

ORIGINAL ARTICLE

The Challenges for Implementation of Policies Causing A Delay in Mass Immunization Against Covid-19: A Cross Sectional Qualitative Study

AREEB AMJAD¹, ASFAR ANWAR², SHUJAAT ALI³, FARAH WASEEM⁴, HADIA KHAN⁵, MARIYAH HIDAYAT⁶^{1,2,3,4,5}Student MBBS Fourth Year University College of Medicine and Dentistry, Lahore, Pakistan.⁶Professor Anatomy Department, University College of Medicine and Dentistry, Lahore, Pakistan.Corresponding author: Mariyah Hidayat, Email: mariyah.hidayat@ucm.uol.edu.pk, Cell: +92-3002588375**ABSTRACT****Objective:** To investigate the policy barriers leading to hindrance in mass immunization of Covid-19 in Pakistan.**Study design:** A cross-sectional qualitative study was**Duration of study:** study was conducted from October 2021 to April 2022**Place of study:** was conducted on 106 individuals at 4 vaccination centers of Lahore, including Expo center, Pakistan Kidney and Liver Institute and research center (PKLI), Lahore Developmental Authority (LDA) sports complex, Railway dispensary Model Town.**Methodology:** It covered interviews, focus group discussions and filling in of semi-structured questionnaires from the general public visiting the vaccination center. Individual interviews of hospital administrators and focused group interviews of general public visiting various hospitals of Lahore, including Jinnah Hospital, Services hospital, Lady Wallington hospital and University of Lahore Teaching Hospital were also included in this study. The data obtained was transcribed and analyzed by using SPSS software version 21. The theme we chose was Politically Informed Views and the subthemes were common hurdles, common myths, different vaccine brands, lack of awareness and conspiracy theories.**Results:** The results were significant ($P < 0.05$) with the levels of different variables as: Common hurdles 41%; Common myth 25%; Religious Aspects 17%; Different brands 7%; Lack of awareness 10% respectively. Each variable showed a remarkable difference from considered standard SOPs.**Conclusion:** To increase the vaccination drive, proper implementation of the already established government policies, with better surveillance and monitoring of the vaccine centers is required. Awareness among the general population should also be increased to debunk myths and motivate them.**Keywords:** COVID-19, vaccination, immunization, Sino-pharm, Sino-vac.**INTRODUCTION**

There has been a widespread push to encourage vaccination drives against COVID-19 worldwide. Vaccination initiatives have always encountered tremendous challenges⁽¹⁾. Prior to the introduction of vaccinations, physical separation, teleworking, distance learning, limitations on the use of non-essential facilities and services, travel bans at the national and international levels, and isolation at home were all used to stop the spread of the virus⁽¹⁻⁴⁾. However, this persistent work by wealthy nations led to the development of COVID-19 vaccines, due to uncertainty, worry, and dread about the effects of receiving a vaccination against this uncommon strain of HIV, rumors and conspiracy theories have enveloped vaccination campaigns throughout the globe rather than the people accepting the vaccine^(2,5). Initiatives must be made by each nation separately in order to effectively stop the spread of this illness. Conspiracy theories and rumors have traditionally interfered with vaccination campaigns in Pakistan, but during the current COVID-19 epidemic, the government's major vaccination effort has not gained much traction, despite the availability of sufficient vaccine and a media blitz^(3,8,11).

The vaccination campaign in Pakistan started on February 3rd, 2021, after the People's Liberation Army of China gave the nation 500,000 doses of the Sino-pharm vaccine^(4,5). The mass vaccination effort is being led by the National Command and Control Center (NCOC), and as of September 22, 2021, 74,837,117 total doses have been given in Pakistan to a population of 226,698,514. Sino-pharm, Sino-vac, CanSino Bio, AstraZeneca, Pfizer-BioNTech, Moderna, and Sputnik V are the vaccinations given in Pakistan (National Command Operation Center, n.d.)^(4,7,11,13)

The Pakistani government has put into place a number of policies and preventative measures to enhance the country's governance framework, scenario, and COVID-19 outbreak situation. Even though the government has taken prompt and sufficient action to combat the pandemic, there are numerous implementation, legislative, and policy barriers preventing effective mass immunization^(5,20,21). This is despite the fact that many vaccination centers across the nation are operating at full capacity to achieve the results^(6,19).

As crucial to the efficacy of COVID-19 vaccinations as the vaccine itself is public trust. The general public's lack of understanding and information is pervasive, and this, in turn, is causing a lack of faith in the authorities who procure and distribute vaccinations, which results in vaccine hesitancy⁽⁷⁾.

Rationale of study: As a result, the objective of this qualitative study is to analyze the policy obstacles by locating their primary causes at every stage of implementation and administration at a few of Lahore's vaccination facilities. After carefully examining the available literature, we came to the conclusion that it is essential to conduct in-depth interviews with members of the general public in Punjab in order to better understand the obstacles that stand in the way of effective Covid-19 immunization on a large scale in Pakistan.

MATERIALS AND METHODS**Study Design:** Cross sectional Qualitative Study.**Study population:**

- DHOs supervising vaccination centers of Lahore, including Expo center, Pakistan Kidney and Liver Institute and research center (PKLI), Lahore Developmental Authority (LDA) sports complex, Railway dispensary Model Town
- General public visiting the vaccination center who want to get vaccinated.
- General public visiting outpatient departments of some public and private hospitals of Lahore including University of Lahore Teaching Hospital, Services hospital, Jinnah Hospital who are hesitant to get vaccinated.
- The policy implementers in these hospitals.

Duration of study: 6 months (October 2021 – April 2022)**Sample size:** 106 individuals, including;

- Hospital administrators – 3
- Deputy District Health Officers (DDHOs) supervising vaccine centers – 4
- General public visiting the vaccination center – 50
- General public visiting outpatient departments of some public and private hospitals of Lahore – 50

Sampling technique:

- Non-probability sampling (Purposive sampling) in case of hospital administrators and staff involved in distribution and administration of vaccine.

- Random sampling in case of general public visiting vaccination centers and hospitals.

Inclusion criteria:

- Only the administrator will be interviewed in the hospital and none other.
- Only the DDHOs supervising vaccine centers will be interviewed and none other.
- Both genders will be interviewed from the general public falling in the age bracket of 18 – 70 years and from all ethnic backgrounds.

Exclusion criteria:

- Mentally disabled people or the ones visiting psychiatric OPDs
- Terminally ill patients or the ones visiting emergency OPDs
- People younger than 18 years or older than 70 years of age.

Data collection procedure: In the first step, an extensive review of existing literature was done using medical search engines like PubMed and Google Scholar. Relevant articles were short listed and thoroughly read. A detailed set of questions intended to ask the interviewees were carefully planned and documented for all 4 categories of people to be interviewed.

In the second step, after having obtained a verbal consent and explained the purpose of study, Focus Group Discussions in a group of 5 -6, of the public, including patients and their attendants visiting general OPDs in the hospitals were conducted in the 3 hospitals and general public visiting the 3 vaccination centers mentioned in the current research proposal, who want to get vaccinated. Each session was lasted for around 15 – 20 minutes.

This was followed by in depth interviews with 3 administrators of selected hospitals and 4 DDHOs of 4 nominated vaccination centers. Each session lasted around 25–30 minutes in which sequential open-ended questions were asked to understand the various aspects of policies implemented and practiced related to the availability and distribution of Covid-19 vaccines. In depth interview with the administrators of the selective hospitals were conducted after taking their written consent on an application forwarded by the Head of the Department of Community Medicine of UCMD, Lahore. Likewise, interviews of the vaccination center health care staff involved in administration of the vaccine were conducted and recorded using camcorder and later transcribed and analyzed.

Data analysis procedure: Information gathered from focus group discussion and in-depth interviews were transcribed and analyzed by using SPSS software version 21 an instrument used for qualitative analysis, The Questionnaires were formulated and were tested against a small sample to test its validity.

RESULTS

Table 1: Different challenges of man immunization

Common hurdles	Illiteracy	Gathering of people at centers/	Lack of administration at vaccination centers	Non-availability of vaccines
Common myth	Die in 2 years	Vaccine cause impotency	Covid-19 is not exiting disease	The pandemic is a hoax
Religious Aspects	Do not take medicine	Only do prayer	Vaccine cause impotency	Use medicinal plants only
Different brands of vaccine	AstraZeneca	Sino pharm	Sino vac	Can Sino
Lack of awareness	Mis concept of social media	Self-medication	Rural Areas	Inaccessible electronic resources

Table-2: Percentage of different challenges of mass immunization in study population

Study population	Common hurdles	Common myth	Religious Aspects	Different brands	Lack of awareness
Percentage Mean Standard Deviation (% Mean ± SD)					
Expo center	20.1±2.1	12.1±2.4	10.1±0.1	2.1±2.5	40.1±2.3
PKLI	20.1±2.2	11.1±2.1	13.1±2.4	4.1±2.2	30.1±1.1
LDA sports complex	20.1±1.1	10.1±2.1	10.1±2.1	2.1±2.1	41.1±2.2
Railway dispensary	20.1±2.3	14.1±2.2	13.1±5.1	2.1±2.3	35.1±4.1
ULTH	10.1±2.4	7.1±2.1	10.1±2.1	3.1±2.1	40.1±2.1
Services hospital	14.1±2.1	4.1±2.1	13.1±2.1	2.1±2.4	20.1±2.1
Jinnah Hospital	10.1±3.1	17.1±2.3	12.1±2.1	1.1±2.1	20.1±2.1

(P<0.05)

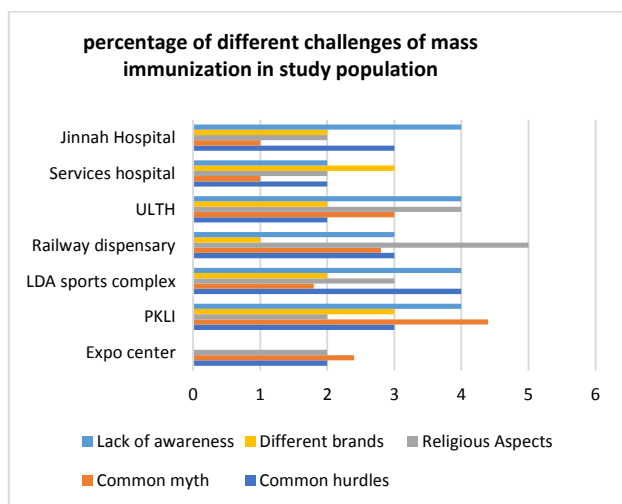


Fig-1: percentage of different challenges of mass immunization in study population

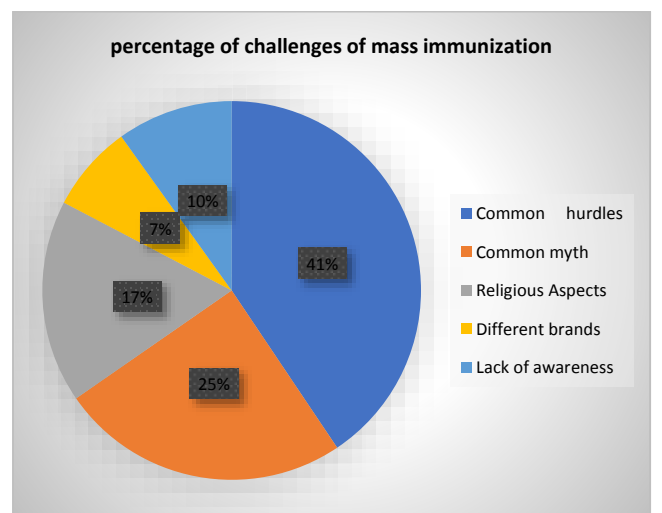


Fig-2: Percentage of challenges of mass immunization

In current study the raw data was collected from different individuals on a data collection Proforma by interviewing different people at various vaccination centers. The major problems faced by the population for vaccination due to government bad policies and some common community-based problems were Common hurdles, Common myth, Religious Aspects, Different brands of vaccines, Lack of awareness. The raw data was bio-statistically analyzed by applying SPSS regression model of percentage mean standard deviation and the levels of different variables were (Common hurdles 41%, Common myth 25%, Religious Aspects 17%, Different brands 7% and Lack of awareness 10% respectively. According to the percentage regression principle of mean standard deviation results were significant ($P < 0.05$) because each variable showed a remarkable difference from considered standard SOPs.

DISCUSSION

Covid-19 vaccine acceptance rate has been a burning issue in Pakistan which the general masses enjoy gossiping about the most. The government and advisory bodies have been spinning the wheels, trying to craft policies to gain control over the pandemic. However, the implementation of these policies is a factor that has been profoundly disregarded. According to a study, the key factors affecting rate of vaccination in Pakistan are 'hesitancy and Inequality'(8). We believe that it is of paramount importance to research upon these issues so that we can facilitate and accelerate the rate of vaccination campaigns in various regions of our country. Pakistan is already facing challenges in eliminating 'vaccine-preventable diseases like Polio and Measles'(9), losing control over Covid-19 will cause the economy to tremendously decline. This is why it is necessary to get to the core of the issues affecting the rate of vaccination. Through our study, we found out that vaccine hesitancy, lack of community engagement and over-crowding of vaccine centers are just few of the reasons causing a delay in the vaccination rate. If we dive deep into the issue of 'vaccine hesitancy', "concern about side-effects is the most common reason for hesitancy" in low to middle income Countries(10). According to our data, many citizens were discouraged when they raised their suspicions about the vaccine. In addition to this, there was unavailability of special advisory bodies or health care workers at the vaccine centers who would educate the public and answer their queries. More 'suspicions result in vaccine refusals' (1). Inaccurate information also results in fallacious arguments about the validity of vaccine. Many people spread false information based on experiences they have heard which may or may not be true. As much as we need to mobilize the social media and drive vaccine-positivity campaigns through it, we also need to monitor sources of misleading data. It is crucial that the usefulness of vaccine is discussed in a manner that a common man understands and accepts the treatment (4). According to one study, our neighboring country 'India has more than 80% vaccine acceptance rate'(11). Since Pakistan shares cultural ties with India, it is possible to achieve the same percentage in near-future by educating the masses(14). We need to understand public behavior towards getting vaccination. We can then figure out patterns tracking back to public intentions to study why this uncertainty exists. Knowing the root cause of an issue helps bring light to its solution and how to manage the problem in a strategic manner (12).

After extensive literature review and recording interviews from all the groups and transcribing and comparing the data, we found that strong enough policies do exist to battle almost any hurdle in the way of mass immunization. However, ensuring the proper implementation of these rules is a challenge(5,7,9,11). The results indicate that common hurdles especially illiteracy, overcrowded and poorly organized vaccine centers and less number of available vaccines are the main challenges in mass immunization of Covid 19 (16,19).

Illiteracy has been a common problem in our country. According to the Ministry of Federal Education and Professional

Training, an estimated population of 60 million is illiterate in Pakistan as of 2022(13). Illiteracy leads to the birth of myths, lack of awareness and denial of the importance of vaccination(14,15). Due to this gap in knowledge, many people are hesitant to even welcome the idea of a novel treatment such as a vaccine. People are uncertain about the possible side-effects and ultimate consequences which they may have to face. This ignorance has also resulted in a birth of various myths which are further strengthened by the use of religion as a means of justification(9,13).

On visiting the vaccination centers it was evident that they were overcrowded and understaffed. Because of which the patients were not properly guided regarding the side effects, contraindications and scheduling of the 2nd dose(17). Thus people shared their "bad experiences" in the centers and hence were discouraged to go back again for the 2nd dose. This resulted in further delay in achieving herd immunity since the first dose would provide viable immunity only for a few months(5-8). Lack of knowledge about the significance of getting a second dose was prevalent. Availability of educated health care workers would have mitigated the situation. Better communication between health care workers and the public would have helped gain the trust of people and eliminate any fears they had regarding the vaccine treatment(11,14,17). This is why through our research it is clear that the situation can be better controlled by motivating the health care workers, upgrading their paychecks and increasing their numbers so that way the workload will reduce(7,14,17,18,21).

On interviewing the hospital administrators and DDHOs it was found that there was a shortage of specific vaccines that were high in demand such as "Astra Zeneca" and "Pfizer". Our research indicated that the public had perceived notions about the efficacy of various types of vaccines. Since, the vaccine treatment was widely implemented in many of the first world countries, people trusted the efficacy and safety of international vaccines particularly "Pfizer". Many people were reluctant to get the local vaccines(16). This resulted in a lot of people rejecting the idea of getting a vaccine all together. In order to solve this problem, supply of scientifically proven more efficient vaccines that are accepted internationally should be increased. Vaccines which are widely accepted and desired should be made more accessible in order to increase the rate of vaccination(17,19,20,23).

Another common problem is believing in myths about Covid and its vaccine. Our research found that many people still believe that Covid- 19 is a hoax. Pointless statements about covid-19 such as "the government benefits from this pandemic", "It's only a mild harmless flu", "It's fake and exists just to manipulate people" etc. still exist. Furthermore, statements like- "Vaccine kills you in 2 years", "It causes impotency", "it's a chip to control humans", "Its only sold to earn money" were widely acknowledged(18,21). These misconceptions were not properly dealt with(20). According to our study these misconceptions form a very strong barrier in causing delay in the mass immunization process. According to our M.s and DDHOs the root cause of this problem is illiteracy and lack of awareness(21,22). One bad experience leads to birth of such deadly and baseless misconceptions. These can only be tackled if we spread awareness in every community and among people of every class(1,20,23,26).

Media plays an important role in terms of both negative and positive aspects. In the world of technology, 'we have the whole world in the palm of our hands'(14-18). Any information can be shared and learned easily. Although, social media is a good tool for spreading awareness and sharing relevant information, it is also being used adversely to spread myths. Baseless videos, messages, posts and other articles change people's perceptions and mold their thinking in a negative way(26). So tracking their source and removing such contents form a vital part of our struggle against the hurdles of mass immunization. In order to motivate the people and debunk the myths; intellectual personalities, political leaders, celebrities and star athletes should come together and get

vaccinated in front of the public so that they can encourage their followers to also get vaccinated.(20-23,26)

Although the internet has spread to all 4 corners of the world, there are still some areas where people are not educated enough to know how to properly use it. In developing country such as Pakistan, a majority of the population comes under this category so it is imperative that we approach them and educate them in our fight against COVID(20-26). Measures such as public addresses, awareness campaigns and other activities should be held in small towns. Small town mayors, masjid Imams, school teachers, and people holding respectable positions in these towns should be encouraged to take the vaccines so that they may encourage their masses.(23,25).

Another problem stemmed when the government introduced policies in which it was mandatory to get vaccinated in order to do your jobs. Due to lack of knowledge of the importance of vaccines the public developed a way out by creating fake vaccination certificates. It is a very common problem and such certificates are available and sold easily in different streets of Pakistan. Government should introduce a system for hospitals to quickly scan the validity of each shown vaccination certificates. Markets selling such certificates should be tracked and stopped. The government should also discourage the public and establish fear regarding such practice by imposing heavy fines on such individuals.

It is estimated that for COVID-19 herd immunity to develop, at least 60-70% of the population must be immune(15). Additionally, immunizations are crucial for rebuilding communities and businesses that have been devastated by COVID-19's impacts. Given the many challenges, we must be realistic in our expectations for COVID-19 vaccinations and their timelines to develop effective strategies and ensure vaccine development, distribution, and deployment. We must also anticipate COVID-19 vaccine challenges and understand their interdependencies. A larger public engagement, intergovernmental support, and collaboration in the reform of institutions, procedures, and incentives will be crucial for each of these issues

CONCLUSION

The study confirmed that poor implementation of government policies due to lack of proper monitoring and some widespread community based issues including common myths, religious considerations and lack of knowledge are the main reasons leading to the hindrance in mass immunization of Covid-19 in Pakistan. By increasing the surveillance (of vaccine centers) and spreading knowledge to clear myths (especially in population of low socioeconomic areas) the vaccination rate can be accelerated.

Strengths and Limitations: To the best of our knowledge this is the first interview based study conducted regarding barriers in mass immunization of covid 19 in Pakistan, we not only interviewed but also compared populations with different mindset regarding vaccination With limiting resources especially time, the data was collected only from different regions of Lahore, Pakistan. A nationwide study was not able to be conducted.

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