

2021



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VACCINE ADOPTION AND RESISTANCE AMONGST MIGRANT WORKERS IN URBAN INDIA

Survey Report

By Daily Wage Worker Platform
and Jindal Global University

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EXECUTIVE SUMMARY

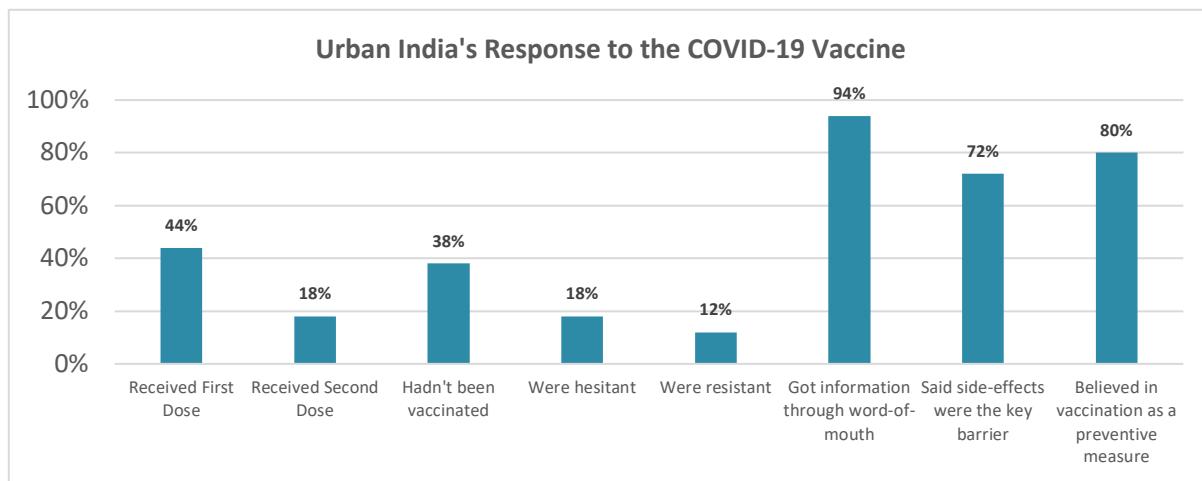
The COVID-19 vaccine has begun to mitigate the devastating effects of the pandemic. The government launched its mass inoculation campaign in January 2021 and as of 10 November 2021, more than 110 crores Indian citizens have received at least one dose. There exist multiple roadblocks on the way to a 100% vaccinated India, the most prominent being vaccine hesitancy and resistance amongst the vulnerable population. Vaccine hesitancy refers to the delay in acceptance of a vaccine, while resistance indicates an outright rejection.

To measure the level and characteristics of resistance in the hesitant population, The Daily Wage Worker Platform (DWWP) in association with Jindal Global University (JGU) conducted a survey to measure vaccine adoption and resistance in urban India. Together, the two organisations announce the release of a report analysing the major findings from the survey. JGU is India's top private university with a diverse faculty of national and global researchers and academics.

Daily Wage Worker Platform (DWWP) is an NGO dedicated to supporting migrants and daily wagers throughout the pandemic with food security, healthcare and livelihoods. During the first wave, DWWP partnered with the Swiss government and Smile Foundation to roll out an emergency health package for workers in slums using Tele-medicine and social distancing. DWWP set up a virtual help desk to provide up to date information on the availability of medical supplies during the second wave.

The vaccine survey report provides a field assessment of the reach of the national vaccination program amongst urban migrants, as well as insights into the factors that are causing resistance and hesitancy among workers. We hope the findings and recommendations are incorporated into the design of national communications and vaccination programs to overcome vaccine resistance globally.

The dipstick survey was conducted by researchers from JGU across six cities - Delhi, Gurgaon, Mumbai, Ranchi, Chennai and Kolkata. The team initially hypothesised the causes and characteristics of vaccine hesitancy/resistance using secondary research. The survey was then meticulously designed to measure various demographic and psycho-social aspects. 200 migrants and daily wage workers were surveyed using the method of convenience sampling by the team. The report analyses their responses and attempts to provide suggestions for key stakeholders - the government, NGOs and corporations. Results of the vaccine survey revealed that, of the 200 migrants surveyed across six cities, 44% received the first dose, 18% received the second dose, 38% had not been vaccinated, 18% were hesitant and 12% refused to take the vaccine.



The survey measured hesitancy and resistance towards the vaccine against several parameters including age, gender, occupation, and so on. Of these, income stood out; demonstrating an inverse relationship between annual income levels and hesitancy to the vaccine. Daily wage workers earning less than Rs.10,000 per month were most resistant to vaccination. On the other hand, migrants with a fixed income were willing and semi-vaccinated. Many public and private sector employers are actively facilitating the vaccination process, including construction companies and railways, who have made it mandatory for their workers to be vaccinated.

However, many workers remain ignorant, suspicious and resistant to the COVID-19 vaccine. Along with assessing hesitancy levels among various groups, the survey also sought to uncover the underlying causes and beliefs that resulted in hesitancy. These included reasons such as fear of side effects, loss of wages, distrust in the public health system and lack of information and access to the vaccination program. One major factor that seemed to influence hesitancy levels was channels of communication, with respondents who received most of their information from community leaders or panchayats reporting greater hesitancy to the vaccine.

The recommendations section provides implementable ways to reduce vaccine hesitancy based on the survey findings. Recommendations for the government include the need to provide information, build trust among communities and make the vaccine more easily accessible. NGOs can play an important role in mobilizing communities, dispelling myths about vaccines and facilitating access to the Aarogya Setu App and vaccine centres. Employers can continue to play an important role in incentivizing workers to get vaccinated by making it mandatory and facilitating access.

We are grateful to Nalini Menon and Sriram Raghavan for their support.

INTRODUCTION

Nearly two years after the onset of the pandemic, the effects can still be felt the world over. Since November 2019, there have been over 200 million COVID-19 cases confirmed worldwide, with more than 4 million deaths.¹ In 2020 itself, the global economy contracted by 3.5%² with an estimated 225 million people losing jobs globally. The devastating situation in India is second only to the US, with over 400,000 deaths and 32 million confirmed cases. The economic impact in India cannot be overstated, with the cost of the lockdowns estimated to be at 26 billion USD³, and over 10 million jobs thought to be lost in the second wave itself.⁴ It is also important to note that these figures are simply official statistics, and actual numbers are likely to be far more.

Vaccines have evolved into a widely accepted method of disease prevention in most countries. Over the years, vaccines for diseases, including Polio, Tetanus and Tuberculosis have become essential vaccines taken by most people with access to education and healthcare facilities. To counter the effects of the pandemic, more than eight vaccines have been developed and a dozen more are under development and undergoing clinical trials or awaiting regulatory approvals. Pfizer and Moderna have been approved for emergency use globally. As of today, in India, three vaccines have been approved, including Covishield (AstraZeneca), the homegrown Covaxin and Russia's Sputnik-V. According to the Ministry of Health and Family Welfare,⁵ over 570 million doses have been administered to date, with around 120 million people being fully vaccinated. This means that approximately 11.5% of the total population is fully vaccinated. Of the total adult population in India, over half have received at least one dose while 46% are yet to receive a single dose of any of the approved vaccinations.⁶ With a total population of 1.3 billion, there is still a long way to go.

- Vaccine Resistance

Vaccination is the key to safeguarding public health against COVID-19. While most people understand the importance of being vaccinated, some people are ill-informed or reluctant to take the vaccine. The WHO's SAGE Working Group on Vaccine

¹ MacDonald NE; SAGE Working Group on Vaccine Hesitancy. Vaccine hesitancy: Definition, scope and determinants. *Vaccine*. 2015 Aug 14;33(34):4161-4. doi: 10.1016/j.vaccine.2015.04.036. Epub 2015 Apr 17. PMID: 25896383.

² Yeyati, E. & Filippini F. (2021). *Social and economic impact of COVID-19*. Brookings Institution.

³ Statista (2021). *Impact of the coronavirus (COVID-19) on the Indian economy - statistics & facts*.

⁴ BusinessToday.In (2021). *10 million lost jobs in Covid 2nd wave, 97% of households' income declined: CMIE*.

⁵ Ministry of Health and Family Welfare. (2021). *COVID-19 Vaccine Communication Strategy*. Government of India. <https://www.mohfw.gov.in/pdf/Covid19CommunicationStrategy2020.pdf>

⁶ Dutta, P. K. (2021, April 7). *Covid-19: When will all Indians be vaccinated*. India Today.

<https://www.indiatoday.in/coronavirus-outbreak/story/india-corona-covid-vaccine-when-will-all-indians-be-vaccinated-1788159-2021-04-07>

Hesitancy¹⁰ defines vaccine hesitancy as a “delay in acceptance or refusal of safe vaccines despite availability of vaccine services”. Vaccine resistance refers to an outright rejection to being vaccinated. Vaccine hesitancy and resistance may be related to misinformation and conspiracy theories, which are often spread online, including through social media. According to the WHO, it is caused by complex, “context-specific factors that vary across time, place, availability of different vaccines and are influenced by issues such as complacency, convenience, confidence, and socio-demographic contexts”. In addition, structural factors such as health inequalities, socioeconomic disadvantages, systemic racism, and barriers to access are key drivers of low confidence in vaccines and poor uptake. While on the one end lies vaccine acceptance, wherein individuals readily accept and trust vaccines, vaccine resistance lies on the opposite spectrum, wherein people do not want to get vaccinated at all.

- Global Vaccine Acceptance Rates

According to a study by Malik Sallam (2021), low rates of COVID-19 vaccine acceptance were reported in the Middle East, Russia, Africa and several European countries.⁷ Biddle et al. (2021) conducted a survey in Australia and found that overall, 58% would definitely get the vaccine, 29% had low levels of hesitancy, 7% had high levels of hesitancy and 6% were resistant.⁸ A survey conducted by Alla et al. (2021)⁹ among adults aged between 18-64 years residing in France found that out of 1,942 respondents, 560 participants displayed outright refusal to get vaccinated.

- Vaccine Resistance in India

The COVID-19 Symptom Survey (CSS) is conducted by Facebook, in partnership with the University of Maryland, in 200 countries including India. The survey presents a large sample size, has the advantage of collecting information in real-time, and has a robust statistical framework.¹⁰ These characteristics of the CSS make it a powerful tool to analyse the trends in vaccine hesitancy in India. In India, CSS is using an active base of over 320 million Facebook users as a sample dataset. The CSS survey asked the specific question: “If a vaccine to prevent COVID-19 were offered to you today, would you choose to get vaccinated?” The survey findings reveal that a significant proportion of the population across states are vaccine hesitant. The proportion of the population hesitant to COVID-19 vaccines is highest in Tamil Nadu (40%), Punjab

⁷Sallam M. (2021). COVID-19 Vaccine Hesitancy Worldwide: A Concise Systematic Review of Vaccine Acceptance Rates. *Vaccines*, 9(2), 160.<https://doi.org/10.3390/vaccines9020160>

⁸Edwards, B., Biddle, N., Gray, M., & Sollis, K. (2021). COVID-19 vaccine hesitancy and resistance: Correlates in a nationally representative longitudinal survey of the Australian population. *PloS one*, 16(3), e0248892.<https://doi.org/10.1371/journal.pone.0248892>

⁹Schwarzinger, M., Watson, V., Arwidson, P., Alla, F., & Luchini, S. (2021). COVID-19 vaccine hesitancy in a representative working-age population in France: a survey experiment based on vaccine characteristics. *The Lancet Public Health*, 6(4), e210–e221.[https://doi.org/10.1016/s2468-2667\(21\)00012-8](https://doi.org/10.1016/s2468-2667(21)00012-8)

¹⁰Chowdhary, S., Motheram, A., & Pramanik, S. (2021, April 14). *Covid-19 vaccine hesitancy: Trends across states, over time*. Ideas For India. <https://www.ideasforindia.in/topics/governance/covid-19-vaccine-hesitancy-trends-across-states-over-time.html>

(33%), Haryana (30%), Gujarat (29%), and Andhra Pradesh (29%). The state-wise findings of the survey show the proportion of the population informed about vaccines is lowest in Tamil Nadu (60%), Andhra Pradesh (60%), Punjab (60%), Assam (60%), Karnataka (65%), and Haryana (65%). The COVID-19 Symptom Survey (CSS) probed the reasons for not taking the vaccine or delaying it among the naysayers. The top five reasons for not taking the vaccine include “waiting for others to get it first” (42%), “other people need it more than me” (35%), “fear of any side-effects” (34%), “vaccines won’t work” (21%) and “don’t believe in the vaccine” (11%)¹¹.

- Causes of Vaccine Resistance

Misinformation about the COVID-19 vaccine spread across various communication channels, leading to a spike in vaccine resistance and hesitancy. Hoaxes, doctored videos and far-fetched rumours are emerging as some of the biggest threats to India's national coronavirus vaccination program, and vaccine rates across the world. There is a bias against the indigenous vaccine - Covaxin, in particular, because it was rolled out before Phase-III trials were completed, fostering a lack of safety and trust in the efficacy of the vaccine in the minds of the general population in India (Sudha Ramachandran, 2021). Combined with the inconvenience of registration/booking slots, low-risk perception from COVID-19 and the absence of incentives for rural and urban poor, a high vaccine hesitancy rate is emerging (Akshay Tarfe, 2021).

Rural India: Boor Majra, Rupnagar, Punjab

This case study was done by a member of the DWWP team. Boor Majra is a remote village in Ropar, Punjab where the primary source of livelihood is agriculture and related activities. Our team visited the village and interviewed several locals. “No one here wants to get vaccinated. The only two people from the pind (village) to get vaccinated died soon after. It was the village Sarpanch and his son. Now everyone thinks that the vaccine caused their deaths”. The whole village with more than 1,500 households is vaccine-resistant because of local rumours and possibly coincidental events.

¹¹ Chowdhary, S., Motheram, A., & Pramanik, S. (2021, April 14). *Covid-19 vaccine hesitancy: Trends across states, over time*. Ideas For India. <https://www.ideasforindia.in/topics/governance/covid-19-vaccine-hesitancy-trends-across-states-over-time.html>

PROJECT RATIONALE

The success of India's vaccination drive is imperative for the health, safety and general wellbeing of the population. It is essential if we are to revive the economy and resume any semblance of normalcy. Even as India makes progress in its national vaccination program, there still appears to be some resistance among the general population. The objective of this study is to understand whether this resistance indeed exists, specifically amongst migrant workers. If it does, the goal is to identify and understand the root causes behind this resistance to inform and develop strategies addressing vaccine hesitancy and resistance. The study also examines problems around the accessibility of vaccines. While vaccines may be available, they are not always accessible. This may be due to several reasons such as geography, cost¹², and so on. It could also vary according to social groups. For example, some groups may experience difficulty booking appointments on the Aarogya Setu app due to a lack of internet connectivity or not having the appropriate device. Therefore, another goal of this study is to understand:

- Is there indeed a gap in accessibility?
- What is causing it?
- What can be done to resolve this?

SURVEY METHODOLOGY

As previously mentioned the Vaccine Resistance Survey was designed to measure and contrast the levels of vaccine hesitancy and resistance among individuals across six states in India - Haryana, Tamil Nadu, Maharashtra, Jharkhand, Delhi and West Bengal. The survey comprised 24 questions that covered the demographics of - age, sex, state, city, annual income, occupation and religious affiliation, questions about vaccine awareness, hesitancy and resistance and general awareness of COVID-19. The survey also captured the target groups' progress in getting vaccinated. The medium of communication was through face-to-face interviews. While the survey was in English, the questions were asked in local languages and participants' responses were recorded verbatim. Before administering the survey, participants were informed of the aim of the survey, were assured that their identity would remain anonymous and their responses confidential.

¹²Dransfield, S. & Thériault, A. *Vaccine monopolies make the cost of vaccinating the world against COVID at least 5 times more expensive than it could be*. Oxfam International.

- Sample

A team of students from Jindal Global University, Delhi University and Ashoka University conducted a dipstick survey of 200 migrant and daily wage workers in six cities (Chennai, Delhi, Kolkata, Mumbai, Ranchi and Gurugram). These were field-based interviews with a wide range of workers in the informal sector. The sample was derived from the aforementioned population ($N = 200$) using convenience sampling. A mixed-method approach was undertaken (qualitative and quantitative) for the survey. Convenient sampling/ purposive sampling was used to identify the participants who were first confirmed to be migrant workers. Further, a structured questionnaire was designed and deployed virtually using Google Forms (check Appendix A for further information on the survey).

- Selection of parameters

Parameters such as demographic information were included in the survey to investigate a correlation between factors such as age, sex, annual income and occupation. Other questions aimed to gauge the relationship between hesitancy to other vaccines and COVID-19 vaccine hesitancy, if vaccine hesitancy/resistance could be related to sources of information, side-effects, cost, health comorbidities and reference group influences. Some questions were aimed at investigating the current knowledge of COVID-19 and its vaccines. As per secondary research, the following factors that affect or lead to hesitancy were measured through the survey:

- Community influences
- Reference groups
- Demographic characteristics
- Sources of information
- Misinformation

KEY FINDINGS

Total Number of Respondents = 200

44%

received
first dose

18%

received
second dose

38%

hadn't been
vaccinated

18%

were hesitant

12%

were resistant

94%

got information
through
word-of-mouth

72%

said side-effects
were key barrier

80%

believed in
vaccination as a
preventive measure

DEMOGRAPHIC OVERVIEW

SEX

MALE: 68%

FEMALE: 31%

PREFER NOT TO SAY: 1%

AGE

18-24: 17%

25-34: 19%

35-44: 27%

45-60: 25%

60+: 12%

RELIGION

HINDU: 71%

MUSLIM: 13%

SIKH: 3%

CHRISTIAN: 9%

PREFER NOT TO SAY: 4%

INCOME (ANNUAL)

<Rs. 5,000: 2%

Rs. 5,000 - 10,000: 7%

Rs. 10,000 - 15,000: 12%

Rs. 15,000 - 20,000: 12%

Rs. 20,000+: 43%

PREFER NOT TO SAY: 24%

CITY

DELHI: 16%

KOLKATA: 16%

GURUGRAM: 25%

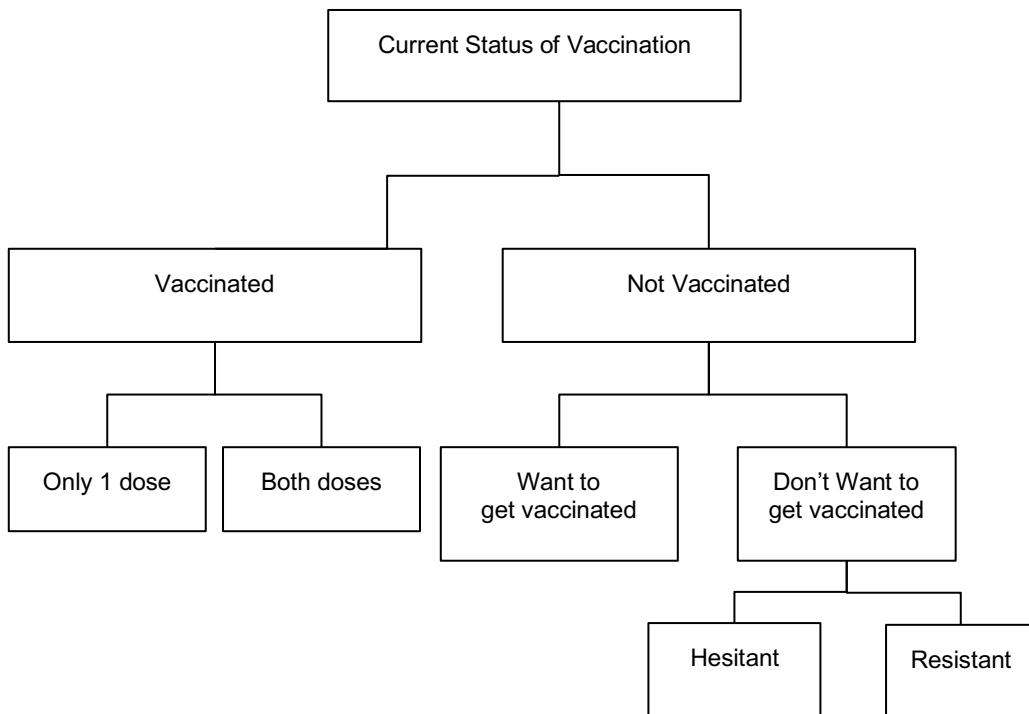
CHENNAI: 13%

MUMBAI: 14%

RANCHI: 16%

ANALYSIS

Flow of Analysis



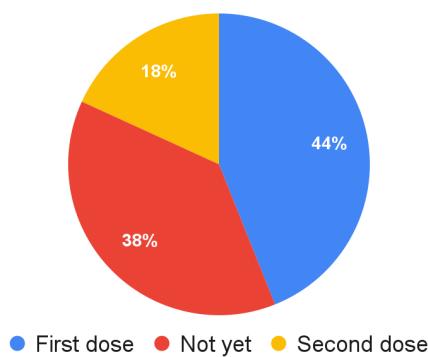
1. VACCINATION STATUS AGAINST COVID-19

Out of the 200 respondents surveyed, 44% of respondents reported having taken the first dose, 18% reported having taken the second dose, while 38% of those interviewed were yet to receive a single dose of the COVID-19 vaccination.

Figure 1

Percentage of the population vaccinated against COVID-19

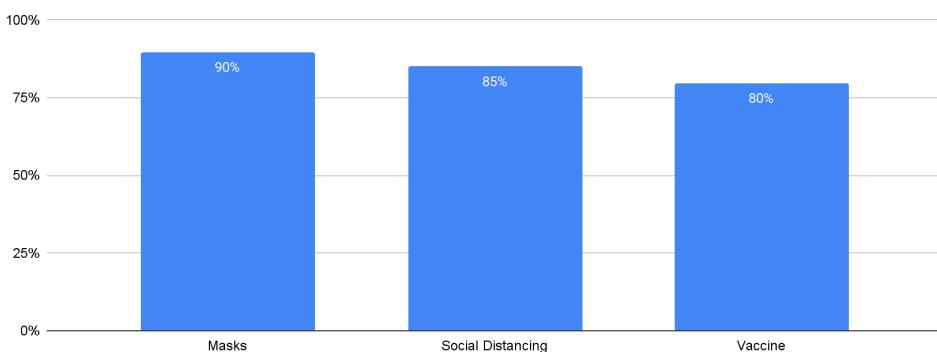
COVID-19 Vaccine Status



Respondents were also questioned on their preferred methods of protecting themselves against COVID-19. As *Figure 2* (below) suggests, the three most employed methods emerged as social distancing, use of face masks, and vaccination. Most survey respondents claimed to be actively following at least one of the aforementioned preventive measures, with 90% using masks, 85% social distancing, and 80% affirming the need for vaccines.

Figure 2

Methods preferred by respondents as protective measures against COVID-19

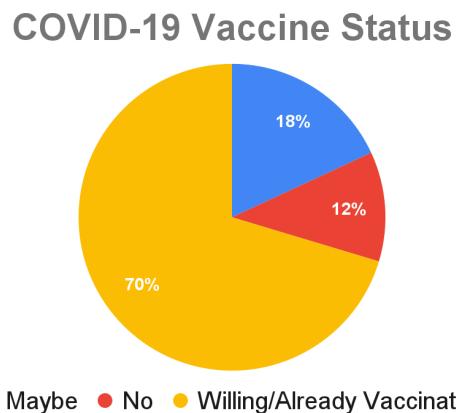


2. PERCEPTIONS ON THE COVID-19 VACCINE

At the time of the survey, 70% of respondents had received at least one dose of the COVID-19 vaccine or indicated clear plans of getting vaccinated. Of the remaining 30%, 18% were *hesitant*, i.e. open to considering it, while 12% of total respondents reported being *resistant*, or completely opposed.

Figure 3

Percentage of respondents hesitant/resistant to the COVID-19 vaccine



Of the 44% of respondents who had received a single dose, 11% demonstrated hesitation or resistance to taking a second dose of the vaccine. Interestingly, although 80% of respondents believed vaccines to be a suitable method of prevention (*Figure 2*), just 70% showed any inclination to take the vaccine. The reasons for this are further explored in the following section on factors affecting perception towards the vaccine.

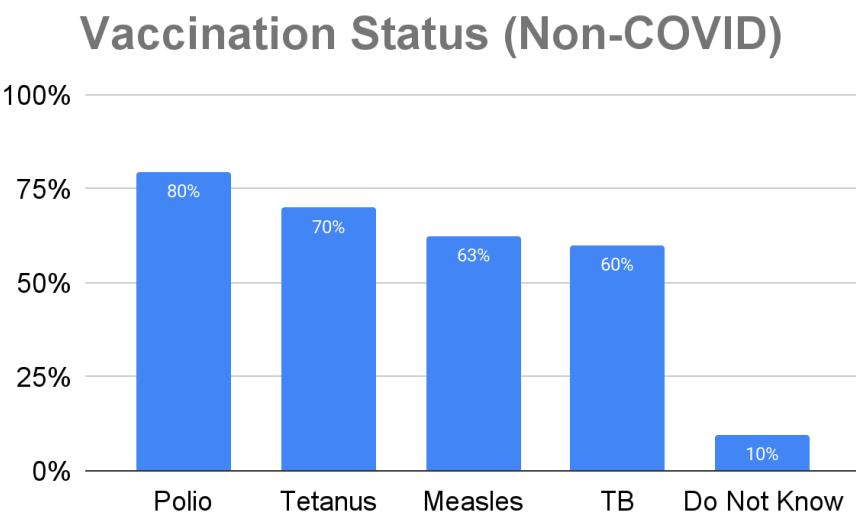
3. VACCINATION HISTORY AND PERCEPTIONS ON COVID-19

History of Vaccination Against Infectious Diseases

To understand respondents' perception towards vaccines in general, the survey questioned respondents on their history of vaccination against diseases other than COVID-19. This included diseases such as Polio, Tetanus, Measles, and Tuberculosis, which come under the Government of India's Universal Immunisation Programme. In doing so, the researchers aimed to understand whether any hesitancy towards the COVID-19 vaccine was specific to COVID-19 or formed part of a larger trend against vaccines.

Figure 4

Respondents' vaccination history against other infectious diseases



As the data in *Figure 4* suggests, most respondents have claimed to be vaccinated against the stated infectious diseases. 80% of the respondents claimed to have been vaccinated for Polio, 70% for Tetanus, 63% for Measles, and 60% for Tuberculosis. 10% of the total respondents opted for the "Do not know" option which was reserved for respondents who were unaware of their vaccination status. Given that the acceptance rate for vaccinations against most diseases is near 70%, it may be inferred that there is

a general distrust amongst a small section of the population concerning the effectiveness of vaccination as a method of disease prevention. However, several respondents claimed that they did not have information nor access to these vaccines in the first place, indicating that a lack of resources and awareness may be a better explanation for the data in *Figure 4* rather than distrust.

- Perceptions on COVID-19

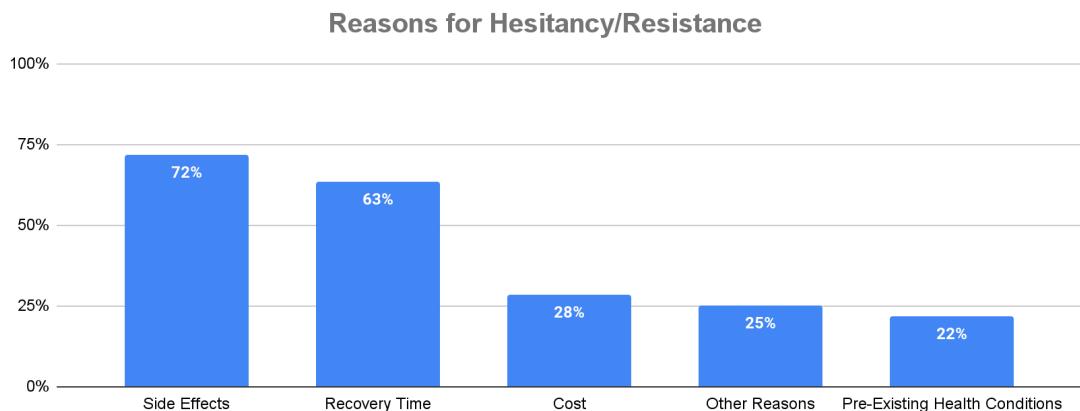
When questioned about their knowledge of COVID-19, common responses included statements such as “*it's a pandemic*” or “*it's a viral disease*”. Some respondents even went on to explain the impact of COVID-19 on their lives, livelihoods, and the economy. These respondents recognised the need for precautionary measures such as social distancing and were generally familiar with the infection, its symptoms, government-sponsored health resources, and so on. On the other end of the spectrum, it was observed that a certain, albeit minor, portion of respondents claimed to not know about the virus, or believed it was simply propaganda and an elaborate plan to “*control the population*”.

4. FACTORS AFFECTING THE PERCEPTION OF COVID-19 VACCINE

To better understand the rationale of those who were unwilling to take the vaccine, respondents were questioned on their reasons for being hesitant or resistant to the vaccine.

Figure 5

Commonly cited reasons for hesitancy towards the vaccine



The data in *Figure 5* suggests that fear of possible side effects - such as fever, swelling etc., (72% of respondents) and lengthy recovery time (63% of respondents), emerged as primary concerns. 28% of respondents claimed they were wary of possible costs associated (for example, transportation, medication, vaccine fees), whilst 22% of

respondents cited pre-existing health conditions like diabetes, heart problems which they believed might be exacerbated.

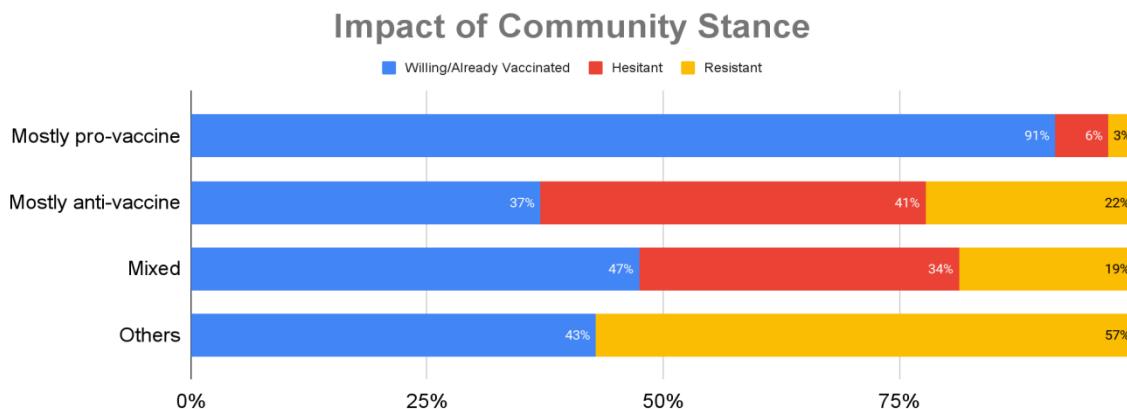
It is significant to note that 25% of hesitant/resistant respondents selected the “Other Reasons” option. When questioned, they mentioned reasons such as fear of injections, distrust in the vaccine (“*there is only glucose and water in it*”), or distrust in the government. Others believed that taking the vaccine was useless while providing explanations like, “*I’m too old*”, “*my body is fine*”, or “*I have Allah*”. Some respondents argued that several people are vulnerable to COVID-19 even after taking the vaccine and that staying indoors is a better and more effective solution. Many had heard rumours, did not know what the vaccine was made of and reported having little information on COVID-19 as well as the vaccination drive in the country. Some respondents said that logistical constraints such as not being able to get an appointment, being busy with work, or unwillingness to stand in long queues were the primary causes. Respondents also expressed concerns over the absence of proper documentation (Aadhar Card, Driving License, Health Insurance Smart Card, MGNREGA Job Card, PAN Card, Passbook, Passport, Pension Document, Voter ID) needed to take the vaccine and lack of proper testing for COVID-19.

In order to gain a deeper understanding of the underlying factors affecting individuals’ perception of the vaccine, researchers questioned respondents on their sources of information, demographics, and perceptions of their communities.

- Community Influence

Community influence emerged as a significant deterrent for respondents hesitant to take the vaccine. When questioned as to why their family and friends may be resistant/hesitant, respondents cited reasons similar to their own. One respondent with an annual household income under Rs. 10,000 expressed concerns over doctor’s bills after witnessing his nephew who suffered severe side effects and paid Rs. 15,000 in doctor’s fees. Others cited a widespread belief that they might contract COVID-19 by taking the vaccine, or that even if they did take the vaccine, they may still get COVID-19 and die. Respondents also spoke of the presence of new variants, low efficacy levels, and limited availability of options when referring to concerns held by their respective communities.

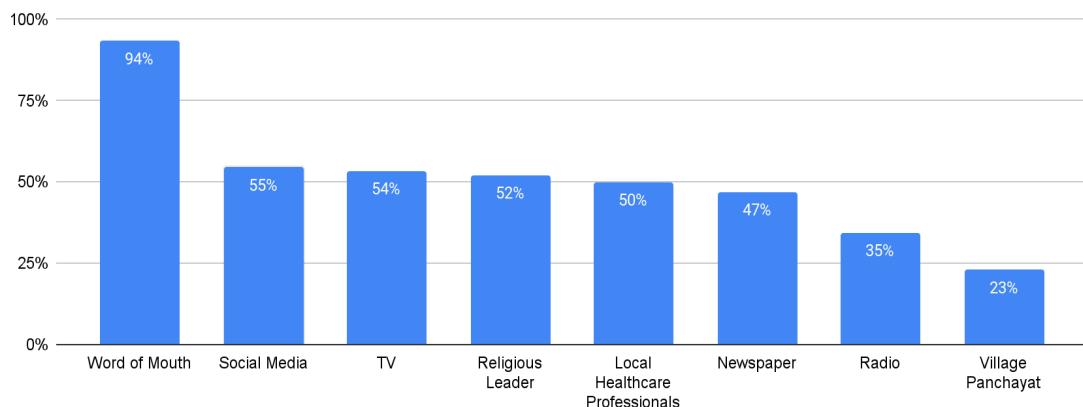
In keeping with the qualitative data mentioned above, *Figure 6* attempts to measure the impact that community perception (as perceived by the respondents) has on the respondent’s individual perception towards the vaccine.

Figure 6*Impact of community perceptions (as perceived by respondents)*

Data from *Figure 6* shows that the willingness to take the COVID-19 varies significantly with changes in community stance. 91% of the respondents who claimed to be living in “Mostly Pro-Vaccine” communities expressed a willingness to get vaccinated or had already taken at least one dose. In comparison, the acceptance rates for those living in “Mostly anti-vaccine” (37%) or “Mixed” communities (47%) appeared far lower.

- Sources of Information on COVID-19

Several respondents cited rumours and misinformation as a primary cause of hesitancy towards the COVID-19 vaccine. To ascertain the root cause of such rumours, the researchers questioned respondents about the channels of communication they generally used to get critical information regarding COVID-19.

Figure 7*Communication Channels (respondents could choose more than one option)***Communication Channels**

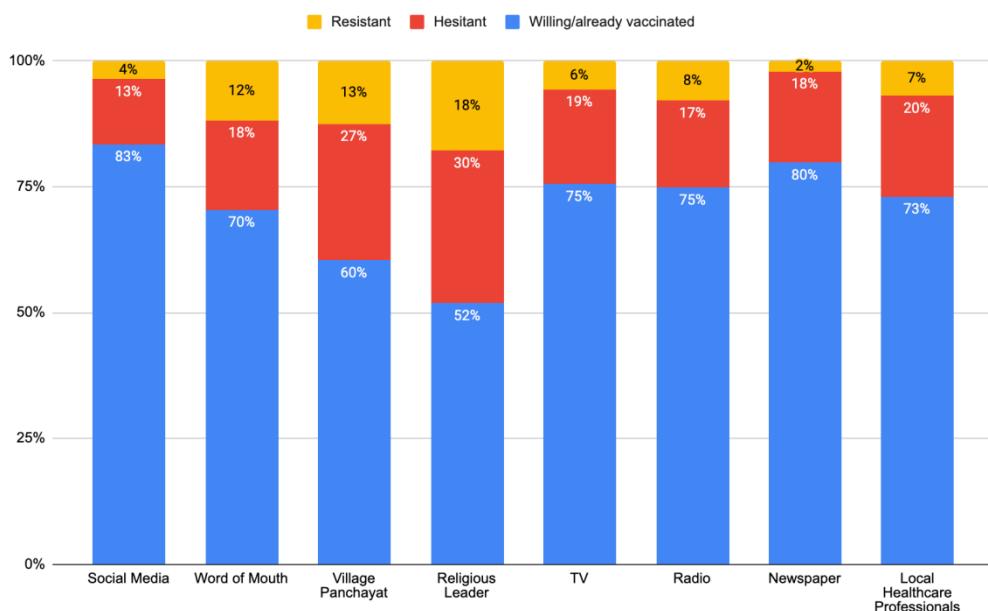
As is evident in *Figure 7* above, 94% of respondents reported receiving their information by word-of-mouth, through conversations with family, friends and members of their community. Social media (55%) emerged as the second most common source with television (54%), religious leaders (52%), and local healthcare professionals (50%) following closely behind. A small segment of the interviewees reported receiving COVID-19 related information from newspapers (47%), the radio (35%), or the village panchayat (23%).

Figure 8 (below) compares the hesitancy/resistance levels per source of information. The standout results appeared amongst those who received their information from religious leaders or village panchayats.

Figure 8

Hesitancy/Resistance levels per Source of Information

Source of Information regarding COVID-19



The following quote from a respondent demonstrates the severity of influence by religious leaders - *"I don't trust the vaccine as my religious leader said I shouldn't. He believes that I will not be able to have kids after the vaccine"*.

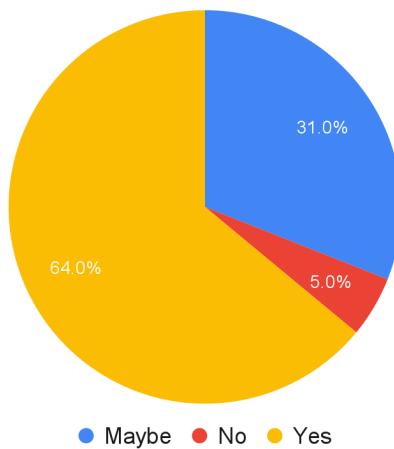
Of the people who reported receiving information from religious leaders (52% of total), 30% were hesitant and 18% were resistant. Similarly, out of the respondents who received information from Village Panchayats (23% of total), 27% reported being hesitant, with 13% being completely opposed.

By comparison, those who relied on word-of-mouth (30%), local healthcare professionals (27%), television (25%), listened to the radio (25%), read the newspaper (20%), or followed social media (17%) appeared to be far less opposed. Respondents were also questioned about their own trust in their channels of communication. Trust in one's source of information is critical in the propagation of critical information. As seen in *Figure 9* (below), it was observed that just 64% of total respondents said that they believed they were getting reliable information about the vaccine, with 31% expressing doubt about the validity of the information they received.

Figure 9

Perceptions on the reliability of vaccine-related information being received

Do you trust your source of information?



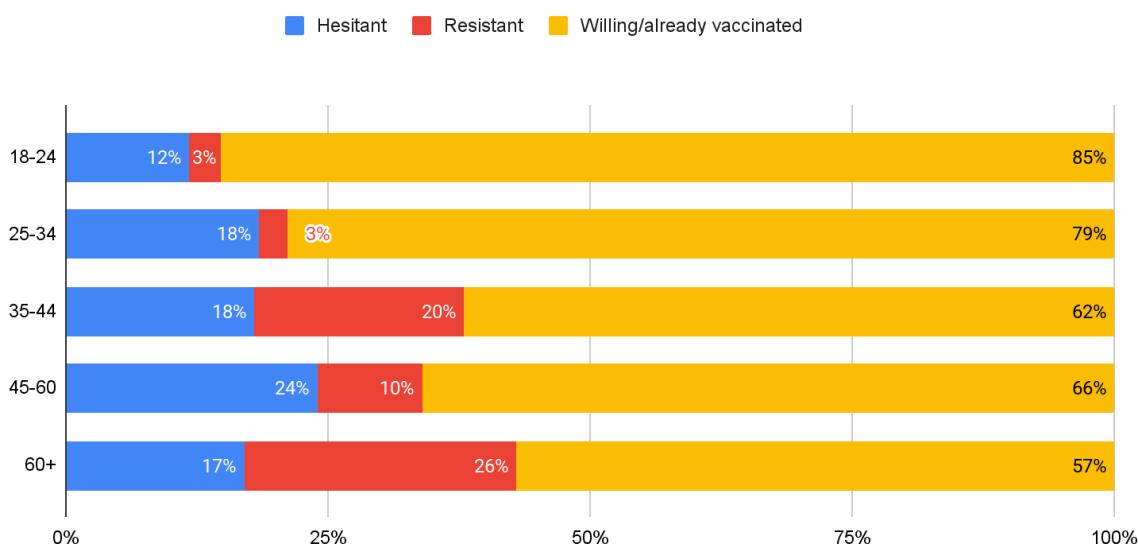
5. CORRELATION BETWEEN DEMOGRAPHICS AND HESITANCY/RESISTENCE

Demographic data collected from respondents throughout the course of the survey was then used to draw correlations between factors such as age, sex, income, region, and religion and vaccine hesitancy.

- Age

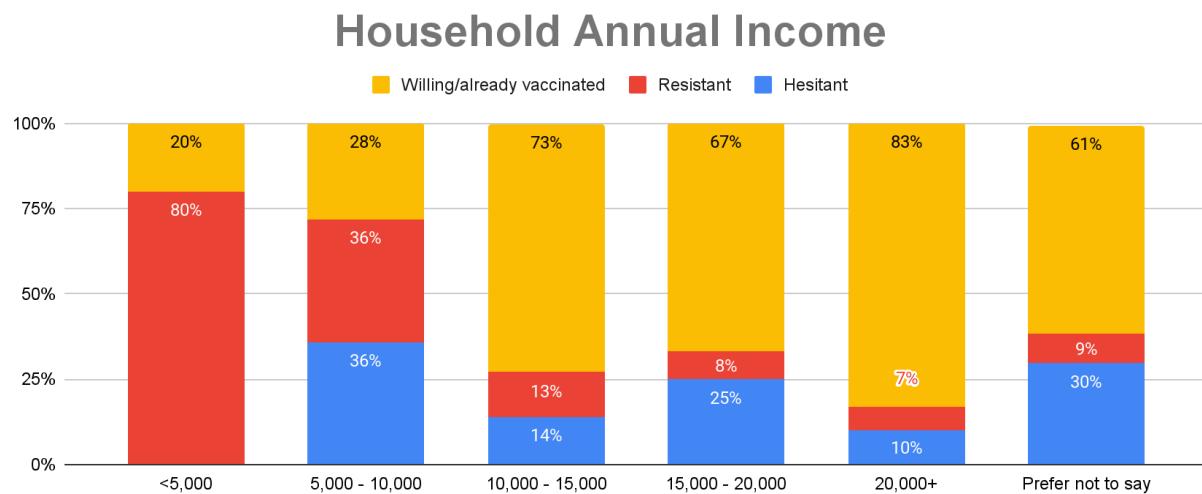
The data collected in the survey displayed a positive correlation between hesitancy/resistance levels and age. The youngest group of respondents, between the ages of 18-24, showed an enormous acceptance (85%) towards getting vaccinated. A similar figure (79%) was found for the age group of 25-35. Between ages 35 and 60, the acceptance rate for COVID-19 vaccines remained constant at around 65%. It was respondents aged 60+ however, that demonstrated maximum resistance to the COVID-19 vaccination, with 43% of the respondents either hesitant or completely opposed.

Figure 10
Levels of Hesitancy/Resistance by Age Group



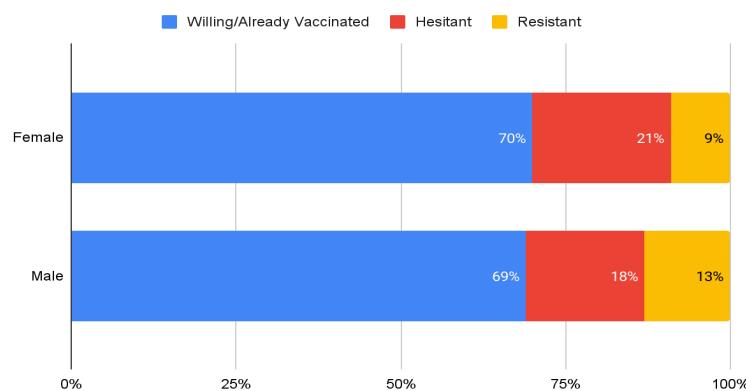
- Annual Household Income

According to *Figure 11* (below), there appears to be a clear correlation between annual income and vaccine acceptance levels, particularly among income groups below Rs. 15,000. In fact, data shows that acceptance rates nearly tripled as annual income rose from below Rs. 10,000 to above it, going from about 25% on average to about 70% on average. This drastic rise in acceptance, and hence a drop in hesitancy/resistance, can be attributed to a variety of reasons including higher education levels, qualifications, and possibly more stable jobs with requirements for vaccination.

Figure 11*Levels of Hesitancy/Resistance by Annual Household Income*

- Sex

Although women formed a much smaller portion of the sample size (31%) compared to men (68%), the levels of resistance, hesitancy and willingness to be vaccinated were similar between the two sexes. Slight differences could be observed, however, with women being around 3% more hesitant, and approximately 4% less resistant than men.

Figure 12*Level of Hesitancy/Resistance by Sex*

- Region

Figure 13
Levels of Hesitancy/Resistance by Region

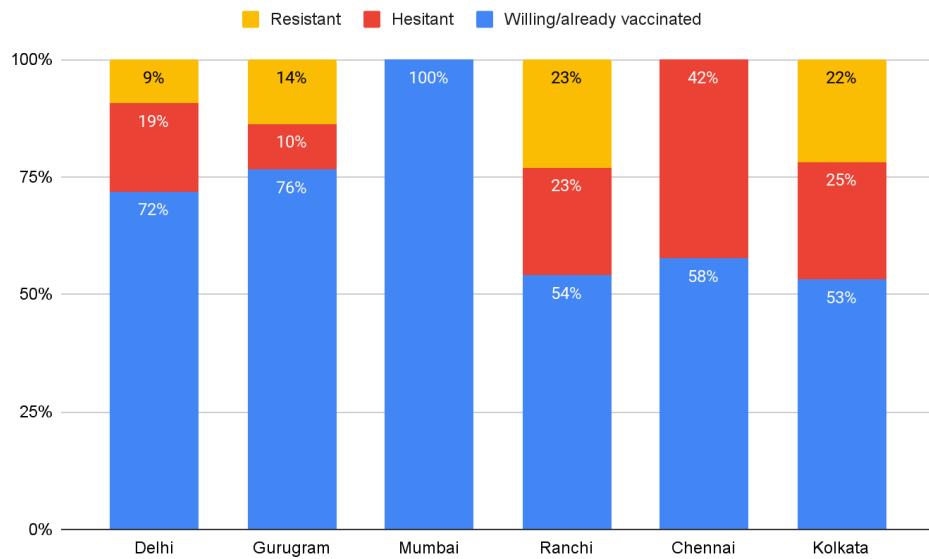
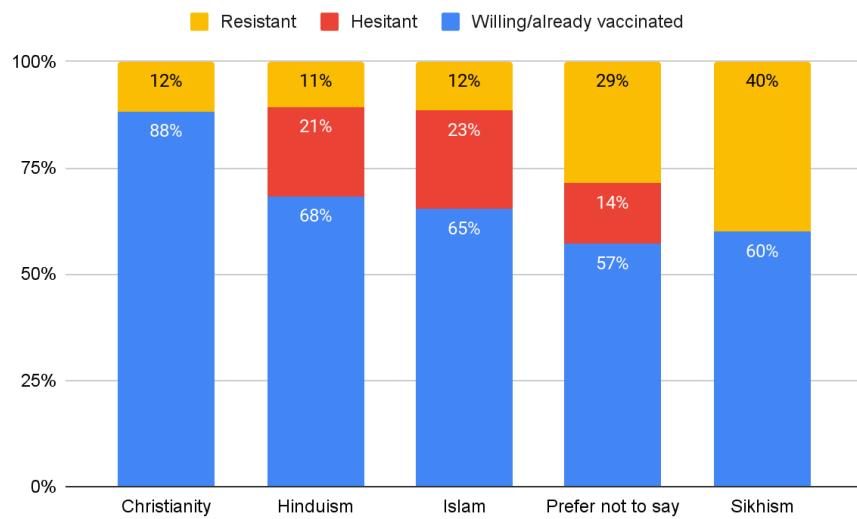


Figure 13 demonstrates a comparison of vaccine hesitancy/resistance levels by region. Respondents from major cities such as Delhi, Mumbai, and Gurugram demonstrated less resistance and greater willingness towards the COVID-19 vaccine. In comparison, cities such as Chennai, Kolkata, and Ranchi showed relatively greater resistance, with just 53% of residents from Kolkata indicating a willingness to take the vaccine. It is also significant to note that Mumbai and Chennai recorded no instances of resistance, whereas in Delhi, Ranchi, and Kolkata, rates of hesitancy trumped rates of resistance. This indicates that citizens may be on the fence and could still be positively influenced by increasing access to information on COVID-19.

- Religious Affiliation

Figure 14
Levels of Hesitancy/Resistance by Religion



The majority of the 200 respondents surveyed identified as Hindu (71%) or Muslim (13%) and demonstrated 32% and 35% hesitancy/resistance to the vaccine respectively. Of the remaining participants, 40% of Sikhs demonstrated some levels of hesitancy/resistance while resisting Christians were just 12%. Out of those who chose not to reveal their religious affiliation, 43% demonstrated hesitancy or resistance, whilst 57% were vaccine-willing or already vaccinated. Many respondents reported fear of repercussions as well as apprehension stemming from religious and community opposition to it. Some Hindus, for example, made statements like “*we have religion and our elders don't believe in this*”, while certain followers of Islam reported hearing rumours that the vaccine is made of pig’s blood.

CHALLENGES

Conducting any research, regardless of the length/ magnitude would entail a litany of challenges. The team of researchers surveyed migrants and daily wage workers across six cities in India - Chennai, Delhi, Kolkata, Mumbai, Ranchi, and Gurugram. Having such a spread of data comes with its own set of challenges. Add the pandemic to that equation, and that will bring a unique set of challenges for the researchers to face and overcome. To begin with, approaching the sample population in the field was a challenge for the researchers because a sizable portion of the population wasn't following the COVID-19 protocols - wearing masks and maintaining social distance etc. In such a situation it becomes quite difficult to go around places and collect surveys of people who were not following any form of safety measures. A common fear among the researchers was contracting the virus themselves. For these reasons, they had to strictly adhere to the COVID-19 protocols. Additionally, most of them had already received one or both doses of a COVID-19 vaccine.

Questions relating to death due to COVID-19 appear to be a sensitive topic for many; possibly owing to personal losses of lives, finances or otherwise. The interviewers have often encountered participants of the survey who have been overcome with emotion. Events like this demand an alternate approach to interviewing in addition to maintaining a third-party attitude on the researcher's part, to avoid any biases. Many of the respondents were wary of the involvement of government authorities and despite the repeated assurance of maintenance of anonymity, were wary of the questions asked, and/or refused to answer. This meant that some of their responses may have been skewed, however, left without any other alternatives, the researchers had to take that at face value. A common response was "*I am illiterate and I don't know anything. Ask someone else.*" and many didn't have substantial responses to "*What do you know about COVID?*" In addition to that, for some of the respondents, their actions did not correspond with their answers - despite their claims of following the COVID-19 protocols, they seem to be violating them. Finally, it is important to remember that our sample size is mostly daily wage workers, who might be in the middle of their work and thus, given the length of the survey, many people were reluctant or unwilling to step out of their jobs for long enough to answer all the questions.

LESSONS LEARNT

The rampant spread of COVID-19 has impacted every section of our society, however, the focus of this survey was on the most vulnerable sections - daily wage and migrant workers. According to the survey conducted, there is a huge need to bridge the gap between the migrant workers and the respective authorities who can alleviate the problems these workers face every day. It is important to build trust and rapport, maintain transparency throughout the interview process concerning the aim and understanding of interviews conducted, and a need for constant assurance of adherence to all ethical boundaries of a research project.

RECOMMENDATIONS

- For the Government

Accessibility

Before framing new laws, the policy-makers should first understand the perspectives of India's informal sector workers that comprise 90% of the country's workforce. Migrant workers need to be prioritised during COVID-19 vaccination drives. Being a mobile population, misinformation spreads among them much faster. Families losing their only breadwinners suffer from a lack of nutrition and livelihood. In a country like India, with many marginalised groups, such as daily wage workers or local producers, there is a large low-income population that is impacted negatively. Migrant workers travel from one state to another in search of jobs and these individuals easily transmit viruses and can infect others. This chain has not only been noticed during the current pandemic, but it is also clearly seen in the wide range of infectious diseases such as Tuberculosis, Cholera, Ebola, Polio and many acute respiratory diseases. The government must take steps to enhance the public trust in and easy availability of the COVID-19 vaccination by taking necessary steps to communicate and explain the benefits of vaccines, and to deliver the vaccines safely and effectively. Based upon the conclusions of this survey, the majority of hesitancy against vaccination originates from ill-informed, low-income households. The government must take necessary steps to prioritise and encourage them to vaccinate to flatten the curve. The government must also acquire and administer vaccinations in a timely and appropriate manner.

Information

Armocida and colleagues (2021) note that migration and health are universally recognised as a global public health priority and often end up being the section of the population that gets the least amount of attention at healthcare facilities. The pandemic has only worsened the situation for low-income groups at this point - a significant number of migrant workers are unregistered; they have to travel to sustain themselves and their families that renders them even more exposed to the effects of the pandemic. There are specific facilities via which migrant workers can have access to healthcare and COVID-19 related information, however, the validity, effectiveness and willingness of the workers to trust these institutions are valid points to consider. These facilities could range from private hospitals that have subsidised rates for migrant workers to government hospitals. They could also be, as in the case of West Bengal, government facilities where there is a free rollout of the vaccines. Having a better, more robust information dissemination mechanism would make a difference- providing timely, disaggregated, user-friendly, and open-source information about vaccination methods, modalities, successes etc.

Governments must manage community demands and explain why certain demographic segments within a country are given priority for vaccination. State governments also need to increase basic awareness among daily wage workers.

The percentage of workers who are unaware of the global pandemic remains high. While illiteracy among workers remains an issue, there are ways of spreading awareness through developing modules and content in regional languages, both in source states and in destination states. Workshops that are convenient to workers and held at identified hotspots, radio programmes, billboards with short messages about the pandemic, which can be easily read, etc. are also some ideas that might be helpful. Concerted efforts by social organisations and labour unions that already have established networks within the daily wage worker community could make a major impact as well. The police must also be encouraged and commended for their on-the-ground assistance in spreading valid information.

- **For NGOs**

Help bridge technological/economic gaps

Whether we talk about slum-dwellers, senior citizens without reliable caregivers or people who are poverty-stricken - all need help and support when it comes to getting the vaccine, logistical support and information related to COVID-19. Economic barriers like the inability to purchase internet-ready devices (smartphones, laptops, tablets, personal computers etc.), and technological barriers like lack of internet coverage, are major hurdles to vaccination; especially considering that registration for the vaccine is primarily taking place through the CoWin website and the Aarogya Setu app. The existence of such barriers might convert a pro-vaccine citizen into a hesitant one or a hesitant citizen into a resistant one.

By setting up help desks, circulating common helpline numbers and targeting areas with a higher density of vulnerable population (Example: old-age homes, road-side beggars etc.), an organisation can easily help bridge the economic and technological barriers and reduce hesitancy due to these factors. An example of successful implementation is Maharashtra Peco Net¹³ – a group of NGOs, citizen volunteers, corporates and government bodies – which have reached out to around 1.1 million citizens in the state and assisted around 77,902 citizens to get vaccinated by setting up 51 vaccination help desks. Local governments can partner with NGOs and the media to spread awareness about the date, time and locations where local vaccination camps etc are taking place.

¹³<https://www.hindustantimes.com/cities/mumbai-news/how-mumbai-ngos-are-helping-spread-the-vaccine-safety-net-101620674960698.html>

Be the authority's eyes and ears on-ground

Since NGOs tend to have a stronger field presence than government bodies, they tend to have deeper insights into various hyperlocal phenomena. These include the proliferation of rumours, their source(s), misinformation and lack of implementation of beneficial government schemes/programs among others. Surveys can be conducted to capture the situation on the ground and identify hesitant/resistant areas, reasons behind the hesitancy and primary channels of communication. The information gathered can be communicated to the relevant authorities to ensure better implementation of vaccination drives, fulfilling demand-supply gaps and busting common myths.

Targeting Influential Leaders/ Mediums of Knowledge Dissemination

Engaging influential community members, such as teachers and faith leaders, to disseminate accurate information on disease prevention and containment within their communities, implementing Standard Operating Procedures (SOPs) for Adverse Events Following Immunisation (AEFI) management, spokespersons' training, preparedness, rumour management, planning for press releases and conferences are some solutions suggested by the Ministry of Health and Family Welfare.¹⁴ Leaders and community influencers can be made to take the vaccines in open public sessions to spread the message regarding their safety; vaccination sites may be opened at places trusted by people, such as temples and mosques, Election Commission offices, to name a few.

Public campaigns like “I am proud to be vaccinated” can create awareness and build momentum around vaccinations in regions with low uptake. Indelible ink, generally used in elections, can be applied on the fingers of vaccinated people. Such a campaign will create a sense of nation-building and can encourage participation. Another network that can be leveraged at the district level is that of the ASHA workers and the auxiliary nurse-midwives. These are trusted local figures, who have considerable influence over the healthcare decisions of the community. The districts of Ramgarh in Jharkhand and Gadchiroli in Maharashtra have been successfully utilising such networks to create awareness and reduce vaccine hesitancy.¹⁵ Use of regional languages, local artists, music, graffiti are all being encouraged in order to spread awareness. For instance, in the tribal parts of Chhattisgarh, popular folk music is being used as a medium for COVID-19 awareness.

Take the vaccine to the people

¹⁴Ministry of Health and Family Welfare. (2021). *COVID-19 Vaccine Communication Strategy*. Government of India. <https://www.mohfw.gov.in/pdf/Covid19CommunicationStrategy2020.pdf>

¹⁵<https://indianexpress.com/article/opinion/columns/india-vaccine-hesitancy-covid-inoculation-drive-7355171/>

Door-to-door vaccination was critical in ensuring the success of the orally administered Polio vaccine. However, since COVID-19 vaccines can only be injected, door-to-door vaccination has not been widely tested yet. Mobile vaccine units attached to tele-medicine vans can be used in this scenario. Tele-medicine units having adequately equipped medical staff will ensure that all vaccine-related complications are dealt with. Partnerships with hospitals, the government and corporations can facilitate the successful implementation of such projects.

- **For Employers**

Vaccines, despite their relative newness to the market, appear to be our best shot at returning to normalcy. An employer, especially one who is involved with the employment of migrant workers, could potentially play a very important role as a catalyst who could help overcome vaccine hesitancy. Employers, given their higher position in the corporate chain, are usually in a better position to have more access to the progress and access of the COVID-19 vaccine. They should be responsible for imparting information regarding the vaccines to their employees at repeated and periodic intervals. This could essentially encourage the migrant workers to take the vaccines. Depending on the availability and ability, employers could also arrange/organise for the workers under them to get vaccinated. Additionally, rewards, benefits and incentives like sponsoring their transportation cost or paid leaves to get vaccinated and the subsequent recovery period could also convince the workers to get vaccinated as well.

Employers are in a position of power - changing of working policies; essentially forcing workers to get vaccinated at the cost of job security might also work as a catalyst to convince migrant workers to get over vaccine hesitancy. Mandating vaccination as a requirement for maintaining economic benefits, as well as the assurance of protecting family and loved ones might also convince workers to have a positive attitude towards vaccines. Employees should provide a clear picture of the pros and cons surrounding the vaccines while providing educated facts and figures regarding COVID-19 vaccines, and when the pros outweigh the cons, we may see a positive response towards vaccines among the migrant workers.

CONCLUSION

The survey includes information about people from all walks of life and religions. Through the process of the survey, the team has met people and come across various, often contradictory, perspectives/ viewpoints. There are individuals who are enthusiastic as well as hesitant towards the vaccines, with various convincing and unconvincing reasons. Most of the people who were surveyed are intending to take the vaccine at a certain point as it is deemed to be essential and to prevent other variants from arising. It gives us a clear idea about the current situation surrounding COVID-19 vaccine hesitancy, and that is the first step towards a positive change.

The present survey revealed valuable lessons for governments, community leaders, nonprofits, corporations, and hospitals, alike. On the government side, it exposed gaps in the current systems of information dissemination and highlighted the need for more effective communication about the benefits of taking the vaccine. It drew attention to resource shortages and scepticism around prevailing institutions, and, in doing so, called for timeliness and trust-building in the process of administering vaccines. On the community side, it called upon NGOs, religious groups, and other grassroot organisations to spearhead campaigns, facilitate door-to-door vaccine drives, and capture accurate assessments of the situation on the ground level. The survey also had implications for other interest groups, such as for-profit organisations and employers, who, by providing rewards, benefits, and incentives to their staff, can encourage the large-scale uptake of vaccines among the working class.

The findings of this report are of consequence not just to policy-makers and medical practitioners, but to community leaders, businesses, and civil society at large. Rather than allocating responsibility to different groups, the data signifies a greater need for cooperation among these seemingly disparate institutions to ensure reliable communication, trust-building, and the overall success of the COVID-19 vaccination drive. We hope the findings and recommendations are incorporated into the design of national communications and vaccination programs to overcome vaccine resistance globally.

BIBLIOGRAPHY

Armocida, B., Formenti, B., Missoni, E., D'Apice, C., Marchese, V., &Calvi, M. et al. (2021).

Challenges in the equitable access to COVID-19 vaccines for migrant populations in Europe. *The Lancet Regional Health - Europe*, 6, 100147.
doi:<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8179687/>

Anon, Inter AmericanCommision on Human Rights; “Joint Guidance Note on Equitable access to Covid-19 Vaccines for all Migrants” ;Council of Europe; OHCHR, Human Rights and Access to Covid-19 vaccines, December 17, 2020.

Boye, B. A. (2021). *COVID-19 Vaccine Launch in India*. UNICEF India.

<https://www.unicef.org/india/stories/covid-19-vaccine-launch-india>

BusinessToday.In (2021). *10 million lost jobs in Covid 2nd wave, 97% of households' income declined: CMIE*.

Chowdhary, S., Motheram, A., &Pramanik, S. (2021, April 14). *Covid-19 vaccine hesitancy:Trends across states, over time*. Ideas For India.
<https://www.ideasforindia.in/topics/governance/covid-19-vaccine-hesitancy-trends-across-states-over-time.html>

Deshmukh, A., &Mehra, A. (2021, June 29). *Misinformation Alone Can't Explain Vaccine Hesitancy Among India's Marginalised*. The Wire Science.
<https://science.thewire.in/health/vaccine-hesitancy-among-indias-marginalised-isnt-just-a-misinformation-issue/>

Dutta, P. K. (2021, April 7). *Covid-19: When will all Indians be vaccinated*. India Today.
<https://www.indiatoday.in/coronavirus-outbreak/story/india-corona-covid-vaccine-when-will-all-indians-be-vaccinated-1788159-2021-04-07>

Dransfield, S. &Thériault, A. *Vaccine monopolies make cost of vaccinating the world against COVID at least 5 times more expensive than it could be*. Oxfam International.

Edwards, B., Biddle, N., Gray, M., &Sollis, K. (2021). COVID-19 vaccine hesitancy and

resistance: Correlates in a nationally representative longitudinal survey of the Australian population. *PloS one*, 16(3), e0248892. <https://doi.org/10.1371/journal.pone.0248892>

MacDonald NE; SAGE Working Group on Vaccine Hesitancy. Vaccine hesitancy: Definition, scope and determinants. *Vaccine*. 2015 Aug 14;33(34):4161-4. doi: 10.1016/j.vaccine.2015.04.036. Epub 2015 Apr 17. PMID: 25896383.

Larson, N. (2021). *225 million jobs were lost worldwide in 2020 thanks to the pandemic, report finds*. CTV News.

Our World In Data (2021). *Coronavirus (COVID-19) Vaccinations*.

Ramachandran, S. (2021, January 13). *India Rolls Out New COVID-19 Vaccines Amid Rampant Skepticism*. The Diplomat. <https://thediplomat.com/2021/01/india-rolls-out-new-covid-19-vaccines-amid-rampant-skepticism/>

Razai, M. S., Chaudhry, U. A. R., Doerholt, K., Bauld, L., & Majeed, A. (2021). Covid-19 vaccination hesitancy. *BMJ*, n1138. <https://doi.org/10.1136/bmj.n1138>

Rogers, L. S. (2021, March 30). *Ending the Pandemic and Vaccine Resistance: Modern Questions, Long His*. Johns Hopkins Bloomberg School of Public Health. <https://www.jhsph.edu/covid-19/articles/ending-the-pandemic-and-vaccine-resistance-modern-questions-long-history.html>

Sahay, R. (2021, June 12). *How India can combat vaccine hesitancy*. The Indian Express. <https://indianexpress.com/article/opinion/columns/india-vaccine-hesitancy-covid-inoculation-drive-7355171/>

Sallam M. (2021). COVID-19 Vaccine Hesitancy Worldwide: A Concise Systematic Review of Vaccine Acceptance Rates. *Vaccines*, 9(2), 160. <https://doi.org/10.3390/vaccines9020160>

Schwarzinger, M., Watson, V., Arwidson, P., Alla, F., & Luchini, S. (2021). COVID-19 vaccine hesitancy in a representative working-age population in France: a survey experiment based on vaccine characteristics. *The Lancet Public Health*, 6(4), e210–e221. [https://doi.org/10.1016/s2468-2667\(21\)00012-8](https://doi.org/10.1016/s2468-2667(21)00012-8)

Statista (2021). *Impact of the coronavirus (COVID-19) on the Indian economy - statistics & facts*.

- Tarfe, A. (2021). *India did not have a vaccination hesitancy crisis till the government mismanaged COVID-19*. The Caravan. <https://caravanmagazine.in/health/india-did-not-have-a-vaccine-hesitancy-crisis-till-the-government-mismanaged-covid19>
- Thakkar, M. R. (2021, May 10). *How Mumbai NGOs are helping spread the vaccine safety net*. Hindustan Times. <https://www.hindustantimes.com/cities/mumbai-news/how-mumbai-ngos-are-helping-spread-the-vaccine-safety-net-101620674960698.html>
- The New Humanitarian, & Patnaik, P. (2020, May 6). *Yes, COVID-19. But what about Other infectious diseases?*
- <https://www.thenewhumanitarian.org/analysis/2020/05/06/coronavirus-measles-cholera-ebola-polio-infectious-disease>
- The Times of India. (2021). *India witnesses highest-ever single-day vaccination of 88.13 lakh doses. Vaccine hesitancy quite high in Delhi-NCR, reveals survey*. (2021, January 21). The Times of India.
- <https://timesofindia.indiatimes.com/city/delhi/vaccine-hesitancy-quite-high-in-delhi-ncr-reveals-survey/articleshow/80390762.cms>
- World Health Organization (2021). *WHO Coronavirus (COVID-19) Dashboard*.
- Yeyati, E. & Filippini F. (2021). *Social and economic impact of COVID-19*. Brookings Institution.

APPENDIX

Survey Questionnaire to Assess Vaccine Resistance Among Migrant Workers

Instructions:

This survey aims to study COVID-19 vaccine hesitancy, resistance and adoption among migrants and daily wage workers in India.

Procedure:

This questionnaire should take approximately 5 minutes to fill. You will be presented with 24 questions that you should respond in the manner that you believe is best suited to you.

Confidentiality and Consent:

This form will not record your name, email address or any other relevant information that can be used for identification. Strict confidentiality will be maintained for all consenting participants. The data acquired by this online survey will only be accessible to the concerned researchers via Google Forms. Consenting participants can also choose to withdraw from the study at any given point in time, and rest assured that any data provided by them will be immediately discarded.

Risks and Ethical Concerns:

This study involves little to no risks for its participants and does not violate the ethical norms of research.

Survey Questions

1. What is your age?

- a. 18 - 24
- b. 25 - 34
- c. 35 - 44
- d. 45 - 60
- e. 60+

2. What is your household's annual income?

- a. Unemployed
- b. <5,000
- c. 5,000 - 10,000
- d. 10,000 - 15,000
- e. 15,000 - 20,000
- f. 20,000+
- g. Prefer not to say

3. What is your occupation?

- a. Unemployed

- b. House help
- c. Driver/cab-driver
- d. Auto driver
- e. Daily wage worker
- f. Security guard

4. What state are you currently living in?

- a. Maharashtra
- b. Delhi
- c. Karnataka
- d. Haryana
- e. Tamil Nadu
- f. Jharkhand
- g. West Bengal

5. What is your sex?

- a. Male
- b. Female
- c. Prefer not to say

6. What city are you currently living in?

7. What is your religious affiliation?

- a. Hinduism
- b. Islam
- c. Christianity
- d. Jainism
- e. Buddhism
- f. Sikhism
- g. Other
- h. Prefer not to say

8. What do you know about COVID-19?

9. How can/do you protect yourself against it?

- a. Social distancing - Yes/No
- b. Masks - Yes/No
- c. Vaccines - Yes/No

10. Have you been vaccinated for any disease? (Polio, Tetanus, Measles, TB)

- a. Yes
- b. No
- c. Not sure

11. If not, why?

12. What do you think about the COVID-19 vaccine?

13. Have you been vaccinated for COVID-19?

- a. First dose
- b. Second dose
- c. Not yet

14. If not, do you plan to get vaccinated?

- a. Yes
- b. No
- c. Maybe

15. If not, why?

- a. Side-effects
- b. Cost
- c. Recovery time
- d. Pre-existing health conditions
- e. Other

16. Specify the reason - fill in if they elaborate on the previous answer.

17. Do you know any people who have died from the vaccine?

a. Yes

b. No

18. Do you know people who have died from not being vaccinated?

a. Yes

b. No

19. Have your friends or family been vaccinated for COVID-19?

a. Yes

b. No

20. If not, then why?

21. Are people in your community pro/anti-vaccine?

a. Mostly pro-vaccine

b. Mostly anti-vaccine

c. Mixed

22. If anti/mixed, what are there reservations towards the vaccine?

23. Where do you currently get information about COVID-19?

- a. Social Media
- b. Word-of-mouth [Friends, Family, Neighbours]
- c. Village Panchayat
- d. Religious leader
- e. TV
- f. Radio
- g. Newspaper
- h. Local healthcare professionals

24. Do you think you are getting reliable and correct information about the COVID-19 vaccine?

- a. Yes
- b. No
- c. Maybe



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