Original Research Article

Assessment of Knowledge and Attitude towards COVID-19 Vaccination among People in Selected Community of West Bengal

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ABSTRACT

Several Coronaviruses have caused serious problems in humans. In early March, 2020, the World Health Organization (WHO) declared that the Corona Virus disease 2019 (COVID-19) is a global pandemic. COVID-19 is a new strain of coronavirus and scientists are still collecting information and conducting research on the virus. Vaccination is the most effective strategy to protect the population from COVID-19 infection and several vaccines have been approved against the disease globally. But, the knowledge and attitude towards COVID-19 vaccination among general community people are very poorly understood. Thus, the present study aimed to investigate the knowledge and attitude towards COVID-19 vaccination among selected community people in West Bengal and it is observed that 66.75% people had moderate knowledge and 98.25% people had high attitude towards COVID-19 vaccination.

Key Words: Corona Virus disease 2019 (COVID-19), Vaccination, Knowledge and Attitude, community people

INTRODUCTION

Corona Virus disease 2019 (COVID-19) is a deadly disease which affects many countries in the world. The disease is caused by new strain of Corona Virus, SARS-COV-2 which have become a serious problem worldwide [1].

The World Health Organization (WHO) declare the COVID-19 outbreak as a pandemic on 11th March, 2020 [2].

During the time of writing (10th November) this pandemic has affected 224 countries with 251.75 million confirmed cases. It causes death of 50.83 million people whereas 227.92 million people recovered from this deadly disease globally [3].

The incidence of the disease is higher in USA with 47.53 million of confirm cases, 7.78 million of death and 37.60 million of recovered cases, whereas in India the total cases are 34.38 million with 4.61 million deaths and 33.77 million recovered cases [3].

The first case of COVID -19 infection in India was reported from Kerala on 27th January 2020 [4].

Vaccination is the most important public health measure and most effective strategy to protect the population from COVID-19 infection since SARS-COV-2 is a highly contagious virus affecting population widely and globally [5].

Among WHO approved 8 nos. of covid -19 vaccines, 6 nos. of vaccines are available in India. But 'Covishield' and 'Covaxin' are widely used in India. In India total 35.6 crore people (25.8%) are fully vaccinated [6, 7].

In West Bengal, a total of 19280 cases of death were recorded out of 16.01,586 covid confirm cases. At the same time, 83266658 doses of vaccination had already been completed [8].

Need of the study:

A global survey about the acceptance of potential COVID-19 vaccine showed that about 48% of population are

confused about this vaccine and remained unaware whether they have the vaccination [9]

Similarly, another study in China showed that only 54% of their populations were intended for vaccination. Above two studies showed that very low proportion of population are intended to vaccinate themselves [10].

Statement of the problem:
Assessment of knowledge and attitude towards COVID-19 vaccination among the people in selected community of West Bengal.

Objective of the study:
1. To assess the knowledge and attitude towards COVID-19 vaccination among the people residing in around Dharmada Gram Panchayet, Nadia, West Bengal.
2. To determine the relationship between knowledge and attitude towards COVID -19 vaccination and selected demographic variables.

Research hypothesis:
H1: There will be significant relationship between knowledge and attitude of people towards COVID-19 vaccination.
H2: There will be significant relationship between demographic variables and knowledge and attitude of people.

Assumptions of the study:
1. Community people will have some knowledge regarding COVID-19 vaccination.
2. Community people will have positive attitude towards COVID-19 vaccination
3. Community people will give consent and willingness to collect the necessary data about the knowledge and attitude towards COVID-19 vaccination.

Delimitation of the study:
The study is delimitated to-
1. 400 subjects as sample for the present study

2. Community people who are residing in and around Dharmada Gram panchayet, Nadia, W.B.
3. Community people who are willing to participate in the study.

METHODOLOGY
Research approach:
Descriptive survey approach was adopted for the study.
Research design: cross sectional design was used to carry out the study.
Setting of the study: the investigator selected the community setting in and around Dharmada Gram panchayet Nadia, WB.
Population; the population for the present study was the community people who are residing in the area under Dharma Gram panchayet, Nadia, W.B.

Sample and sample size: Sample size for the present study consists of 400 community people of Dharma Gram panchayet area.
Sampling technique: simple random sampling technique was adopted to collect the data for the present study.

Description of the tools: Data was collected using 3 tools-
Tool 1: Socio-demographic proforma.
Tool 2: Questionnaire on assessment of knowledge regarding COVID-19 vaccination.
Tool 3: Questionnaire on assessment of attitude towards COVID-19 vaccination.
After careful examination of the experts committee consisting of 6 members from the field of Community and Psychiatry, the validity of the tool for the present study was assessed. Some modification was made as per suggestions given by the experts. Reliability of the tool were found to be 0.91 using split half technique and inter-rater method.
To conduct the study necessary consent was taken from the participants.
Ethical permission was also obtained from the concerned authority. Pilot study was conducted among 100 community

people to check feasibility and practicability of the study. The study was found to be feasible. The data was tabulated and analyzed using differential and inferential statistics like percentage, mean, standard deviation and chi- square test. The correlation was computed using Pearman's correlation co-efficient [11]

RESULT

Section-A: Description of demographic variables of community people.

Table-1: n=400

Sl No.	Variables (Demographic Variables)		Frequency	Percentage (%)
1.	Age (in years)	18-45	253	63.25
		46-60	62	15.5
		61- above	85	21.25
2	Gender	Male	225	56.25
		Female	175	43.75
3	Educational status	No formal Education	12	3
		Primary	77	19.25
		Secondary	82	20.50
		Higher Secondary	79	19.75
		Graduation and above	150	37.5
4.	Marital Status	Unmarried	215	53.75
		Married	149	37.25
		Separated	24	6
		Widow	12	3
5.	Religion	Hinduism	335	83.75
		Islam	54	13.5
		Christian	9	2.25
		others	2	0.5
6	Type of family	Joint	169	42.25
		Nuclear	219	54.75
		Extended	12	3

Table-1 showed that out of 400 subjects, majority (63.25%) were belonged to the age group between 18-45 years 56.25% were male, 37055 had completed their graduation, 53.75% were unmarried, 83.75% were belong to Hinduism by religion and 54.75% were belong to nuclear family.

SECTION-B: Description of knowledge and attitude score

Table 2

Sl No.			Frequency	%
1	Knowledge Score	6-8 (High)	114	28.5
		3-5 (Moderate)	267	66.75
		0-2 (Low)	19	4.75
2	Attitude Score	11-16	393	98.25
		6-10	6	1.5
		0-5	1	0.25

Table -2 showed that out of 400 subjects, 28.5% had high knowledge level towards COVID-19 vaccination whereas 66.75% had moderate knowledge level towards COVID-19 vaccination.

It also showed that out of 400 subjects 98.25% had high attitude towards COVID-19 vaccination.

SECTION-C: Description related to correlation of knowledge score and attitude scores towards COVID-19 vaccination.

Pearson's correlation coefficient analyzed among collected data between knowledge score and attitude score. It showed negligible correlation [r= 0.074] between knowledge score and attitude score.

SECTION-D: Description related to association between knowledge and attitude score with related socio-demographic variables.

Table- 3: Knowledge score

Variables				High	Moderate	Low	Chi value	P value
Demographic Variables	Age	(in Year)	18-45	76	163	14	9.23 (NS)	9.43
			46-60	11	51	0		
			61- above	27	53	5		

		Table -3 Continued...					
Gender	Male	65	153	9	0.64 (NS)	5.99
	Female	49	116	10		
Educational status	No formal Education	3	9	0	4.63 (NS)	15.51
	Primary	18	55	4		
	Secondary	25	52	5		
	Higher Secondary	19	57	3		
	Graduation and above	49	94	7		
Marital Status	Unmarried	57	147	11	3.44 (NS)	12.59
	Married	44	97	8		
	Separated	8	16	0		
	Widow	5	7	0		
Religion	Hinduism	90	229	16	7.69 (NS)	12.59
	Islam	19	33	2		
	Christian	3	5	1		
	others	2	0	0		
Type of family	Joint	70	136	13	5.78 (NS)	9.49
	Nuclear	41	123	5		
	Extended	3	8	1		

NS= Non-significant, S= significant

Table-4: Attitude Score

Variables			High	Moderate	Low	Chi value	P value
Demographic Variables	Age (in Year)	18-45	241	10	2	2.73 (NS)	9.49
		46-60	58	4	0		
		61- above	83	2	0		
	Gender	Male	216	7	2	2.58 (NS)	5.99
		Female	166	9	0		
	Educational status	No formal Education	12	0	0	19.84 (S)	15.51
		Primary	76	1	0		
		Secondary	81	0	1		
		Higher Secondary	78	1	0		
		Graduation and above	135	14	1		
	Marital Status	Unmarried	201	13	1	6.57 (NS)	12.59
		Married	145	3	1		
		Separated	24	0	0		
		Widow	12	0	0		
	Religion	Hinduism	319	14	2	0.89 (NS)	12.59
		Islam	52	2	0		
		Christian	9	0	0		
		others	2	0	0		
	Type of family	Joint	212	7	0	4.44 (NS)	9.49
		Nuclear	158	9	2		
		Extended	12	0	0		

NS= Non-significant, S= significant

DISCUSSION

From the table -3 it is clear that there is no sufficient relationship among knowledge level regarding COVID-19 vaccination with selected demographic variables.

It is also found that there is negligible correlation among knowledge score and attitude score regarding COVID-19 vaccination among the selected community people. So, it can be concluded that knowledge level of the individual does not depend upon their age, educational status, marital status, family type or on type of religion they belong to as well as level of attitude also.

The finding of this study is concordance with the findings revealing that

though knowledge about COVID-19 vaccination is inadequate among of people of Malaysia but the majority of the respondent were willing to get vaccinated. This finding can help the authority to plan for future efforts to increase vaccine uptake that may eventually lead to herd immunity against COVID-19 infection [12].

From the table -4, it is clear that there is only significant relationship found among attitude of the people towards COVID-19 vaccination with educational status of the selected community people. But at the same time, it is also seen that there is no significant relationship with level of attitude and age, sex, marital status, type of family and religion they belong to and level of attitude has less correlation with

knowledge level. Similar findings were also observed in a study conducted to assess the attitude towards SARS-COV-2 vaccination among medical and non-medical students. It reveals that the desire to get vaccinated against SARS-COV-2 is more among medical than nonmedical students (91.99% vs 59.42%). The study also explores the social attitudes which is necessarily the first step to optimize vaccination programme and achieving herd immunity towards COVID vaccination [13].

Recommendations:

I) A comparative study can be done to the residence like rural community versus urban community people.
II) a large number of samples can be included in the study.
III) other variables like perception stress etc. can be included in the study.

Nursing implication:

The finding of the present study reflects that there is negligible association between knowledge level and attitude score towards COVID-19 vaccination among general population of West Bengal. In order to impose knowledge and attitude immediately "Information Education Communication (IEC)" programmes need to be initiated.

CONCLUSION

This preliminary observation suggest that mass health educational programme need to be started to increase the knowledge and attitude towards COVID-19 vaccination.

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