A study to assess the knowledge and attitude towards covid-19 vaccination among patients and Pateints's attendants in selected OPDs of Neigrihms Hospoital.

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Abstract

COVID-19 (SARS-CoV-2 virus) was first detected in China towards the end of 2019 and spread to the various parts of the globe over the next few days. The World Health Organization (WHO) declared it a public health emergency of international concern on January 30. In response to this serious situation of Covid-19 spread, the WHO declared Covid-19 as a pandemic on March 11, 2020. The world has seen a pandemic of this scale for the first time in around a hundred years.

A Non - experimental Cross-sectional Study was conducted using validated self-administered question naire among patients and patient's attendants with 194 participants using consecutive sampling technique. The

data collected from the subjects were analyzed by using descriptive analysis (frequency, percentage) and inferential statistics (chi square).

Among the 194 participants 69.6% participants had average knowledge, 30.4% participants had good knowledge regarding COVID-19 vaccination. 96.9% of the participants had favorable attitude whereas only 3.1% had unfavorable attitude towards COVID-19 vaccination. The study also found that, knowledge regarding COVID-19 vaccination is independent of the selected demographic variables.

Based on the findings of the study it can be concluded that majority of the participants had average knowledge and favorable attitude regarding COVID-19 vaccination.

Keywords: Knowledge, Attitude, Corona virus, COVID-19 Vaccination, Patients and Attendants

Introduction

Background of the study

Corona virus disease 2019 (COVID-19) is a novel disease caused by a newly identified virus, Severe Acute Respiratory Syndrome Corona virus 2 (SARS-CoV-2). The novel disease which begun in Wuhan, China in Dec 2019 was declared pandemic by World Health Organization on 11 March 2020. The world has seen a pandemic of this scale for the first time in around a hundred years. Globally 511,386,176 Covid-19 cases have been reported with over 6 million deaths reported on 30 April, 2022. To facilitate the outbreak management of Covid-19, there is a need to understand the perception of people towards the Covid-19 vaccine at this moment in combating the pandemic.

A vaccine provides the best hope for a permanent solution to controlling the pandemic. However, to be effective, a vaccine must be accepted and used by a large majority of the population. According to WHO "Vaccine must provide a highly favorable benefit-risk contour;

with high efficacy, only mild or transient adverse effects and no serious ailments." [1]

Understandably, the acceptance of the new vaccine remains uncertain by both, healthcare experts and the public at large. In addition, a strong anti-vaccine movement, with multiple pseudo-scientific conspiracy theories has flooded the media reports. It is for these reasons that vaccine hesitancy may become an important challenge in the immunization campaign against COVID-19. [2]

Need of the study

The introduction of COVID-19 vaccine is a major step towards reducing the spread of the pandemic and further reducing the associated disease and deaths. According to WHO, vaccination is a simple, safe and effective way to protect against harmful diseases. In this sense, vaccination against COVID-19 will reduce the risk of becoming seriously ill and dying, since the person will be better protected.

The success of the COVID-19 vaccination program is dependent on people's knowledge and attitude regarding the vaccination program. Understanding the perception and concerns of people about COVID-19 vaccine in developing and populous country like India will help in understanding demand for the vaccine and further tailoring out public health information and education activities. [3]

No known studies related to COVID-19 vaccination have been conducted in Meghalaya. So, our study will provide us with first hand data on the knowledge and attitude towards COVID-19 vaccination among people.

Objectives of the study

Primary objective

To assess the knowledge and attitude towards Covid-19 vaccination among patients and patient's attendants in selected OPDs of NEIGRIHMS Hospital.

Secondary objectives

To find the association of knowledge with selected demographic variables.

Operational definitions

- Assessment: Refers to the evaluation and estimation of the knowledge and attitude of the patients and patient's attendants towards C0VID-19 vaccination.

- Knowledge: Means what the patients and patient's attendants know about the COVID-19 disease and vaccination.

- Attitude: Means the tendency of patients and patient's attendants to respond either positively or negatively towards COVID-19 vaccination.

- Covid-19 vaccine: Is a vaccine intended to provide acquired immunity against severe acute respiratory syndrome corona virus 2 (SARS-CoV-2), the virus that causes corona virus disease 2019 (COVID-19).

Methodology

Research approach

In this study, a quantitative research approach was finalized to assess the knowledge and attitude towards COVID-19 vaccination among patients and patient's attendants.

Research design

Non-Experimental Cross- Sectional Study Design was adopted to assess knowledge and attitude towards COVID-19 vaccination among patients and patient's attendants in selected OPDs of NEIGRIHMS Hospital, Shillong, Meghalaya.

Study settings

The pilot study was conducted from 1st March, 2022 to 2nd March, 2022 in Opthalmology and Orthopaedics OPD of NEIGRIHMS Hospital, Shillong, Meghalaya.

The final study was conducted from 23rd May 2022 to 28th May, 2022 in Urology, Gynaecology and General Surgery OPDs of NEIGRIHMS Hospital, Shillong, Meghalaya.

Study population

Patients and patient's attendants above 18 years of age attending selected OPDs of NEIGRIHMS Hospital, Shillong, Meghalaya.

Sample size

Sample size calculation for the pilot study was 35 and for the final study was 194

Sampling technique

Consecutive Sampling Technique

Data collection procedure

A pilot study was conducted from the 1st of March, 2022 to 2nd of March 2022 in Orthopedic and Ophthalmology OPDs of NEIGRIHMS Hospital, Meghalaya after obtaining formal permission from the concerned authority. Consent was taken from the participants for participating in the study. The sample of the study was 35 patients and patient's attendants attending selected OPDs of NEIGRIHMS Hospital. Majority of the participants i.e. 51.4% participants had good knowledge, 97.1% participants had favorable attitude.

The final data collection was done from 23rd May 2022 to 28th May, 2022 in Urology, Gynecology and General Surgery OPDs of NEIGRIHMS Hospital, Shillong, Meghalaya.

After obtaining permission, the study was conducted. Prior to the data collection, informed consent was taken from the participants to explain the procedure and the purpose of the study which also stated the confidentiality and anonymity of the results.

Thereafter, the participants were allowed to proceed with the self-administered questionnaire and were given approximately 10-15 minutes to complete it.

Scoring of the tool

- Section 1: It consists of Demographic characteristics and was not scored.

- Section 2: It consists of Self-Administered Knowledge Based Questions to assess knowledge. There are 16 items. Each item number is allotted a score of 1 mark. There is no negative mark for negative responds.

- Section 3: It consists of Five Point Likert Scale and to assess attitude. There are 8 positive and 8 negative statements. For positive statement score of 5, 4, 3, 2, 1 is given to Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree and for negative statement score of 1, 2, 3, 4, 5 is given to Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree respectively.

Interpretation of score

Knowledge items

- Good knowledge: category score is 11-18

- Average knowledge: category score is 8-10

- Poor knowledge: category score is 0-7

Attitude items

- Favorable attitude: 48 and above

- Unfavorable attitude: Below 48

Analysis, interpretation and discussion

The data collected from the participants was analyzed by using descriptive statistics (frequency, percentage) and inferential statistics (chi-square test). The data is presented in the form of tables and bar diagram as illustrated below.

Organization of findings

Data has been organized into four parts as adduced below

- Section I: Socio-demographic profile of the participants

- Section II: Level of knowledge of the participants regarding COVID-19 vaccination

- Section III: Frequency distribution of knowledge level of the participants regarding COVID-19 vaccination according to demographic variables

- Section IV: Findings related to association of knowledge regarding COVID-19 vaccination with selected demographic variables

- Section V: Findings related to attitude level of the participants regarding COVID-19 vaccination

Section i: socio-demographic profile of the participants

Table 1: Frequency and percentage distribution of the participants according to the socio-demographic data. N= 194

Demographic characteristics	Frequency (f)	Percentage (%)
Age (in years)		
19-34	111	57.21
35-50	70	36.10
50 Above	13	6.70
Gender		
Male	109	56.20
Female	85	43.81
Religion		
Christian	116	59.80
Non-Christian	78	40.20
Education		
Class X and below	36	18.50
Higher Secondary	48	24.70
Undergraduate	34	17.50
Graduate and above	76	39.15
Occupation		
Student	54	27.80
Employed	109	56.10
Unemployed	31	15.90

Table 1 shows that out of 194 participants, 111 (57.21%) participants belonged to the age group 19-34, 109 (56.20%) participants were male, 116 (59.80%) participants were Christian, 76 (39.15%) participants were graduate and above and 109 (56.10%) participants were employed.

Section ii: level of knowledge of the participants regarding covid-19 vaccination

Fig 1: Bar diagram showing the level of knowledge of the participants regarding COVID-19 vaccination. N=194
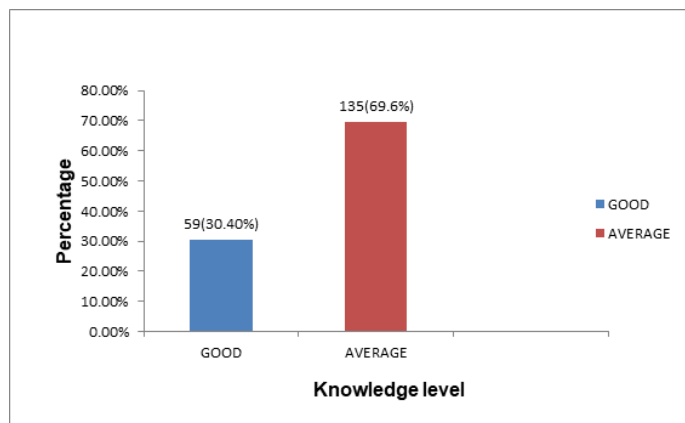

Fig 1 shows that majority of the participants had average knowledge (69.6%) regarding COVID-19 vaccination.

Section iii: frequency distribution of knowledge level of the participants regarding covid-19 vaccination according to demographic variables

Table no 2: Frequency distribution of knowledge level of the parti cipants regarding COVID-19 vaccination according to demo graphic variables. N=194

Demographic variables	Good knowledge	Average knowledge
Age (in years)		
19-34	**31**	**80**
35-50	23	47
Above 50	4	9
Gender		
Male	**30**	**79**
Female	29	56
Religion		
Christian	32	84
Non-Christian	27	51
Education		
Class X and below	**13**	**23**
Higher Secondary	12	36
Under graduate	11	23
Graduate and above	23	53
Occupation		
Student	11	**24**
Employed	34	76
Unemployed	14	35

Table no 2 depicts that majority of the participants i.e. 80 belonging to the age group 19-34 years had average knowledge. 79 male participants had average knowledge. 53 participants who were graduates and above had average knowledge. Most of the participants (84) who were Christians had average knowledge. Majority of the participants (76) who were employed had average knowledge.

Section iv: findings related to association of knowledge of the participants regarding covid-19 vaccination with selected demographic variables

Table 3: Association of knowledge of the participants regarding covid-19 vaccination with selected demo graphic variables. N=194

Sl. No	Demographic variable	Good knowledge	Average knowledge	Degree of freedom (df)	Tabulated value	Chi square value
1	Age (in years)					
	19 – 34	31	80	2	5.99	0.503
	35 – 50	23	47			
	Above	4	9			

	50					
2	Gender					
	Male	30	79	1	3.84	0.981
	Female	29	56			
3	Religion					
	Christian	32	84	1	3.84	1.088
	Non-Christian	27	51			
4	Educational status					
	Class X and below	13	23	3	7.82	1.28
	Higher secondary	12	36			
	Under graduate	11	23			
	Graduate and above	23	53			
5	Occupation					
	Student	11	24	2	5.99	0.108
	Employed	34	76			
	Unemployed	14	35			

*P value is < 0.05

Table 3 shows that There is no statistically significant association of knowledge with any of the demographic variables as the chi square values of them are less than tabulated value at the level of significance <0.05.

Section v: findings related to attitude level of the participants regarding covid-19 vaccination

Fig 2: Bar diagram showing attitude level of participants regarding COVID-19 vaccination. N=194
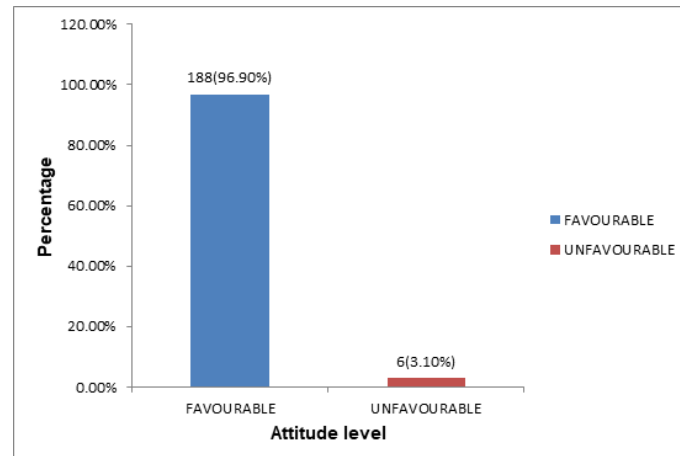

Fig 2 shows that among 194 participants, 188 (96.9%) of the participants have favorable attitude and 6 (3.1%) of the participants had unfavorable attitude regarding COVID-19 vaccination. The findings show that majority of the participants had favorable attitude regarding COVID-19 vaccination.

Discussion

In this section the major findings of the present study have been discussed with references to results obtained by other investigators in the same aspect.

The result of the present study showed that among 194 participants, maximum i.e., 111 (57.21%) participants belonged to the age group of 19-34 years, where as in the study conducted by Binu Mathew et al. (South India), Feb 2022 among general population, maximum participants i.e., 42.58% belonged to the age group of 18-30 years.

The result of the present study showed that out of 194 participants maximum i.e., 135 (69.6%) participants had average knowledge regarding COVID-19 vaccination which is similar to the study conducted by MD Emran Hossain et al. (Bangladesh), 2021 where 785 (70.59%) of the participants possess adequate knowledge regarding COVID-19 vaccine.

The result of the present study showed that out of 194 participants, maximum i.e., 188 (96.9%) participants had positive attitude regarding COVID-19 vaccination which is similar to the study conducted by Shiva Shankar Mahesh et al. (Tamilnadu) 2021 where more than 50% of the participants had positive attitude towards COVID-19 vaccine.

The study also found that out of 194 participants maximum i.e. 75.26% participants were willing to take COVID-19 vaccine when it is available for use which is similar to the study conducted by Shibal Bhartiya et al. (West India) 2021 where maximum i.e. 79% were willing to take COVID-19 vaccine when it is available for use. [16]

Conclusion

The study has been conducted in selected OPDs of NEIGRIHMS Hospital, Shillong among patients and patient's attendants to assess the knowledge and attitude regarding COVID-19 vaccination. Based on the findings of the study, majority of the participants had average knowledge and favorable attitude regarding COVID-19 vaccination. Hence, the study concludes that there is a need of health awareness program to enhance the knowledge and to improve public acceptance of COVID-19 vaccination.

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