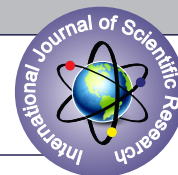


## A STUDY ABOUT KNOWLEDGE AND ATTITUDE ON COVID-19 VACCINATION IN TERTIARY CARE CENTRE IN SOUTHERN HARYANA.



## Forensic Medicine

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## ABSTRACT

## Summary of protocol:

**Background:** Coronavirus Disease 2019 also known as COVID-19 is an aggressively expanding pandemic caused by a novel human coronavirus (SARS-CoV-2) previously known as 2019-nCoV. The Coronavirus Disease has spread throughout the world and gained attention as a result of acute respiratory illness. This led to mass panic and anxiety among people. The WHO (World Health Organization) declared the corona virus outbreak 2019-2020 as a public health emergency of international concern (PHEIC) on 30 January 2020 and on 11 March 2020 WHO declared COVID-19 as a pandemic. Without the proper knowledge of the disease, there are many misconceptions and stigmas about the pandemic even with the implementation of awareness programs regarding vaccination. So, this study attempts to assess the knowledge, attitude and awareness level of people among in health sector and health care workers in India about the COVID-19 disease vaccination.

**Aim:** To assess the awareness among the students, faculty and other health care workers about the knowledge and attitude about COVID-19 vaccination.

**Methodology:** A cross sectional study was conducted among the individuals engaged with the health sector and health care workers. Assessment questionnaire containing relevant questions regarding the knowledge (basic details about COVID-19 vaccine). The sample size of 375 was taken in the study.

**Procedure:** All the interns, faculty and other health care workers who are attending to duties were directly approached and the importance of the study was discussed with them. After their willingness they were given a questionnaire form along with the informed consent form the investigators.

**Analysis:** Was done by using SPSS version 24 (IBM, Chicago, USA). Descriptive statistics were used in the study to analyse the findings.

**Conclusion:** First and foremost in current scenario is vaccination against this virus, because it is the need of hour to take vaccine. Vaccination can induce an appropriate immune response to fight this deadly virus and help people to combat this situation

## KEYWORDS

## INTRODUCTION:

Coronavirus Disease 2019 also known as COVID-19 is an expanding pandemic throughout the world caused by a novel human coronavirus (SARS-CoV-2) which previously known as 2019-nCoV. As of 31<sup>st</sup> January 2021, till now it has affected 216 countries/areas/territories, infected 10,41,65,066 people and caused 22,65,354 deaths. The United States of America, India, Brazil, Russian Federation, The United Kingdom etc are most severely affected countries. In India, it has infected 1,08,02,591 people including 1,54,823 deaths till date. On January 30<sup>th</sup>, 2020 the first SARS-CoV-2 positive case in India was reported in the state of Kerala. Subsequently, the number of cases drastically rose. In Haryana first Covid-19 case reported in Gurugram when a 26-year-old woman, a resident of Sector 9, tested positive for the novel coronavirus on 15 Feb 2020. Haryana reported a total positive case of 268293 and total deaths of 3027 in which Nuh District reported 1705 cases.<sup>1,2</sup>

COVID-19 first case was identified in December 2019 in Wuhan, China. Now, the disease has spread globally till now and has become a life-threatening pandemic disease. The WHO (World Health Organization) declared the corona virus outbreak 2019-2020 as a public health emergency of international concern (PHEIC) on 30 January 2020 and on 11 March 2020 WHO declared COVID-19 as a pandemic.<sup>3</sup>

The main clinical symptoms are dry cough, fever, myalgia, dyspnea, fatigue and is highly infectious. In 18.5% of the patients in china with COVID-19 developed severe symptoms like septic shock, acute respiratory distress syndrome, metabolic acidosis, and bleeding and coagulation dysfunctions.<sup>4</sup>

The virus itself is not airborne but spreads through respiratory droplets and by coming in close contact from people who are suffering from Covid-19. The respiratory droplets contaminates surfaces and spreads

to people when touching the contaminated surfaces and then touching their face, nose, mouth and eyes. Virus survives on the contaminated surfaces for approximately 72 hours. Symptoms of the disease appear in 2-14 days from the time of exposure, with an average of 5 days.<sup>5</sup>

This virus majorly affects the lungs because it attacks the host cells via the enzyme ACE2, which is most abundant in type 2 alveolar cells of the lungs<sup>6,7,8</sup>. This virus has a surface glycoprotein called a "SPIKE" which connects to ACE2 and enters the host cells. The virus also affects the gastrointestinal organs as ACE2 is also expressed in cells of gastric, duodenal and rectal epithelium and small intestine<sup>9</sup>.

India have taken strong measures to contain the spread of COVID-19 through better diagnostics and treatment, vaccines will provide a lasting solution by enhancing immunity and containing the disease spread. Globally, over 274 candidate vaccines are in different stages of development as of 4 December 2020. In response to the pandemic, the vaccine development process has been fast-tracked.<sup>10</sup>

The Framework by WHO articulates the overall goal of COVID-19 vaccine deployment, provides six core principles that should guide distribution of the vaccine and the endorsement of this document has been done by the Strategic Advisory Group of Experts on Immunization (SAGE). It includes Human Well-Being, Equal Respect, Global Equity, National Equity, Reciprocity and Legitimacy.<sup>11</sup>

In India the COVID vaccine was launched on 16<sup>th</sup> January, 2021. Based on the guidance from National Expert Group On Vaccine Administration for Covid-19 (NEGVAC), COVID-19 vaccine will be introduced in a phase wise manner. The groups prioritization will depend upon the disease incidence and prevailing pandemic situation. First phase focusing on health care workers, frontline workers and population at higher risk. Vaccination in these priority groups (Health Care Workers, Frontline Workers and Population ≥50 years of age and

<50 years with co-morbidities like diabetes, hypertension, cancer, lung diseases etc.) is not necessarily sequential and will be tailored based on vaccine availability. It is planned to vaccinate nearly 30 crore population in phase-1 of the vaccination.<sup>12</sup>

There is a need to assess the basic knowledge about the COVID-19 vaccine among the individuals associated with the health sector, with which we can understand the impact of vaccination programs and the interest of the health care workers in knowing and preventing the spread of the disease. Keeping in view the above implications, our present study is aimed at evaluating the individuals related to the health sector about the COVID-19 vaccine program.

#### AIM AND OBJECTIVE:

1. To assess the awareness among the students, faculty and other health care workers about the knowledge and attitude about COVID-19 vaccine.
2. To assess the knowledge of health care workers to prevent transmission of COVID-19 infection with the help of vaccination.
3. To assess the profile of adverse events following immunization of Covid-19 vaccination.

#### MATERIAL AND METHODOLOGY:

**Study subjects:** Students (MBBS) above the age of 18 years, faculty members (including Junior residents, PGs, Senior residents and all the professors) and other subjects up to the age of 55 years.

**Study site:** The study was conducted in the SHKM Government Medical College, Nalhar, Nuh.

**Study design:** Hospital based cross sectional and prospective observational study.

**Study period:** A period of 3 month or till the total number of subjects included in the study.

**Sample size:** Total 375 Subjects in which faculty were 66, students were 175, nursing staff were 30 and other health care workers were 104 of age groups 18 to 55 years.

#### Sample selection:

##### Eligibility of the participants:

To be eligible for the study, the study subjects will have to fulfill all of the following

#### INCLUSION CRITERIA:

a) Students, faculty and other health care workers who are engaged with SHKM Medical College.

#### EXCLUSION CRITERIA:

- a) Other than health care workers of SHKM Medical College.
- b) Subjects below 18 years of age and above 55 years of age.

#### STATISTICAL ANALYSIS:

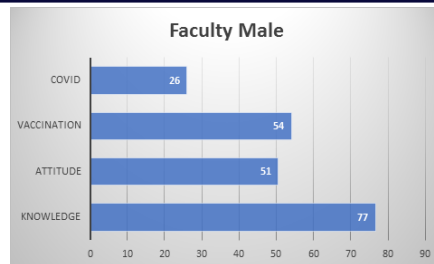
After compilation of collected data, analysis will be done using Statistical Package for Social Sciences (SPSS), version 24 (IBM, Chicago, USA). Descriptive statistics will be used in the study to analyse the findings. Mean and standard deviation and proportions will be used to estimate the results of the study. Along with it appropriate statistical tests will be used.

#### Procedure:

All the study subjects including interns, faculty members and other health care workers who are working in SHKM Medical College and Hospital were directly approached and the importance of the study was discussed with them. After their willingness and consent taken in the form of informed consent they were given a questionnaire form to give their response or opinion. Questionnaire form filled with their responses were collected and data generated. This data was incorporated in excel software and appropriate statistical tools were applied accordingly.

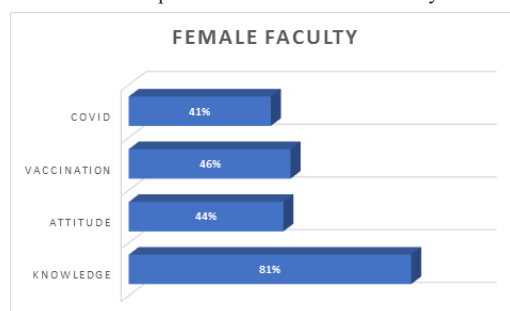
All protective measures were taken during the course of the study as per the guidelines from Ministry of Health and Family Welfare department of India.

#### RESULT AND DISCUSSION:



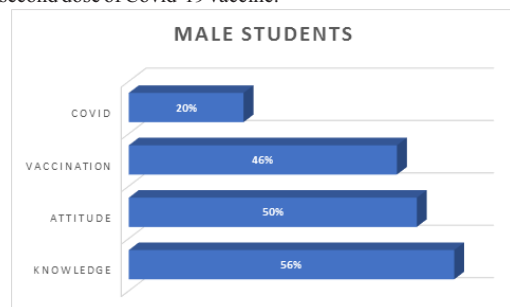
**Bar Chart 1: Chart Showing Knowledge and attitude about COVID-19 In male faculty**

Chart 1 showing that 26% of male faculty tested positive for COVID-19 and showed antibody titers in their nasopharyngeal swab samples. In the male faculty 54% had got vaccinated with Covishield vaccine and stated that proper protocol were followed during the vaccination and post vaccination symptoms like fever, malaise, generalized weakness, shivering etc., for a period of about 1 to 3 days. Among the male faculty 51% showed a positive attitude towards Covid-19 Vaccination, they were mildly apprehensive and were willing to take the second dose of Covid-19 vaccine. The knowledge of vaccines and availability of Covid-19 vaccine was present in 77% of the male faculty.

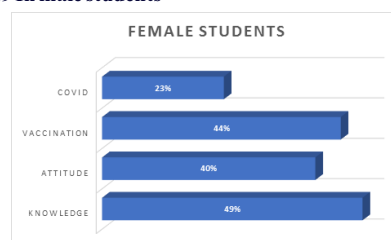


**Bar Chart 2: Chart Showing Knowledge and attitude about COVID-19 In female faculty**

Chart 2 showing that 81% of female faculty had knowledge regarding Covid-19 vaccination which was highest among the study groups. Among them 41% tested positive for COVID-19 and showed antibody titers and 46% had got vaccinated with Covishield vaccine and developed post vaccination symptoms like fever, malaise, generalized weakness, shivering etc., for a period of about 1 to 3 days. Among the female faculty 44% showed a positive attitude towards Covid-19 Vaccination, they were mildly apprehensive and were willing to take the second dose of Covid-19 vaccine.

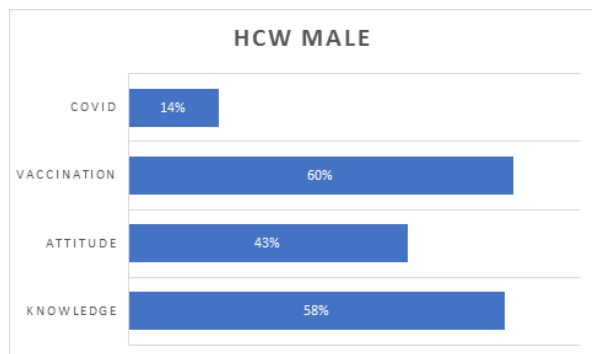


**Bar Chart 3: Chart Showing Knowledge and attitude about COVID-19 In male students**

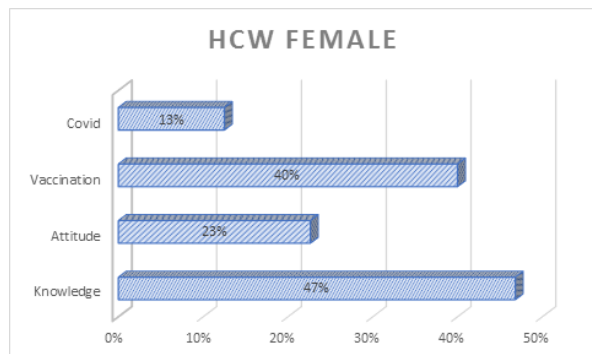


**Bar Chart 4: Chart Showing Knowledge and attitude about COVID-19 In female students**

As depicted above in chart 3 and 4, the knowledge was 56% among male students, 20% had before tested positive for Covid-19, 50% had positive attitude towards vaccination, 46% students have taken the vaccine and were willing to take the second dose also. While, the knowledge was 49% among female students, 23% had before tested positive for Covid-19, 40% had positive attitude towards vaccination, 44% female students have taken the vaccine and were willing to take the second dose.

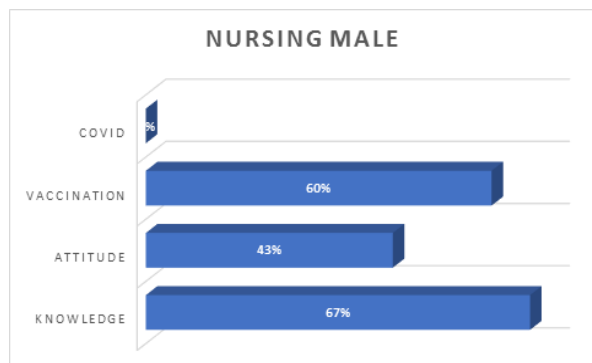


**Bar Chart 5: Chart Showing Knowledge and attitude about COVID-19 In male health care workers**



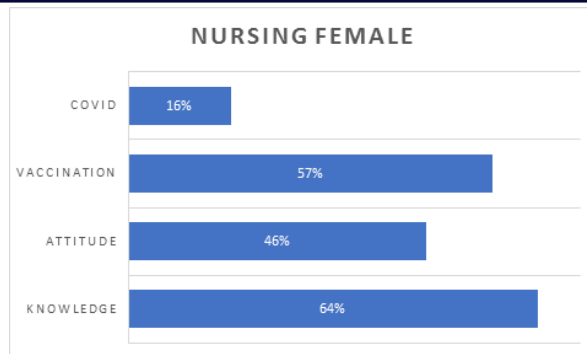
**Bar Chart 6: Chart Showing Knowledge and attitude about COVID-19 In female health care workers**

As portrayed above in chart 5 and 6, in health care workers 14% were tested positive in males and 13% in females. The vaccination status was higher in male health care workers (60%) compared to female health care workers (40%). While the knowledge and attitude regarding the Covid-19 vaccination was higher in males (58% and 43% respectively) than in females (47% and 23% respectively).



**Bar Chart 7: Chart Showing Knowledge and attitude about COVID-19 In male nursing staff.**

Chart 7 showing that 67% of male nursing staff had knowledge regarding Covid-19 vaccination. None of the male nursing staff tested positive for Covid-19. Among them 60% had got vaccinated with Covishield vaccine and developed post vaccination symptoms like fever, malaise, generalized weakness, shivering etc., for a period of about 1 to 3 days. Among the male nursing staff 43% showed a positive attitude towards Covid-19 Vaccination and were willing to take the second dose of Covid-19 vaccine.



**Bar Chart 8: Chart Showing Knowledge and attitude about COVID-19 In female nursing staff.**

As represented above in chart 8, in female nursing staff 16% were tested positive and 57% were vaccinated. The knowledge and attitude regarding the Covid-19 vaccination was 64% and 46% respectively.

## CONCLUSION

Following little steps can prevent spread of COVID-19 virus successfully and reduced the mortality rate far better and these steps are:

1. First and foremost in current scenario is vaccination against this virus, because it is the need of hour to take vaccine. Vaccination can induce an appropriate immune response to fight this deadly virus and help people to combat this situation.
2. Use soaps, alcohol-based sanitizers for hand wash.
3. Wear mask and dispose it properly to limit the spread of virus.
4. Do not touch face, nose, mouth, eyes with hands after touching any object on public place.
5. Maintain social distancing and avoid social gatherings.
6. Eat healthy diet, maintain good immunity levels to fight against the virus.
7. Follow the COVID-19 vaccination guidelines.

## Limitations

Our study was based on assessment through the questionnaires and not on observations; hence, some bias in the results cannot be excluded from the study.

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