

Knowledge and Attitude towards COVID 19 Vaccinations among Patients Admitted in General Medical and Surgical Wards of Christian Medical College (CMC), Vellore, South India

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Abstract: COVID 19 pandemic had caused a severe burden on the human mankind. Safe and effective vaccination is the significant measure to control the impact of pandemics. This study aimed at determining the knowledge and attitude regarding COVID 19 vaccine among patients admitted in the tertiary care hospital in South India. A descriptive cross-sectional study was conducted in the year 2021 by recruiting subjects using simple random sampling technique. Subjects were asked to fill the self-administered questionnaire on knowledge and attitude regarding COVID 19 vaccination. Descriptive and inferential statistics were used to interpret the results. About 20.8% of the patients had adequate knowledge about COVID 19 vaccine, more than half of the patients 60.8% were having moderate knowledge and 18.3% were having inadequate knowledge. Moderately positive attitude towards COVID 19 vaccination was noted among 66% of the patients, 23.4% of the patients had negative attitude and 10.6% were showing neutral attitude. There was no association between demographic factors and knowledge and attitude of COVID 19 vaccine.

Keywords: COVID 19, Knowledge, Attitude, COVID 19 vaccine.

1. Introduction

The COVID 19 disease had spread widely all over the world. This pandemic had burdened health care system and we are battling to prevent the infection as we have gone through three waves of COVID 19 pandemic. The key measures in control are Quarantine, isolation and strict infection control measures. Therefore, the need of vaccination against this disease plays a major role. When we get vaccinated, we are protecting ourselves as well as people around us by preventing the spread of disease. When a large number of people have been vaccinated against a disease and have generated protective antibodies against future infection, herd immunity can be achieved. Vaccines, unlike natural infection, produce immunity without producing disease or other consequences. The most effective way to prevent the spread of COVID 19 is by safe vaccination and ensuring majority of the population is vaccinated. Reducing the hesitancy and improving the acceptance to this vaccine among the public was a very challenging task for the national health care systems working in hand with the Government of India.

Objectives

- 1) To assess the knowledge of patients regarding the COVID 19 vaccination.
- 2) To assess the attitude of patients towards COVID 19 vaccination.
- 3) To find an association between the selected demographic variables and knowledge, attitude of patients towards COVID 19 vaccination.

2. Material and Methods

Design and sampling:

The research was conducted using a descriptive cross-sectional study design among patients admitted in general medical and surgical wards of Tertiary care hospital of south India. The subjects were recruited using random sampling method from all the general medical and surgical wards to achieve the sample size of 120 that was calculated by conducting a pilot study. The informed consent was obtained from the participants after which the patients completed the self-administered questionnaire on Knowledge and attitude of COVID 19 Vaccine.

Data collection instrument:

The study tool is self-administered questionnaire on knowledge and attitude regarding COVID 19 vaccination. The questionnaire was developed by the investigators of this study and the validity and reliability of the tool was assessed by experts in the field.

The questionnaire was administered to 12 patients to pilot test and modifications were not needed. The tool had two parts. Part (i) dealt with the demographic variables of the study subjects and Part (ii) had self-administered tool with two sections to determine the Knowledge and attitude towards COVID 19 vaccination among patients. The first section of the tool consisted of 10 items that assessed the knowledge of COVID vaccine. The content validity index score of this section was 0.87. The responses of each question were "Yes, No, and Don't know". The correct option was given score 1, the wrong option and "don't know" were given the score of 0. The maximum score was 10 which was converted to percentage. The score was

interpreted as inadequate (0 – 49%), moderately adequate (50 - 79%) and adequate (80 - 100%).

The second section consisted of 10 items on attitude towards COVID vaccination which was measured on 5 point Likert scale as “Strongly agree, Agree, Neutral, Disagree and Strongly Disagree” and the scoring was 5, 4, 3, 2 and 1 respectively. Reverse scoring was done on the negative statements i. e. item numbers 1, 3, 5, 6, 7, 8, 9 and 10. The content validity index score of this section was 0.94. The interpretation was done as “0 – 49% negative attitude, 50 - 79%: moderately positive attitude, 80 - 100%: positive attitude”.

Data Collection Procedure

Sampling: The subjects were recruited using random sampling method from all the general medical and surgical wards.

Sampling size: Sample size of 120 was calculated using report of pilot study.

Data collection technique: The informed consent was obtained from the participants after which the patients completed the self - administered questionnaire on Knowledge and attitude of COVID 19 Vaccination.

Ethical considerations: The study was approved by Institutional Review Board and the ethical clearance was given. The participation by the subjects was voluntary and the confidentiality was maintained. The participants were enrolled in the study only after obtaining informed consent.

Data analysis: Statistical analysis was performed using SPSS 23.0 Statistics. Descriptive statistics was used to analyze the demographic distribution, knowledge and attitude with frequency, proportions (%), mean, and standard deviations.

3. Result and Discussion

Demographic Characteristics of patients

According to the demographic data, majority of the patients (71.7%) were male. Many of the patients (35.8 %) were above 50 years. Most of them were married (97%). More than half of them (55%) completed their school education. Around half of them were unemployed (52.5%).

Majority of them hadn't received COVID vaccine (74.2%) at the time of data collection. There was no association between selected demographic variables and knowledge, attitude of patients towards COVID 19 vaccines.

Knowledge about COVID 19 vaccine

About 20.8% of the patients had adequate knowledge about COVID 19 vaccine where else a study conducted in Gurage zone, Ethiopia (Haimanot Abebe 2021) revealed that 74% of the general population had good knowledge towards COVID - 19 vaccination, which is significantly more comparing to the study done in CMC, Vellore. More than half of the patients (60.8%) were having moderate knowledge and 18.3% were having inadequate knowledge. Another study

done on knowledge among adults in Singapore (Joseph Cheng Yuen Juin, 2022) revealed that more than half of the participants (55%) had inadequate knowledge which is high comparing to the study done in CMC Vellore which is only 18.3% who had inadequate knowledge.

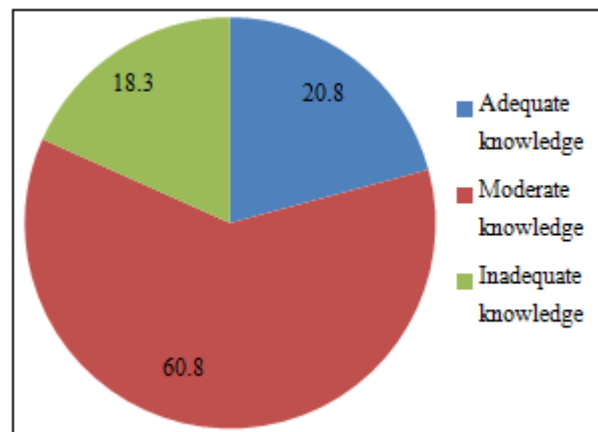


Figure 1: Knowledge about COVID 19 vaccine

Three fourth (85%) of the patients were knowledgeable that vaccine is one of the reliable public health interventions to manage COVID 19, most of them (91.7%) were aware that vaccination is important to protect them and their family against COVID - 19 disease. Majority of them (94.2%) were aware that it is still important to wear masks and maintain social distancing even after COVID 19 vaccination. It is noted that 79.2% of patients were not aware that a person having allergic reaction to food item can be vaccinated. More than three fourth of patients (79.2%) didn't know that current COVID 19 infected person can't be vaccinated. More than half of them (69.2%) didn't know that COVID 19 vaccine doesn't provide lifelong protection against COVID 19.

Attitude towards COVID 19 Vaccination

On assessing the attitude of the patients regarding COVID 19 vaccine, it was noted that 66% of the patients had moderately positive attitude towards COVID vaccination, 23.4% of the patients had negative attitude towards COVID vaccination and 10.6% were showing neutral attitude.

Nearly half (45%) of the patients were having fear to get vaccinated since it is a new vaccine and 48.3% of patients felt that they are happy with the natural immunity that they already have. Three fourth of the patients (85%) said that it is safe to get COVID vaccine and 76.7% of them felt that COVID 19 vaccine prepared by India are safe. Majority (94 %) of patients felt that they don't get infected with COVID once they are vaccinated. Half of the patients (51.7%) felt that media has caused necessary fear about vaccine.

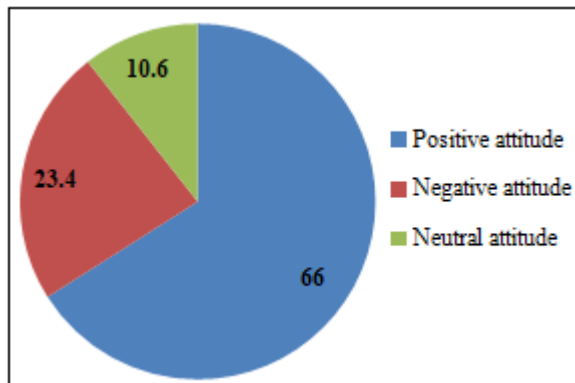


Figure 2: Attitude towards COVID 19 vaccine

Studies conducted in Debre Tabor and wolkite, Ethiopia (Alle YF & Oumer KE, 2021), revealed that only 42.3% and 44.7% of the general population have a positive attitude towards COVID - 19 vaccination, respectively. A meta - analysis study (Hui Geng, kexin Cao, Jingbing Zhang, 2022) in China showed that 51% of respondents had a positive attitude to COVID - 19 vaccination. A prior study revealed that approximately two - thirds of the respondents had positive perceptions of the presently available COVID - 19 vaccines given in Saudi Arabia (SM Al - Zalfawi, 2021). Similarly in a study conducted among adult population in turkey, a total of 62.7% of the respondents had a positive perception regarding COVID - 19 vaccination (MelihaCaglaSonmezer, 2022). Comparing with all these studies, the study done in CMC Vellore is relatively high depicting 66% subjects with moderately positive attitude towards the COVID vaccine.

The interesting fact is that 80% of the subjects felt that taking the COVID vaccine should be made mandatory which is remarkably high comparing with the study done on the acceptability of the vaccine among the residents in rural communities of Ghana which was 41.9%. Our study finding is much high compared to studies by Wang et al. and Bell et al. WHO reported COVID - 19 vaccine acceptance rate of more than half 55.8% respectively among the Chinese.

4. Limitations

There were few limitations in our study. The sample size was not large enough to assess the knowledge and attitude of COVID 19 vaccine. The results could vary if this study is done at various settings of hospital or public.

5. Conclusion

The findings reflect moderate knowledge and moderately positive attitudes towards COVID - 19 vaccine among the patients admitted in the general medical and surgical wards of a tertiary hospital in south India.

The key and the best strategy to confine the pandemic is to make the public to get vaccinated and Vaccines are one of the most reliable and cost - effective public health interventions ever implemented to save millions of lives each year. Clarification of doubts regarding COVID vaccines, education on the importance of vaccination and giving examples of important public figures who got

vaccinated were helpful to motivate the public to get vaccinated.

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