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# COVID-19 VACCINE RELATED CONCERNS IN KASHMIRI POPULATION. A CROSS-SECTIONAL QUESTIONNAIRE BASED STUDY.

**Anatomy**

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## ABSTRACT

**Background:** The effectiveness of vaccination in reducing the COVID-19 burden depends on how well the vaccine is received by the public. To prevent the immunisation programme from failing, it is necessary to address the worries of those who are vaccination hesitant. The purpose of this study was to evaluate Kashmiri population's concerns about the COVID-19 vaccine. **Methods:** An online questionnaire was distributed among the general public of Kashmir between February 2021 and March 2021. All individuals were aged above 18 years of either gender (male or female) were included in the survey. Through social media channels including WhatsApp, Facebook, and emails, a thorough validated self-administered questionnaire was sent to the participants. It was entirely voluntary to participate in the survey. The questionnaire was administered in English language. **Results:** Almost all responders 69% agreed that the covid-19 vaccination is safe. 41.5% of participants disagree with the claim that the vaccine contains harmful components. The vaccine's effectiveness against all strains of the COVID-19 virus is strongly upon by 55.5% of the participants. The majority of participants 44.8% agree that Covid-19 infection will boost immunity more than vaccinations do. The majority of participants 74.3% agree that immunizations will work to stop covid-19. **Conclusions:** The results indicate regardless of age, gender, marital status, and occupation, majority of participants agree that vaccination timing is ideal because not all strains of the COVID-19 virus will be protected against it while also helping to stop the spread of infection. The population who received the vaccination did not experience any severe side effects. Regarding how the vaccination centre was set up, the participants expressed satisfaction. Safety and awareness were reported to be the main obstacles to the covid-19 vaccine. But there is well acceptance to covid-19 vaccine among the community of Kashmir, India, and further efforts to create awareness concerning the safety of vaccines will be instrumental in the eradication of this infection

## KEYWORDS

COVID-19, Vaccine Concerns.

## INTRODUCTION

An international threat exists from the COVID-19 epidemic that is currently across the world.[1] COVID-19 has rapidly spread across the globe with high morbidity and mortality, currently affecting over 150 million people and claiming over 3 million lives.[2] India is currently the second most affected country in the world after the United States[3].

Apart from effective treatments, vaccination is a key preventive strategy in mitigating the pandemic.[1] The Corona-19 virus strain originated from Wuhan city, China, has posed the greatest challenge to the humans,[4,5] leading to the longest era of pandemic extending for more than 2 years. Physicians tried several combinations of drug therapy during this pandemic, but all of them were of little or no output.[6, 7] Vaccine has been proved to be infallible for many viral infections, so the scientists around the globe tried hard to develop a vaccine for Covid-19.[8] In the context of emergency, the clinical trial period was shortened, which raised concern and question about the safety of the vaccine among the public. There are reports of concern to vaccination among the population for various reasons like efficacy, safety and credibility.[9] There are reports from the UAE concerning the non-acceptance of vaccination by 12% of the parents.[10]The vaccine needs to be tested among all groups of individuals, particularly in high-risk individuals such as the elderly, pregnant women, and people with co-morbidities, and immunodeficiencies[11]. India started the administration of vaccines for COVID-19, on 16 January with a focus on India's healthcare workers and frontline workers. Later, in a phased manner, the vaccination drive extended to senior citizens and those ≥45 years with co-morbidities. From 1st May 2021 onwards, those aged >18 years were to be eligible. Vaccination against the novel corona virus disease (COVID-19) began in Jammu and Kashmir January 16, 2021 with two inaugural ceremonies in Jammu city and Srinagar respectively.

India is currently administering two vaccines – one developed by AstraZeneca with Oxford University (Covishield) and one by the Indian firm Bharat Biotech (Covaxin) – both of which were approved in January 2021, ahead of the vaccine rollout. In April 2021, a third vaccine – Russia's Sputnik V – was approved for use[12]. Normally, it takes years for the development of a safe and effective vaccine. Considering the immediate need for vaccination currently administered vaccines have been developed with a short period of testing and hence are a matter of concern among the population[13]. This concern over the safety and efficacy, resulting in vaccine hesitancy, is a potential barrier to effective implementation of vaccination programs[13]. Thus, this study was conducted to assess the concerns regarding vaccinations in the Kashmir, India.

## MATERIALS AND METHODS:-

An observational questionnaire-based study was conducted among the general public of Kashmir between February 2021 and March 2021. All individuals were aged above 18 years of either gender (male or female) were included in the survey. Through social media channels including WhatsApp, Facebook, and emails, a thorough validated self-administered questionnaire was sent to the participants. It was entirely voluntary to participate in the survey. The questionnaire was administered in English language. It was divided into two parts. Part A (Table 1) consisted of socio-demographic information and Part B (Table 2) contained questions on concerns regarding vaccination for COVID-19 infection.

Participant responses were entered into MS Excel. The questionnaire had an introduction paragraph outlining the main goal and study objectives, followed by information on voluntary participation and a requirement that all participants give their informed consent.

The ability to abandon the survey at any moment and for any reason, even when they feel uncomfortable, was also made clear to the participants. The participants were given the assurance that any information they supplied would be kept private, preserving their identities and confidentiality. The outline of the questionnaire was adapted from the previous study conducted by Magadmi and Kamel (2020) with some modifications according to locality.[14] The questionnaire was reviewed for validity and reliability.

**Study population and inclusion and exclusion criteria:-**

**Exclusion criteria:-**

- Less than 18 years of age,
- Pregnancy
- Nursing and
- Having any serious chronic condition.

**Inclusion criteria:-**
- Healthcare workers
- Frontline workers.
- Senior citizens and
- Those ≥45 years with co-morbidities.

**Sample size:-**
There were previous reports that the acceptance to vaccine is only 85%. We considered that a sample size of 359 would be sufficient.

**RESULTS:-**
359 members in total took part in the survey 247 males and 112 females. Table 1 lists the percentage of people in each age group as well as their marital status, level of education, and employment. Depending on their occupation, the participants were divided into three groups: students (71.5%), medical and associated professionals (17%), other professionals (11.4%).

Table 2 contains the participants' responses to the questionnaire about public safety concerns regarding the covid-19 vaccine. Almost all responders (69%) agreed that the covid-19 vaccination is safe. 41.5% of participants disagree with the claim that the vaccine contains harmful components. 39.3% of participants are unconcerned about the vaccine's potential to spread disease.

The vaccine's effectiveness against all strains of the COVID-19 virus is strongly or strongly disagreed upon by 55.5% of the participants. The majority of participants 44.8% agree that Covid-19 infection will boost immunity more than vaccinations do.

The majority of participants 74.3% agrees that immunizations will work to stop covid-19. Covid-19 vaccines are a significant advancement in avoiding covid-19 infection, according to Participants' overall opinion regarding the need for everyone to adhere to government recommendations for Covid-19.

**Table 1 Demographic detail of the participants**

| Serial number | Question | Option | Percentage |
|---|---|---|---|
| 1 | Age (years) | 18–25<br>26-35<br>36-45<br>>45 | 72.4<br>9.7<br>7.2<br>10.6 |
| 2 | Gender | Male<br>Female | 68.8<br>31.2 |
| 3 | Marital status | Married<br>Single<br>Separated/divorced/widowed | 18.4<br>81.1<br>0.6 |
| 4 | Education | Post graduate<br>Graduate<br>Diploma<br>High school | 34.5<br>46.5<br>11.4<br>7.5 |
| 5 | Occupation | Student (medicine, pharmacy, nursing, dentistry)<br>Profession (medicine, pharmacy, nursing, dentistry)<br>Profession (other) | 71.5<br>17.0<br>11.4 |

**Table 2 Responses of participants concerning safety and acceptance**

| Question | Strongly agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| A Covid-19 vaccine is safe. | 22.8 | 46.2 | 27.3 | 3.3 | 0.3 |
| Covid-19 Vaccines is containing dangerous ingredients | 2.8 | 8.6 | 37.0 | 84.5 | 8.6 |
| Covid-19 vaccines will be effective against all strains of covid-19 virus | 9.2 | 42.1 | 31.5 | 14.8 | 2.5 |
| Covid-19 infection will provide better immunity than vaccines do. | 9.7 | 35.1 | 3.0 | 17.8 | 5.3 |
| Covid-19 vaccines will be effective at preventing covid-19. | 16.4 | 57.9 | 21.4 | 3.6 | 0.6 |
| The timing of the current vaccination schedule is appropriate | 13.9 | 51.5 | 27.6 | 6 | 0.3 |
| Covid-19 vaccination should be made mandatory by the government | 28.1 | 40.7 | 8 | 10.6 | 2.8 |
| Enough human study concerning safety and efficacy of the covid-19 vaccine | 13.4 | 42.9 | 31.2 | 9.7 | 2.8 |

**DISCUSSION**
In terms of preventing the spread of infectious diseases, vaccines have been shown to be the most promising invention. However, always an inhibition has been seen among the public in accepting vaccine due to several reasons.[15] No such study concerning the vaccine acceptance has been reported from the state of Kashmir, India. According to the majority of responders in this survey the covid-19 vaccination is safe, which is consistent with past study data from China and the USA.[16] The majority of the participants in our study feel that the vaccine will not be effective against all strains of Corona virus, which has not been reported in any earlier study. Infection with Covid-19 will lead to superior immunity development, according to 44.8% of participants, rather than vaccination since immunity from vaccinations may not develop as well as it does after a natural infection.[17] The study's participants believe that the vaccination will be successful in avoiding covid-19 infection. The majority of participants agreed with the preceding findings about parental safety concerns in the USA and believed that the vaccine was safe for children.[18]

The majority of trial participants think that the timing of the current immunisation is suitable and that the vaccine will be a significant improvement in reducing covid-19 infection.[19] The majority of respondents agree with the preceding report that vaccination should be made a government requirement for everyone. [20]The majority of individuals favored adhering to official recommendations for preventing covid-19 infection, which is consistent with an earlier study report from India.[21]Most participants felt that there had been enough human studies done to determine the covid-19 vaccine's safety and effectiveness, and that there have been no prior reports of this kind.

The majority of the participants agreed that enough human studies concerning the safety and efficacy of the covid-19 vaccine have been done and there are no such earlier reports. This study reveals that awareness and safety is the major barrier for Covid-19 vaccination.[22]

According to this study's findings, which are in line with an earlier analysis by Dodd et al., cost is not a barrier to immunisation. [23] The vaccine was only administered to 8% of participants in total, and none of them have reported any serious adverse effects. The majority of them have simply reported fever and headache, which is consistent with the report for the moderna covid-19 vaccine.[24]

This study has the limitation of being conducted on a very small population. The use of Web-based survey produced higher response rates when administered to an educated population with access to computers.[25] Poor computer literacy, limited English language ability, and limited internet access could have all contributed to the study's low participation rates. Instead of the current pandemic condition, it would not have been a good idea to conduct the survey physically among the participants. Despite the sample size being modest, participants were chosen because they came from various professional and educational backgrounds and because they represented a broad cross-section of the state's population.

**CONCLUSIONS**
In the Indian state of Kashmir, this is the first community-based cross-sectional survey. According to the survey, safety (for both adults and children), contents, side effects, and effectiveness, as well as the range of activities and costs, are all of concern. This is true regardless of age, gender, marital status, and occupation. The majority of participants agree that vaccination timing is ideal because not all strains of the COVID-19 virus will be protected against it while also helping to stop the spread of infection. The population who received the vaccination did not experience any severe side effects. Regarding how the

vaccination centre was set up, the participants expressed satisfaction. Safety and awareness were reported to be the main obstacles to the covid-19 vaccine. But there is well acceptance to covid-19 vaccine among the community of Kashmir, India, and further efforts to create awareness concerning the safety of vaccines will be instrumental in the eradication of this infection.

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No potential conflict of interest.
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