at any age. [1] **Global statistics:** As of 9th December 2021, 267,184,623 confirmed cases of Covid-19 have been documented all over the world, including 5,277,327 deaths. Southeast Asia alone has 44,693,929 confirmed cases of Covid-19. United States of America has the largest number of cases for a single country with 49,106,224 cases and 7,85,272. [2]

Indian Statistics: India has 34,666,241 confirmed cases and 474,111 documented deaths as of December 9th 2021.[2] The state of Maharashtra has 66 million confirmed Covid cases, most of them already recovered and the state also experienced the most deaths due to the pandemic. The state of Meghalaya as of now has a confirmed case tally of 84643 with 1476 deaths. [3] **Importance of vaccine equity and clinical trials:** According to WHO, efficient vaccines and equitable access to them is vital to curbing the Covid-19 pandemic. As the vaccination development and trials are necessary to create efficient vaccines, as it's impossible to ascertain the safety and efficacy of vaccines without clinical trials. For the clinical trials to be successfully implemented at a community level we need to understand the perception of clinical trials in the community to ensure sufficient participation. Vaccines that are effective and safe will just not stop the pandemic by itself, it is successful vaccination that ensures the pandemic is controlled. This emphasizes the importance of making sure that equitable access to

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vaccines is provided to Countries, states and people from all races and economic situations. [4]

Vaccination Statistics: India has managed to vaccinate 1,33,17,84,462, with 81 crores having received first dose vaccination, and 51,63,27,460 having received the second dose of vaccination. In Meghalaya has vaccinated 11,95,000 people at least a single time and 8,49,997 second dose vaccinations. The above-mentioned data is of December the 13th in the year 2021. [5] **Meghalaya demographic information:** Meghalaya has a population of 29,66,889 according to the 2011 census out of which 86.15% of the population are scheduled tribes. There are 14,91,832 males and 14,75,057 females. Most 79% of the population is in urban areas. The literacy rate among men and women are 75.95% and 72.89% respectively. Khasi are the most prominent tribal group in Meghalaya, comprising 34 % of the population. [6]

Rationale of this present study: Meghalaya is a state that is predominantly occupied by Scheduled tribes, they make 86.15 % of the state’s population [6], the Covid-19 vaccination rates in Meghalaya are 40.30% and 28.64 % for the first and second dose of Covid respectively. This is less than the Indian vaccination rate of India as of 13th December 2021, which is 58.69 % and 37.41% for first and second doses. This is attributed to its predominantly tribal population. So, it’s important to understand their perception on Covid-19 vaccination. In future, children will also need to be vaccinated and parents may have fears that might serve as a hindrance to the Covid-19 vaccination process. Khasi being one of the most predominant tribes in Meghalaya and inhabiting the east Khasi hills, it will be important to understand their perspective on the general vaccination and Covid-19 vaccination related issues. The main objectives of our study were to understand major reasons for Covid-19 vaccine hesitancy in this population; and to figure out solutions that can help improve Covid-19 vaccine coverage.

Materials and Methods

Participants: In this study focus group discussions were used to collect the necessary data. In order to get diverse opinions of opinion 6-12 participants from each village were recruited by convenience sampling, each focus group consists of the village headman and 2-3 village committee members, so was the village Asha and the Anganwadi worker, if both were available during the time, the rest of the participants were people who lived in the village, selected based on availability during the time of the focus group discussion. The common village participants who participated in the discussions, did many jobs from being farmers, teachers to home makers. The participants were designed to come from different walks of life to make sure diverse opinions are obtained as possible.

Procedure: Focus groups were conducted until saturation of opinions were observed. All focus groups were organized at the respective village office, the dates were fixed after conversations with the respective village men, who informed the participants of the FGDs to attend on pre scheduled dates. Each focus group lasted between 45-60 minutes. Before each discussion all participants were explained about the aim of the study, and an informed consent was signed by each participant. The discussion was monitored by a moderator and an assistant moderator who also served as a translator during the discussion, because she was the one who knew Khasi, the local language of the population, and took notes during the discussions and made sure the moderator did not overlook any participants trying to add comments. The conversations

were recorded through a voice recorder with permission of the participants. The conversations opened with questions on Covid-19 disease, the impact of the pandemic had on their lives then transitioned to their opinions on vaccinations generally, and Covid vaccines specifically, the focus group discussions ended with asking them what sort initiatives and policies from the side of the government and local health agencies might encourage them to take up the vaccine. The focus group question guide as shown in **Table-1**.

Table-1 Focus group question guide

Question types	Questions
Opening	Please introduce yourself.
Introduction	1. What is your understanding of Covid 19 infection? 2. How has the Covid 19 pandemic affected your life?
Transition	1. Do you think vaccines are useful? 2. What do you think about Covid 19 vaccinations?
Key	1. What do you are major objections to taking Covid 19 vaccinations in this community?
Ending	1. Can you give us suggestions on what sort of policies or benefits will improve Covid 19 vaccine uptake in this area?

Data management and statistical analysis: The audio tapes were manually transcribed by a translator into a Microsoft word document, using a thematic approach, data was examined for recurrent words or phrases, which were then systematically identified across the entire document, and grouped together by means of a coding system. Similar codes were grouped together into more general concepts (subcategories) and further categorized into main categories. Categorical variables were presented as frequency and percentage.

Ethical Clearance and Permissions: This present study was conducted with prior permission from Indian Institute of Public Health, Delhi with the Institutional Ethics Committee approval no: **IIPHD_IEC_S-18_2021**. We have got the oral consent with the study participants. We didn’t give any incentive to our study participants.

Results

In the study the estimated point of saturation was obtained at the end of six focus group discussions, the mean number of people who participated in the discussion was 49, out of which 12 (24%) were female and the rest were male. Most of the participants were from agricultural background (80%), either farmers who worked on their own land or agricultural laborers, the others were self-employed (8%), teachers (4%), Asha and Anganwadi workers (8%). The village headman of each village participated in each discussion, as did at least two members from the village committee. The themes, with its categories and corresponding codes are given in **Table-2**.

Table-2 Showing the themes, categories and codes from the data collected

Themes	Categories	Codes
Covid 19	<ol style="list-style-type: none"> 1. Awareness 2. Impact of the pandemic. 	<ol style="list-style-type: none"> 1. Most of the participants were quite aware of Covid 19. They were aware of its symptoms. While many played down its severity. They did initially fear it more than they did now. 2. The virus and the lockdown due to the pandemic has adversely impacted them. <ol style="list-style-type: none"> A. They were not able to sell their agricultural products. B. Emotional burden due to fear of the virus and the isolation. C. They were unable to access essential services like Markets and Health establishments due to curfew. D. Couldn't not see family who are bit further away.
Covid 19 vaccinations	<ol style="list-style-type: none"> 1. Perceptions on Covid vaccination. 2. Objections to vaccines. 3. Policies changes to encourage vaccine uptake. 	<ol style="list-style-type: none"> 1. Many in the community believed it's unnecessary. Only a few learned members understood it's significance, even many ASHAS and anganwadi were unvaccinated. 2. <ol style="list-style-type: none"> A. Belief in God over science. B. Vaccine can't stop Covid 19. C. They don't need it as they don't travel anywhere. D. Some believe it's a conspiracy to cause them harm. E. Many think it should be left to the choice of the individuals, and they don't need to explain why. F. Some say they fear the side-effects. 3. <ol style="list-style-type: none"> A. Village headmen and ASHAS think "adequate awareness is the key. B. Curbing misinformation and fake news on social media can help. C. Most say they will only take it if it's made mandatory. D. Will never take.

Discussion

There were not a lot of studies done to understand the perception of tribal communities on Covid vaccinations, especially in India, but a study conducted by Kumari et al [7], which tries to understand the perception of Indians on Covid-19 through focus group discussions found that, people they talked to had mixed reactions to take the vaccine, education or their occupation didn't make a difference as the opinions were equally split between all demographics. Concern regarding side-effects, distrust of the vaccine development process were the major reasons said by those who were not completely onboard to take the vaccine. A qualitative study done in the USA by Carson et al [8] to understand the decision-making factors in ethnic minorities, found that major factors that affect their distribution are inequitable distribution of vaccines, mistrust of unethical studies, mistrust of authority and lack of proper information sources. A qualitative study done in Vietnam by Duonga et al [9] found that people's assessment of risk and benefits from the vaccine, and the capacity of the local health agency to vaccinate the population effectively determined their decision to vaccinate themselves. Has the broad themes the results were fitted into as shown in **Figure – 1**.

Figure – 1 Showing of broad themes of the results



Awareness about the Covid-19 among the participants: People were quite aware of Covid-19 illness, about where it started, how it spreads, what sort of symptoms it can cause, but as of now they don't believe it's not that lethal as they previously thought, they feared the virus during the first and second waves but are relatively unfazed now. While a similar study done to gauge the perception of Indians found mixed reactions towards the vaccine [10], although the awareness was good in both the cases people didn't really welcome the vaccine here in this tribal population.

Effects of the Pandemic: The Pandemic has had financial effects on the community they believe, especially since Meghalaya has enforced strict measures to curb the spread of the virus [10], they were not able to

sell their agricultural products during the lockdowns, they weren't able to travel anywhere, they weren't even able to buy raw materials. The emotional stress during the lockdown was also pretty high as they were confined to their homes, fearing that they would be exposed to the virus. Even access to essential supplies like vegetables and access to health care facilities were adversely affected due to the pandemic. The effect of the pandemic was similar to the rest of the country. [11] All of them don't want additional waves of Covid-19 epidemics to affect their region and they don't want any more lockdowns.

Usefulness of Covid vaccine: Many in the community thought the vaccine was not useful, as they thought it's not able to stop the disease effectively as some people, they know got the disease even after they took the vaccine. One person from the community who was an elderly gentleman who is part of a village committee had claimed, "His next-door neighbor died because he took the vaccine," some others claim they hardly travel anywhere, they just work in their field for them it's not necessary to take a vaccine. In another study people have said they don't trust the usefulness of the vaccine because of the fear of the pharmaceutical companies that manufacture and test them. [12] The major reasons for vaccine hesitancy, the reason uttered most frequently is presented as the largest circle and so on as shown in **Figure – 2**.

Figure – 2 Showing major reasons for hesitancy of Covid vaccine



Major reasons for Covid-19 vaccine hesitancy: Most people cited religious reasons as to why many in the community don't want to take up the vaccine, majority of them being Christians, some of them claim their church is especially against modern medicine [13], they think life and death will happen according to will of God and they should not interfere in that, they believe God protects over them and they don't really need anyone or rather anything else to protect them, religion being a reason for vaccine hesitancy was documented in other studies also. [14] Individual's freedom to choose was also frequently used, by which they mean, they know a vaccine exists and maybe it can help in protecting them against the virus, but they don't feel like taking it now, and they don't feel like they have to give any reason to justify their decision. One person claimed that clubbing individual choices with vaccines is a recent phenomenon and has emerged as many have started to feel like they are being forced to take the vaccine. Many fear the side-effects of the

vaccine as they believe the vaccine itself is an unknown entity, they would risk getting exposed to a not so lethal illness, this reason was also documented in other studies conducted on the topic [7 – 8] rather than taking the vaccine and getting some unknown side effects. One or two have said it's a conspiracy to cause them harm, both the concept of Covid-19 virus and the vaccine are made up.

Suggestions to improve coverage: Most people have said if it's made mandatory by the government they will take it, as people who have vaccinated themselves now predominantly do so because their workplaces mandate it, if it's mandatory in schools, if it's mandatory in offices and its compulsory for all citizens to take then everyone will definitely take, but the same people have previously claimed vaccination should left to an individual's choice, and this contradiction in their response was puzzling. While many of them also claimed they will never take the Covid vaccine, even if the government gives them freebies and subsidies. One village headman said measures should be taken to curb misinformation that spreads through social media for people to embrace the vaccine, also more awareness is necessary among the public, as most people are still scared of it or don't think it's needed for them. Solutions will require actively engaging with communities to understand their concerns or barriers to vaccination and working together to develop approaches to encourage uptake and rebuild trust. [10]

Conclusion

This is one of the first studies that is done in Meghalaya related to the issue, six focus group discussions were conducted until saturation, data was collected on topics of Covid-19 and Covid-19 vaccinations. It seems like people are aware of Covid-19, and how harmful it can be, but they have less fear now, most of them are not receptive to the idea of Covid-19 vaccinations. They cite religion as one of the most important factors for them not willing to take the vaccine, as they think God will protect them from harm. They think it should be a personal choice. Most don't think any steps by the government can convince them to take the vaccine unless it's made mandatory, this stiff resistance to vaccines is due to lack of awareness and spread of misinformation on social media, hence working with religious leaders, better health awareness programs might have some impact in improving the Covid-19 vaccine coverage, nudges and awareness campaigns in and by the workplaces and places of education. Making it mandatory to take vaccines in places where large people gather like markets, where most people in these areas either work in or source their food from etc. These steps might motivate and have a tricking effect into the community, as they are a close knit and constantly look for reaffirmation from their neighbors, as more and more people vaccinate themselves others will follow suit.

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