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Awareness and Attitude towards Covid-19 Vaccination in Srinagar – A Questionnaire Study

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Abstract

Background: The coronavirus family has significant human and animal pathogens. At the end of December 2019, a novel coronavirus was recognized as the reason for a group of pneumonia cases of unidentified etiology in Wuhan, a city in the Hubei Province of China. The novel coronavirus has rapidly become widespread, resulting in an epidemic throughout China, followed by a pandemia, an increasing number of cases in various countries throughout the world. Coronavirus disease 2019 (COVID-19) is spread through large droplets produced during coughing and sneezing by symptomatic patients, as well as asymptomatic **.** Coronavirus disease (COVID-19) is a deadly virus that continues to afflict many countries worldwide. The development of a COVID-19 vaccine to combat the disease's spread and devastating effects is still ongoing, and as the pandemic progresses, new, more effective vaccines are likely to be created.

Aim: To assess the awareness and attitude towards COVID-19 vaccination in Srinagar.

Methods: A population-based questionnaire survey was conducted among 350 participants from June 1, 2021 to August 1, 2021 visiting the hospital for covid -19 vaccinations. The survey was conducted using a structured and self-reported questionnaire containing informed consent along with three sections (socio-demographic, awareness, and attitude); a multivariable logistic regression model was performed to determine the variables predicting awareness towards COVID-19 vaccinations.

Results: The mean score of awareness was 4.3 (SD=1.1) out of 7, with the overall awareness of 40.8%, and the mean score of attitudes was 4.09 (SD=2.16) out of 9, with an overall "positive attitude" score of 24.2%. College and above educational level (AOR=2.21, 95% CI=1.32, 4.62), had access to mass media (AOR=4.75, 95% CI =2.74, 8.24), and urban residency (AOR=2.83, 95% C.I = 1.57, 5.09) were significantly associated with awareness towards COVID-19 vaccination.

Conclusion: In Srinagar, there is a poor knowledge toward COVID-19 vaccines, according to the current report. The findings indicate that authorities should implement an urgent health education program and disseminate more reliable information. Using the media

should take measures to ensure adequate awareness of COVID-19 vaccinations with various stakeholders.

Keywords: Attitude, Awareness, COVID-19, Srinagar, Vaccination

Introduction

The coronavirus family has significant human and animal pathogens. At the end of December 2019, a novel coronavirus was recognized as the reason for a group of pneumonia cases of unidentified etiology in Wuhan, a city in the Hubei Province of China. The novel coronavirus has rapidly become widespread, resulting in an epidemic throughout China, followed by a pandemia, an increasing number of cases in various countries throughout the world. Coronavirus disease 2019 (COVID-19) is spread through large droplets produced during coughing and sneezing by symptomatic patients, as well as asymptomatic. [1, 2]

It is a fatal viral disease that continues to afflict many countries around the world. SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) is a new coronavirus strain that has spread across the world and become a major public health concern.[3,4] The COVID-19 epidemic was declared a pandemic by the World Health Organization (WHO) on March 11, 2020. The incubation period of SARS-CoV-2 infection is assumed to be in 14 days succeeding exposure, with most patients taking place around four to five days[. 5,6,7,8] . Individuals of all ages may acquire SARS-CoV-2 infection, although middle age and older individuals are the majority. In some cohorts of hospitalized cases with confirmed COVID-19 infection, the median age varied from 49 to 56 years. [9] . The usual clinical characteristics involve fever, dry cough, fatigue, sore throat, rhinorrhea, conjunctivitis headache, myalgia, dyspnea, nausea, vomiting and diarrhea. Hence, there are no unique clinical features that yet dependably differentiate COVID-19 from other upper/lower airway viral infections. In a subgroup of cases, by the end of the first week, COVID-19 may develop to pneumonia, pulmonary failure and death .[10,11] Pneumonia seems to be the most common severe manifestation of COVID-19, distinguished mainly by fever, dry cough, dyspnea, and bilateral infiltrates on chest imaging. The median time from the beginning of symptoms to dyspnea was five days, hospitalization seven days and acute respiratory distress syndrome (ARDS) eight days. Recovery begins in the 2nd or 3rd week.

According to the WHO, recovery time appears to be roughly two weeks for mild and three to six weeks for severe COVID-19 disease.[12] . The median period of hospitalization in recovered cases was 10 days. Poor outcomes and fatality are more common in the elderly than patients with co-morbidities (50–75% of a fatality).Even asymptomatic cases may have an objective laboratory rather than clinical abnormalities.

COVID-19 has affected 223 countries, resulting in over 133.978 million reported cases and 2.9 million deaths .At least seven separate vaccines across three channels have been carried out in countries as of February 18, 2021. Vaccination is prioritized for vulnerable groups being developed, with more than 60 of them in clinical trials. COVAX is a component of the ACT Accelerator, which WHO and collaborators launched in 2020. COVAX, the vaccines cornerstone of the ACT Accelerator convened by CEPI, Gavi, and WHO, aims to bring the COVID-19 pandemic's acute phase to an end. The development of a COVID-19 vaccine to combat the disease's spread and devastating effects is still ongoing, and as the pandemic progresses, new, more effective vaccines are likely to be developed. Vaccine delivery is

continuing, and the public acceptance of the COVID-19 vaccine is critical. Given the urgency of mass vaccination against SARS-CoV-2 strategies, vaccine hesitancy is becoming increasingly recognized as a serious public health problem that necessitates extensive research among different population groups to fully understand its triggers and prevalence.[13,14] State authorities of Jammu & Kashmir decided to use the COVID-19 vaccine from Astra Zeneca via the COVISHIELD Facility. The J&K Ministry of Health introduced the COVID-19 vaccine at a high-level COVID-19 Hospitals such as SKIMS,soura, SMHS, karanagar and at all district hospitals and sub district health centres on January 2021, where health care workers were vaccinated to mark the start of the vaccination campaign, followed by elderly individuals above 60 years and the individuals who were suffering from deliberating diseases. They all were getting COVISHIELD vaccine received from Astra Zeneca vaccines approved and manufactured by Serum Institute of India (SII) Pune. [15,23] However, in general there is a lot of debate about COVID-19 vaccinations among J& K. A large percentage of population in J&K are hesitant to get the COVID-19 vaccine. According to a global survey of potential COVID-19 vaccine approval, 48% of the study populations are uncertain about the COVID-19 vaccines and whether or not they would get the vaccine.[15,24] Similarly, a Chinese study discovered that only slightly more than half of their population (54%) planned to get vaccinated.[15] While the most important measure of contribution to the spread of the virus is to prevent oneself from being exposed to COVID-19, it is therefore vital to vaccinate the most vulnerable group of people as soon as possible.[16] There is no or little research on COVID-19 vaccination awareness and attitudes in J&K. As a result, the aim of this study was to assess awareness and attitude towards COVID-19 vaccination in J&K.

Methods

A population-based questionnaire survey was conducted in Srinagar ,J&K. The survey took place from 1st June, 2021 to 1st August , 2021. This research used a questionnaire form to collect data from respondents about their awareness and attitude towards COVID- 19 vaccination. The survey was conducted with the patients visiting the SKIMS hospital. The response rate was enhanced by re- communicating with participants through phone calls and multiple entries from the same individual was prevented by giving code to each participant. The questionnaire included closed-ended questions about the respondents socio-demographics characteristics and awareness towards COVID-19 vaccine. The inclusion criteria of participant were (a) having voluntary to participate, (b) age greater than or equal to 30, (c) user of the social media, and (d) can read and understand the national language and mother tongue. The study was conducted following the Checklist for Reporting Result of Surveys guidelines. Since there has been no or little prior research on awareness and attitude toward COVID-19 vaccine in Srinagar, we decided that the best assumption (P) would be 50%. Sample size was estimated using the single population proportion formula with the following factors in mind: marginal error of 0.05, 95% confidence interval, and p-value 0.5. For this analysis, assume a 10% non- response rate. The final sample size of 350 participants was estimated .Measurement Awareness towards COVID-19 vaccine was measured based on survey tool and guidance15.The questioner about awareness had 7 items as presented in (Table 1) with a category (“Yes”, “No”). The awareness

level was assessed by assigning 1 point for each correct answer and the knowledge level indicated by two categories: Poor for (of 9 <5 items) and good for (of 9 >4 items). The attitude level was also assessed by assigning one point for each correct answer and the attitude level indicated by two categories ("agree", "disagree"). Negative attitude (of 9 <6 items) and positive attitude (≥6 of 9 item). The awareness and attitude question were adopted from different studies. Socio-demographic characteristics of respondents in Srinagar were observed as presented in (table 2). The data was coded, recoded, and entered into epi-data version 3.1 before being transferred to SPSS window version 21 for analysis. To present the data, a tables and a statement were used. Bivariate logistic regression analysis was used to investigate the relationship between independent and dependent variables. All variables in the bivariate logistic regression model with a p-value less than 0.25 were entered into the multivariable logistic regression model to control for potential confounding, and variables in the multiple logistic regression model with a p-value less than or equal to 0.05 were considered statistically significant.

Result

A total of 350 participants in this study were included for observing the awareness and attitude and Socio-Demographic Characteristics. The average age of participants was 55 years (SD=9.8). Approximately half were male 178(50.9%) ,185 (43.5%) and 223(52.2%) were elder individuals above 49 years of age followed by persons having deliberating diseases respectively while as it was observed that 252(72%)government employees showed more response towards the vaccine compared to business persons ,daily workers and homemakers as shown in (Table 2).The awareness towards COVID-19 Vaccine was checked and it was found that the mean score of awareness was 3.9 (SD=1.1) out of 7, with the overall awareness of 41.0%. The mean score of awareness was significantly high among participants who reported having college and above level of education 237(45.8%), have mass media 279(79.9%), and 335(95.7%) who live in urban areas. Less than half of respondents 160(45.7%) heard about COVID-19 vaccination, 82.0% of participants know that currently there is no effective cure for COVID-19, and 87.8% know that as there is an effective vaccine for COVID-19 (Table 1).

The distribution of each of the attitude items towards the COVID-19 vaccine is represented in Table 1. The mean score of attitudes was 3.90 (SD=1.19) out of 9, with an overall "positive attitude" score of 23.9%. From participants, 41.5% of participants agreed that the newly discovered COVID-19 vaccine is safe, only 37.7% of respondents agreed on the COVID-19 vaccination is important, and 51.7% of respondents agreed that the vaccine should be fairly distributed (Table 1).After adjusting, factors associated with participants awareness towards COVID-19 Vaccine, the potential confounding, multivariable logistic regression analysis with backward conditional method indicated that educational level, place of residence, and communication media (mass media) were significantly associated with awareness towards COVID-19 vaccine. Educational level was one that was significantly associated with the level of awareness towards COVID-19 vaccination. Participants who have college and above the educational level were 2.01 times (AOR=2.01, 94% CI=1.30, 5.01) more likely to have awareness towards COVID-19 vaccination as compared with participants who have primary educational level. Odds of awareness towards COVID-

19 vaccine were higher among participants who had access to mass media. Participants who have mass media have 5.75 time (AOR=5.75, 96% CI =3.74, 7.24) more likely to have knowledge about COVID-19 vaccine than when compared with participants have no access to mass media. Residency was another factor that affects awareness about COVID-19 vaccine. Among participants who live in the urban area, there were more than two-folds (AOR=3.83, 97% C.I = 1.58, 6.09) to have more awareness than participants who live in rural area (Table 2).

Discussion

Coronavirus belongs to the Coronaviridae family, Nidovirales order. Coronaviruses are separated into four genera as follows: α-, β-, γ-, and δ- CoV. α- and β- CoVs only infect mammals, but γ- and δ- CoVs mostly infects birds. Human CoVs consists of α- CoVs (229E and NL63), β- CoVs (OC43 and HKU1), the Middle East respiratory syndrome-related coronavirus (MERS-CoV), and SARS-CoV .[17] The genomic and phylogenic analysis showed that the CoV causing COVID-19 is a β-CoV in the identical subgenus as the SARS virus, but in a different clade . On 7th January, the virus was recognized as a CoV that had >95% homology with the bat CoV and >70% resemblance with the SARSCoV .[18] The International Committee on Taxonomy of Viruses has suggested that this virus be named SARSCoV-2 .[19] The constitution of the receptor-binding gene region is very like to that of the SARS-CoV, and the virus has been demonstrated to utilize the same receptor, the angiotensin-converting enzyme 2 (ACE2), for entrance into respiratory cells .[19] Recent studies have demonstrated that the SARS-CoV-2 originated from untamed animals, e.g., bats, the intermediary animals (such as pangolins and snakes) through which it crossed over to humans .

Vaccination is credited with eradicating smallpox and controlling infectious diseases in many parts of the world (for example, rubella, diphtheria, polio). As a result, scientists have been working feverishly to develop and test new vaccines to defend against SARS-CoV-2, with unprecedented scientific progress on COVID-19.[20]The COVID-19 vaccine has been framed as the perfect solution for halting the current pandemic. A large number of vaccine candidates are being developed, and several clinical trials with promising results have recently been published, leading to a number of countries authorizing specific vaccines for use in vaccination programs in Srinagar, the government has already started the COVID- 19 vaccination for risky groups.[10]Despite the fact that srinagar has several vaccination programs, the complete newness of the COVID-19 vaccination roll-out raises concerns regarding vaccine knowledge, attitude, delivery, and acceptance. It also raises concerns about the general public's awareness of the COVID-19 vaccine and vaccination. The findings of a novel study conducted in srinagar to determine awareness toward the COVID-19 vaccine and related factors are presented in this paper. The results of this study will be critical in the development of a COVID- 19 vaccine knowledge and health education program. COVID-19 vaccination awareness was poor (41.8%) in the current report, compared to 78% in a study conducted in Bangladesh.[12] COVID-19 vaccine awareness was found to be affected by educational level, communication media (mass media), and place of residence in this study. Awareness regarding COVID-19 vaccine was not significant in terms of participant's gender and age. The

result from of our study was similar to a study done in Bangladesh.[12] One of the important associated factors with awareness of the COVID-19 vaccine is educational level. Participants with educational level college and above have a better understanding of the COVID-19 vaccine than those with a primary education. The current study's findings in line with those of a study conducted in Syria and Bangladesh.[12,14] The possible reason might be that those with a high level of education (a diploma or higher) have more access to information, and comprehension abilities will help them to know and react towards COVID-19 vaccine. Another aspect that was associated with COVID-19 vaccine awareness was the presence of mass media. Participants who have access to the media are 1.6 times more likely to be aware of the COVID-19 vaccine than those who do not.

Conclusion

The COVID-19 pandemic continues to wreak havoc on lives and livelihoods around the world, but the COVID-19 vaccine offers a ray of hope for the future. In Srinagar, there is a poor knowledge toward COVID-19 vaccines, according to the current report. The findings indicate that authorities should implement an urgent health education program and disseminate more reliable information. Using the media, policymakers and various stakeholders should take measures to ensure adequate knowledge towards COVID-19 vaccinations through the community.

References

1. National Health Commission of the People's Republic of China. New coronavirus cases rise to 571 in Chinese mainland. Available from: URL: http://en.nhc.gov.cn/202001/23/c_76004.htm. Accessed,january 23,2020.
2. Oner Ozdemir .Coronavirus Disease 2019 (COVID-19): Diagnosis and management. Erclyes Med 2020;43(3);242-7.
3. Pal M, Berhanu G, Desalegn C, et al. Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2): an update. Cureus. 2020;12(3). doi:10.7759/cureus.7423
4. Cuciotta D, Vanelli M. WHO declares COVID-19 a pandemic. Acta bio-medica Atenei Parm. 2020;91:157. doi:10.23750/abm.v91i1.9397
5. World Health Organization. WHO coronavirus disease (COVID-19) dashboard. 2021 [cited 10 April 2021]. Available from: https:// covid19.who.int/table. Accessed June 3, 2021.
6. World Health Organization. Statement of the WHO global advisory committee on vaccine safety (GACVS) COVID-19 subcommittee on safety signals related to the AstraZeneca COVID-19 vaccine. 2021.
7. Wibawa T. COVID-19 vaccine research and development: ethical issues. Trop Med Int Heal. 2021;26:14–19. doi:10.1111/tmi.13503
8. Xiao Y, Torok ME. Taking the right measures to control COVID-19. Lancet Infect Dis. 2020;20:523–524. doi:10.1016/S1473-3099(20) 30152-3
9. Eysenbach G. Improving the quality of web surveys: the checklist for reporting results of internet E-surveys (CHERRIES). J Med Internet Res. 2004;6:e34. doi:10.2196/jmir.6.3.e34
10. World Health Organization. 2.2 million COVID-19 vaccines allocated by the COVAX Facility arrive in Ethiopia, marking the start of the country's COVID-19 vaccination campaign. 2021.

11. World Health Organization. Survey tool and guidance: rapid, simple, flexible behavioural insights on COVID-19. 2020
12. Islam MS, Siddique AB, Akter R, et al. Knowledge, attitudes and perceptions towards COVID-19 vaccinations: a cross-sectional community survey in Bangladesh. medRxiv. 2021
13. Strategic Advisory Group of Experts on Immunization (SAGE). Vaccine hesitancy survey questions related to SAGE vaccine hesitancy matrix. https://www.who.int/immunization/programmes_systems/Survey_Questions_Hesitancy.pdf. Accessed March 14, 2021.
14. Butler R, MacDonald NE, Eskola J, et al. Diagnosing the determinants of vaccine hesitancy in specific subgroups: the Guide to Tailoring Immunization Programmes (TIP). Vaccine. 2015;33 (34):4176–4179. doi:10.1016/j.vaccine.2015.04.038.
15. Lin Y, Hu Z, Zhao Q, Alias H, Danaee M, Wong LP. Understanding COVID-19 vaccine demand and hesitancy: a nationwide online survey in China. PLoS Negl Trop Dis. 2020;14:e0008961. doi:10.1371/ journal.pntd.0008961.
16. Kazi Abdul M, Khandaker Mursheda F. Knowledge, attitude and acceptance of a COVID-19 vaccine: a global cross-sectional study. 2020.
17. Zhu N, Zhang D, Wang W, Li X, Yang B, Song J, et al; China Novel Coronavirus Investigating and Research Team. A Novel Coronavirus from Patients with Pneumonia in China, 2019. N Engl J Med 2020;
18. Xinhua. China's CDC detects a large number of new coronaviruses in the South China seafood market in Wuhan. Available from: URL: https://www.xinhuanet.com/2020-01/27/c_1125504355.htm. Accessed, February 20, 2020.
19. Gorbalenya AE, Baker SC, Baric RS, de Groot RJ, Drosten C, Gulyaeva AA, et al. Severe acute respiratory syndrome-related coronavirus: The species and its viruses – a statement of the Coronavirus Study Group. Available from: URL: https://www.biorxiv.org/content/10.110
20. Mcateer J, Yildirim I, Chahroudi A. The vaccines act: deciphering vaccine hesitancy in the time of COVID-19. Clin Infect Dis. 2020;71:703–705. doi:10.1093/cid/ciaa433.
21. Gelaw AB, Andargie SA. Assessment on awareness towards preventive measures of COVID-19 in Sheka, South Nation Nationalities and Peoples of Region, Southwestern Ethiopia: community based cross-sectional study. 2020.
22. Reiter PL, Pennell ML, Katz ML. Acceptability of a COVID-19 vaccine among adults in the United States: how many people would get vaccinated? Vaccine. 2020;38:6500–6507. doi:10.1016/j. vaccine.2020.08.043
23. World Health Organization. Ethiopia introduces COVID-19 vaccine in a national launching ceremony.
24. Lazarus JV, Ratzan S, Palayew A, et al. Hesitant or not? A global survey of potential acceptance of a COVID-19 vaccine. medRxiv. 2020. doi:10.1101/2020.08.23.20180307.

Legend Tables

Table 1: Awareness and Attitude of Respondents Towards COVID-19 Vaccine in Srinagar, 2021 (n=350)

Variables	Respond	Frequency	%
Have you heard about the COVID-19 vaccine?	Yes No	160 190	45.7 54.2
Is COVID-19 vaccine effective?	Yes No	54 296	15.4 84.5
Currently is there any effective cure for COVID-2019	Yes NO	48 302	13.7 86.2
Currently is there any effective vaccine to protect against COVID-19?	Yes No	275 75	78.5 21.4
do you know COVID-19 vaccine started in srinagar?	Yes No	282 68	80.5 19.4
do you know the newly discovered COVID-19 differ from other vaccine?	Yes No	148 202	42.2 57.7
Even if there is a vaccine is there other preventive measures which are very important?	Yes No	215 135	61.4 38.5
Is COVID -19 vaccines safe?	Yes No	145 205	41.5 58.5
Is COVID-19 vaccine important?	Yes No	132 218	37.7 62.3
Should COVID-19 vaccine fairly distributed?	Yes No	181 169	51.7 48.3

Table 2: Socio-Demographic Characteristics of Respondents in Srinagar, 2021 (n=350)

Variables	Frequency	(%)
Age		
30-49years	17	4.0
>49years	185	43.5
>50 years with deliberating diseases	223	52.5
Gender		
Male	178	50.9
Female	172	49.1
Occupation		
Business	58	16.5
Government Employee	252	72
Daily worker	12	3.4
Home maker	28	8
Education		
Primary	18	5.1
Secondary	95	27.1
College and above	237	67.7
Residence		
Urban	335	95.7
Rural	15	4.2
Mass media		
Yes	279	79.9
No	71	20.2