Research Article

A Study to Assess the Knowledge and Attitude Regarding Myths About Covid-19 Vaccination in Selected Rural Area Ratua at Bhopal (M.P.)

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ABSTRACT:

Background- COVID-19 is the Pandemic disease caused by the SARS-COV-2 virus. There are many myths regarding COVID-19 vaccine spread by community people at rural area. The objective of this study was to assess the knowledge about myths of COVID-19, Bhopal Ratua (M.P). The World Health Organization (WHO) is working closely with global experts, governments, and partners to rapidly expand scientific knowledge on this new virus, to track the spread and virulence of the virus, and to provide advice to countries and individuals on measures to protect health and prevent the spread. The urban people have poor attitude regarding myths about Covid- 19 vaccination.

Materials & Methods- A Study was conducted to assess the knowledge and attitude regarding Covid Vaccination among rural community people. 30 rural community people from a selected rural community were included in the study. A questionnaire consisting of 40 questions was used.

Results- Almost all had some pre-test knowledge regarding the myths surrounding Covid-19. Whereas the knowledge was increased post-test.

Conclusion- We concluded that such awareness programs may have a positive impact on increasing the knowledge of rural people.

After that the vaccine needs to go through a review by the National Regulatory Authority, who will decide if the vaccine is safe and effective.

KEYWORDS: COVID 19; vaccines; myths; respiratory syndrome; corona.

INTRODUCTION:

The coronavirus disease 2019 (COVID-19) emerged in Wuhan, China at the end of 2019. Since then, it has spread to 200 countries and has been declared a global pandemic by the World Health Organization (WHO). To date, there are more than 2.3 million positive COVID-19 cases recorded with at least 150,000 deaths globally. The first cases of COVID-19 in India were reported in the towns of Thrissur, Alappuzha, and Kasargod, all in the state of Kerala, among three Indian medical students who had returned from Wuhan. Lockdowns were announced in Kerala on 23 March and in the rest of the country on 25 March. By mid-May 2020, five cities accounted for around half of all reported cases in the country: Mumbai, Delhi, Ahmadabad, Chennai, and Thane[1]. On 10 June, India's recoveries exceeded active cases

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for the first time Infection rates started to drop in September, along with the number of new and active cases. Daily cases peaked in mid-September with over 90,000 cases reported per day, dropping to below 15,000 in January 2021.

India began its vaccination program on 16 January 2021. As of 25 May 2021, the country had administered over 200 million vaccine doses. Scientists and researchers throughout the world have been working relentlessly to find a way to get rid of the lethal disease. About 2-3 million deaths per year have been avoided by vaccination[2]. In pandemics such as the 1957, 1968, 1976, and 1977 outbreaks and the H5N1 outbreak (1997-1998), and the 2009 H1N1 outbreak, many vaccines were developed[3&4]. With the approval of vaccines for COVID-19, it was expected that the pandemic can be controlled. The discovery of vaccination is considered as one of the great human achievements when it comes to maintaining public health.[5–8] vaccination is the most effective way of controlling infectious diseases, yet success is challenged by individuals and groups who choose to delay or refuse vaccines.[9]Acceptance of a vaccine or hesitancy has great public health implications as these partly determine the extent to which people are exposed to infections that could have otherwise been prevented.[10] Hesitancy to be vaccinated can be driven by several reasons such as negative medical family experiences that are related to vaccinations of the parents, concerns about the safety of the vaccines, and religious or ethical reasons.[11] Research shows that vaccine uptake can be influenced by several factors.[12] Smith et al. found an association between vaccine uptake and not perceiving vaccines to cause adverse effects, general positive attitude towards vaccination, positive vaccine recommendations, perceiving fewer practical difficulties of vaccination, perceived susceptibility to illness, knowledge about the vaccine, social influences, trust in the health-care profession, and having increased information about the vaccine. Safety concerns, perceived low severity of illness, lack of awareness, and belief in alternative medicine are the common reasons for hesitancy towards vaccination,[7] whereas healthcare professionals' advice, advice from friends and family members, self-protection, belief that vaccination is mandatory, and being responsible have been reported to be the factors affecting the general population's support for vaccination.[13] Smith et al. found factors such as having previously been vaccinated, perceiving the vaccine to be effective, and perception of susceptibility to the disease to be strongly positively associated with the uptake of childhood influenza vaccine in England while the factors strongly negatively associated with uptake included perceiving the vaccine to be unsafe, to cause short-term side effects or long-term health problems and believing that yearly vaccination may overload the immune system. A study of the perceived risks of vaccines in European populations revealed that the primary area of concern was vaccine safety, followed by perceptions of a low likelihood of contracting vaccine-preventable diseases, perceived low severity of vaccine-preventable diseases, beliefs that vaccines do not work, and overall lack of information. It is believed that children's uptake of the vaccine is influenced by the socio-economic characteristics of their parents[15]. We have conducted this study to assess the knowledge and attitude regarding myths about Covid-19 vaccination in selected rural areas at Bhopal.

MATERIALS & METHODS:

A Descriptive Co-relational Study was conducted to assess the knowledge and attitude regarding Covid Vaccination among rural community people of Bhopal, Madhya Pradesh. A review of the literature and discussion with experts helped the investigator to develop an appropriate tool for data collection and design the methodology for the study. Data was collected using a knowledge questionnaire, which consisted of 30 items and 20 attitude statements. The tool was prepared by the investigator and validated by experts. Reliability was established by the split-half method using Karl Pearson's correlation formula. The reliability obtained was 0.85, which proved that the tool was reliable. A pilot study was conducted on 6 rural community people. This gave the basis for the investigator to conduct the main study. The main study was conducted on 30 rural community people from a selected rural community from 1st June to 20th June 2021. The obtained data were analyzed considering the objectives and hypothesis using descriptive and inferential statistics. The purpose of present study was to assess the knowledge and attitude of rural people regarding myths about Covid - 19 Vaccination, in a selected rural area of Bhopal, Madhya Pradesh. We included participants that were present during the study period and excluded those who were not willing. The questionnaire consisted of 2 sections A & B).

Section A: Consisted of 10 demographic variables like – age, sex, religion, qualification of male, qualification of female, occupation of male, occupation of female,

Table 1: Demographic distribution of the participants.

Variables	Frequency	Percentage
Age (Yrs)		
15-17	1	3.33333333
18-25	6	20
26-45	14	46.6666667
46 & above	9	30
Gender		
Male	16	53.3333333
Female	14	46.6666667
Transgender	0	0
Religion		
Hindu	13	43.3333333
Muslim	10	33.3333333
Christian	1	3.33333333
Other	6	20
Qualification of male		
Primary	7	46.6666667
Higher sec.	1	6.66666667
UG and PG	1	6.66666667
Others	7	46.6666667
Qualification of female		
Primary	3	20
Higher sec.	2	13.3333333
UG and PG	4	26.6666667
Others	5	33.3333333
Occupation of male		
Govt. job	0	0
Private job	4	26.6666667
Semi private job	3	20
farmer	9	60
Occupation of female		
Housewife	10	66.6666667
Govt job	1	6.66666667
Private job	2	13.3333333
Semi private job	1	6.66666667
Monthly income (Rs)		
<5000/-	6	20
5001-10000/-	15	50
10001-20000/-	9	30
>20000/-	0	0
Area of residence		
Urban	0	0
Rural	30	100
Semi-urban	0	0
Type of family		
Nuclear	19	63.3333333
joint	9	30
extended	2	6.66666667

area of residency, type of family.

Section B: Consisted of structured knowledge and attitude questionnaire containing 30 questions. Each right answer carries 1 mark and wrong answer carries 0 marks. Maximum score that can be achieved is 30. Knowledge level was then classified according to percentage of score. knowledge scores were determined.

Association between pretest knowledge and demographic variables were calculated by chi square test. Mean & standard deviation of pretest and post-test knowledge scores were determined.

RESULTS:

The prospective study was carried out in a rural district of Madhya Pradesh. After obtaining the ethical clearance, the participants were identified. They were explained about the study. 30 individuals formed the study group. Most of the participants were between 26 to 45 years and there were almost equal number of males and females. None of the participants were from government sector [Table 1].

This was followed by checking the pre-test knowledge. The results showed that most of the participants had some basic knowledge regarding the myths of Covid-19 vaccination [Table 2]. The post test knowledge results were very encouraging. It revealed that almost 83% participants improved their knowledge [Table 3].

Table 2: Assessment of pretest knowledge of the participants

Criteria	Frequency	Percentage	Mean	SD
Poor	12	40		
Average	17	56.66667	13	4.26
Good	0	0		

Table 3: Assessment of post-test knowledge of the participants

Criteria	Frequency	Percentage	Mean	SD
Poor	02	6.66666%		
Average	03	10%	27.6	1.81
Good	25	83.333%		

Table 4: Effectiveness of knowledge.

Test	Mean	SD	t-test
Pretest	13	4.26	1.651
Posttest	27.6	1.81	

Table 5: Association of knowledge of participants with demographic variables.

Variables	Poor	Average	Good	Total	DF	chi-value	P-value	Inference
Age (Yrs)								
15-17	0	0	1	1				
18-25	4	2	0	6	6	60	0.066	S
26-45	6	8	0	14				
46 & above	2	7	0	9				
Gender								
Male	10	5	1	16				
Female	2	12	0	14	4	11.63	0.033	NS
Transgender	0	0	0	0				
Religion								
Hindu	6	7	0	13				
Muslim	6	3	1	10	6	11.63	0.033	NS
Christian	0	1	0	1				
Other	0	6	0	6				
Qualification of male								
Primary	5	1	1	7				
Higher sec.	1	0	0	1				
UG and PG	1	0	0	1	6	13.52	0.056	S
Others	1	6	0	7				
Qualification of female								
Primary	2	1	0	3				
Higher sec.	1	0	1	2				
UG and PG	4	0	0	4	6	11.63	0.077	S
Others	0	5	0	5				
Occupation of male								
Govt job	0	0	0	0				
Private job	2	1	1	4	6	8.63	0.012	NS
Semi private job	2	1	0	3				
farmer	2	7	0	9				
Occupation of female								
Housewife	4	5	1	10				
Govt job	1	0	0	1	6	7.63	0.22	NS
Private job	1	1	0	2				
Semi private job	1	0	0	1				
Monthly income(Rs)	0							
<5000/-	3	2	1	6				
5001 -10000/-	6	9	0	15	6	6.55	0.033	NS
10001 -20000/-	3	6	0	9				
>20000/ -	0	0	0	0				
Area of residence								
Urban	0	0	0	0				
Rural	12	17	1	30	4	3.55	0.55	NS
Semi-urban	0	0	0	0				
Type of family								
Nuclear	9	9	1	19	4	4.56	0.066	S
joint	3	6	0	9				
extended	0	2	0	2				

S=Significant; NS= Not significant

Table 9: Association of pretest attitude of the person with selected demographic variables .

Variables	Strongly agree	Agree	Disagree	Strongly disagree	Total	DF	Chi-value	p-value	Inference
Age (Yrs)	0								
15-17	0	1	0	0	1				
18-25	0	1	5	0	6	9	30	0.056	S
26-45	0	3	11	0	14				
46 & above	0	1	8	0	9				
Gender									
Male	0	3	13	0	16				
Female	0	3	11	0	14	6	12.36	0.022	NS
Transgender	0	0	0	0	0				
Religion									
Hindu	0	1	12	0	13				
Muslim	0	2	8	0	10	9	8.23	0.032	NS
Christian	0	1	0	0	1				
Other	0	2	4	0	6				
Qualification of male									
Primary	0	1	6	0	7				
Higher sec.	0	1	0	0	1				
UG and PG	0	1	0	0	1	9	11.52	0.075	S
Others	0	4	3	0	7				
Qualification of female									
Primary	0	1	2	0	3				
Higher sec.	0	1	1	0	2	9	7.52	0.063	S
UG and PG	0	2	2	0	4				
Others	0	2	3	0	5				
Occupation of male									
Govt. job	0	0	0	0	0				
Private job	0	1	3	0	4	9	8.63	0.012	NS
Semi private job	0	1	2	0	3				
farmer	0	4	5	0	9				
Occupation of female									
Housewife	0	4	6	0	10				
Govt. job	0	0	1	0	1				
Private job	0	1	1	0	2	9	6.69	0.11	NS
Semi private job	0	1	0	0	1				
Monthly income(Rs)									
<5000/ -	0	2	4	0	6				
5001 -10000/-	0	3	12	0	15	9	5.63	0.022	NS
10001 -20000/-	0	1	8	0	9				
>20000/ -	0	0	0	0	0				
Area of residence									
Urban	0	0		0	0				
Rural	0	6		0	30	6	2.52	0.45	NS
Semi-urban	0	0		0	0				
Type of family									
Nuclear	0	3	12	0	19				
joint	0	3	6	0	9	6	3.33	0.062	S
extended	0	0	0	0	2				

S=Significant; NS= Not significant

The results also depicted that the effectiveness of knowledge of the person regarding myths surrounding Covid-19 is statistically tested by applying student t-test at the level of significance of 0.05. In our study the calculated value 1.651 is less than table value <0.05 and so the hypothesis is accepted [Table 4]. The association of knowledge of the participants regarding myth about Covid-19 with selected demographic variables was statistically tested. The variables such as age, qualification of male and female and family type was found significant. The other variables were found non-significant [Table 5]. Assessment of pre-test attitude & post-test attitude of person regarding myth Covid-19 showed that 24 participants disagreed & 18 participants agreed respectively. Mean and SD also justified that attitude. [Table 6 & Table 7]. The effectiveness of attitude of the person regarding myth of Covid-19 was statistically tested by applying student t-test at the level of significance of 0.05. we found that the value 1.227 was less than table value <0.05 so the hypothesis is accepted [Table 8]. The association of knowledge of the person regarding myth about Covid-19 with demographic variables was statistically tested by applying chi-square test. The variables age, qualification of male and female and family type were found significant. Other variables were non-significant [Table 9].

Table 6: Assessment of pretest attitude of the participants

Criteria	Frequency	%	Mean	SD
Strongly agree	0	0		
Agree	6	20	13.75	2.85
Disagree	24	80		
Strongly disagree	0	0		

Table 7: Assessment of posttest attitude of the participants.

Criteria	Frequency	%	Mean	SD
Strongly agree	11	36.66667		
Agree	18	60	21.5	3.014
Disagree	1	3.333333		
Strongly disagree	0	0		

Table 8: Effectiveness of attitude of the participants

Test	Mean	SD	t-value
Pretest	13.73	2.85	1.227
Posttest	21.5	3.014	

DISCUSSION:

The study was intended to evaluate the effectiveness of information knowledge attitude regarding myths about COVID-19 vaccination in Ratua area at Bhopal (M.P.).

To achieve the objectives, pre-test & post-test was conducted.

Self-structure questionnaire was used to collect data on knowledge and attitude regarding myths about COVID-19 vaccination. There have been various studies and our results were in accordance to them. [9]

CONCLUSION:

There was no significant association between knowledge score and attitude score with selected demographic variable like age, gender, religion, education of male, education of female, occupation of male, occupation of female, monthly income, type of family. Methods to ascertain the general beliefs and attitudes about Covid-19 vaccine should be standardized and health care officers and administrations should validate the questionnaires regarding the myths surrounding Covid-19. This shall enable overall acceptance of vaccines for life threatening diseases such as Covid-19.

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