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Knowledge and Attitude of General Population towards Covid-19 Vaccination

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Abstract. Background: Corona virus has affected the people all around the globe. The only measure to prevent this deadly virus is to mask up, maintain physical distancing, frequent hand washing and vaccination. Some people are deciding not to get the coronavirus vaccines because of the lack of knowledge,mistrust of those involved in producing and selling vaccinations, risk perception, subjective norms, religious and moral convictions, and certain myths created in the minds of common masses make them to opt out from vaccinating themselves which will affect people of all different backgrounds, ages and ethnicities and waiting too long to be vaccinated allows the coronavirus to continue spreading in the community, with new variants emerging. Methods: Present study included Quantitative non-experimental survey type design which was carried out on 140 individuals. Convenient sampling technique was chosen for selection of samples. A standardized tool was used for data collection. Descriptive and inferential statistics were used to analyse the data. Conclusions: Majority of the people were having average knowledge regarding covid-19 vaccination and good attitude towards covid-19 vaccination. People with higher qualification and good profession were having good attitude and knowledge regarding Covid-19 vaccination, thus less hesitant in getting Covid vaccine. People with good knowledge& awareness regarding covid-19 vaccination were having very good attitude towards covid-19 vaccination, so higher authorities must find ways and arrange awareness programs regarding importance of covid-19 vaccination to educate more and more people to end this pandemic.

1. Introduction

WHO declared covid-19 a pandemic on 11 March 2020.Vaccination is an important aspect of preventing deadly diseases. Vaccination helps the human immune system in recognizing the various pathological agents capable of causing a disease. Vaccination helps in making our body capable of fighting a specific pathological agent. When there is no treatment available that too for a deadly disease vaccination is the only way to prevent oneself from getting the infection. In the context of the current worldwide health and financial crisis from COVID-19, vaccines have become the primary anticipated means to end its effects. So, reducing the spread of new COVID-19 infection is anticipated through vaccination of all people, with particular concern for a risky population like healthcare workers. Besides the efficient community-level health measures like wearing face masks, social distancing, avoidance of populated areas, awareness creation, and handwashing, effective vaccination is vital to prevent morbidity and mortality of the pandemic. The COVID-19 vaccines work with your immune system so your body will be ready to fight the coronavirus if you are exposed to it. As the COVID-19 pandemic continues, getting the vaccine is a powerful step in taking charge of your health. India began the COVID 19 vaccination campaign on 16 January 2021. Currently the main vaccines available in India are Oxford-Astra Zeneca vaccine locally referred to as Covishield, Bharat Biotech-ICMR indigenous vaccine named Covaxin and the Russian Sputnik V vaccine which is imported. In addition, several other vaccines have also been given emergency use authorization. While availability and distribution of the vaccines remains a challenge, even in places where vaccines are made available there is vaccine hesitancy. Scientific literature indicates that vaccine hesitancy has increased since the influenza pandemic in 2009. Vaccine hesitancy may exist even among people who believe in the importance of vaccinations.Vaccine hesitancy is not limited to the general public; despite recommendations for the vaccination of all HCWs against infectious diseases, HCWs also report vaccine hesitancy. Vaccine hesitancy among HCWs is also influenced by multiple factors including fear of side-effects and misconceptions concerning safety and importance. Individual beliefs and perceptions, embedded in personal, social, and cultural values, indirectly affect people's health behaviours, frequently without their awareness, which can be seen in decisions about vaccinations. Vaccine hesitancy can affect people of all different backgrounds, ages and ethnicities. But waiting too long to be vaccinated allows the coronavirus to continue spreading in the community, with new variants emerging. Certain myths created in the minds of common masses make them to opt out from vaccinating themselves. There is lot of mistrust and concerns about the effects of vaccination were the most important determinants of both uncertainty and unwillingness to get vaccinated against COVID-19. Some people have abelief that the vaccines are intended to inject microchips into individuals and that the vaccines may cause infertility in the individuals. The negative attitude towards covid-19 vaccination could pose a serious threat to the preventive measures aimed at controlling COVID-19 spread in the area.

2. Material & Methods

Quantitative non-experimental type research approach was adopted in this study. Descriptive survey type research design was used to conduct the study. Block Tral of district Pulwama Kashmir was selected randomly for the study. General public of Block Tral Pulwama, who gave consent to participate in the study, were included in the study. Non-probability convenient sampling technique was used to select the sample. The sample size was140 individuals of Block Tral. The research tool used for the study was a standardized tool to assess the knowledge and attitude of general public towards Covid-19 vaccination.

3. Categorization of knowledge score

Knowledge Level	Knowledge Score
Poor	0-03
Average	04-06
Good	07-09
Excellent	10-12

Each correct answer was awarded a score of 1 mark and for wrong answer 0.

4. Categorization of attitude score

Attitude level	Very poor	Poor	Good	Very good
Score	0-08	09-16	17-24	25-32

Attitude Level	Score
Very Poor	0-08
Poor	09-16
Good	17-24
Very Good	25-32

The tool was standardized. Ethical clearance was obtained from institutional ethics committee. The collected data was summarized and tabulated by descriptive statistics such as mean, mean percentage, standard deviation, correlation and inferential statistics.

Result and Discussion: The results were discussed under five sections.

Section 1: Demographic variables.

TABLE 1. Frequency Distribution of socio demographic variables.

SECTION-1 SOCIO DEMOGRAPHIC PROFORMA		Percentage (%)	Frequency(f)
AGE	0-20 Year	11%	15
	21-40 Year	36%	51
	41-60 Year	34%	48
	>60 Year	19%	26
GENDER	Male	54%	75
	Female	46%	65
DOMICILE	Rural	100%	140
	Urban	0%	0
QUALIFICATION	Never Attend School	26%	36
	Secondary	39%	54
	Graduate	24%	33
	P.G or Above	12%	17
PROFESSION	Health	10%	14
	Business	11%	16
	Defence	9%	13
	Other	69%	97

Majority of subjects51 (36%) were in the age group of 21-40 years, about 48(34%) were in the age group of 41-60 years, 26(19 %) were in the age group of above 60 years, 15(11%) were in the age group of 0-20 years. Regarding the gender, majority of the study subjects were males 75(54%) and 65(46%) were females. Regarding the residence, all of study subjects

140(100%) were from the rural areas. Regarding the educational qualification majority of the subjects were having secondary level of educational qualification 54(39%), 33(24%) were graduate, 17(12%) were having post-graduation or above qualification, 36(26%) had never attended school. Regarding profession 97(69%) were having other professions, 16(11%) were doing business, 14(10%) were working in health department and 13(9%) were working in defense services.

Section 2: Knowledge regarding covid-19 vaccination.

TABLE 2. Table Showing Level of Scores

CRITERIA MEASURE OF KNOWLEDGE SCORE		
Category Score	**Percentage**	**Frequency**
EXCELLENT (10-12)	25.0%	35
GOOD (7-9)	25.0%	35
AVERAGE (4-6)	31.4%	44
POOR (0-3)	18.6%	26
Maximum Score=12 Minimum Score=0		

25% (f 35) of the subjects were having excellent knowledge, 25% (f 35) were having good knowledge, 31.4% (f 44) were having average knowledge and 18.6% (f 26) were having poor knowledge regarding covid-19 vaccination. The overall knowledge score mean was 6.71 with mean percentage 56, Standard deviation 3.07, median 6.50, range 11 with maximum score 12 and minimum score of 1.

Section 3: Attitude towards covid-19 vaccination.

TABLE 3. Table Showing Level of Scores

Criteria Measure of Attitude Score		
Category Score	Percentage	Frequency
VERY GOOD (25-32)	16.4%	23
GOOD (17-24)	56.4%	79
POOR (9-16)	22.9%	32
VERY POOR (0-8)	4.3%	6
Maximum Score=32 Minimum Score=0		

16.4% (f 23) of the subjects were having very hood attitude towards covid-19 vaccination, 56.4% (f 79) were having good attitude, 22.9% (f 32) were having poor attitude and 4.3% (f 6) were having very poor attitude towards covid-19 vaccination. The overall attitude score mean was 19.29 with mean percentage 60.3, Standard deviation 5.22, median 20.00, range 24 with maximum score 28 and minimum score of 4.

Section 4: Correlation between knowledge and attitude.

The present study results showed a positive correlation (r =0.722) between knowledge and attitude.

Section 5: Association of knowledge and attitude with demographic variables.

TABLE 4. Table Showing Association of knowledge Scores and Demographic Variables

Demographic Variables		Levels(N=100)				Association with knowledge score				
Variable	opts	EXCELLENT	GOOD	AVERAGE	POOR	Chi Test	P Value	df	Table Value	Result
AGE	0-20 Year	2	3	7	3	12.169	0.204	9	16.919	Not Significant
	21-40 Year	10	17	15	9					
	41-60 Year	16	13	13	6					
	>60 Year	7	2	9	8					
GENDER	Male	22	20	21	12	2.572	0.462	3	7.815	Not Significant
	Female	13	15	23	14					
DOMICILE	Rural	35	35	44	26	N. A				
	Urban	0	0	0	0					
QUALIFICATION	Never Attend School	0	5	17	14	45.698	0.000	9	16.919	Significant
	Secondary	10	16	18	10					

	Graduate	15	9	7	2					
	P.G or Above	10	5	2	0					
PROFESSION	Health	14	0	0	0	53.990	0.000	9	16.919	Significant
	Business	2	4	4	6					
	Défense	4	4	5	0					
	Other	15	27	35	20					

Table no4 shows that there is an association between the level of score and some socio demographic variable. Based on the objectives used to Chi-square test used to associate the level of knowledge and selected demographic variables. The Chi-square value shows that there is significant association between the score level and demographic variables (Qualification and profession).The calculated chi-square values more than the table value at the 0.05 level of significance. There is no significant association between the level of scores and other demographic variables (Age and Gender).

TABLE 5. Table Showing Association of attitude Scores and Demographic Variables

Demographic Variables		Levels(N=100)				Association with ATTITUDE SCORE				
Variable	opts	VERY GOOD	GOOD	POOR	VERY POOR	Chi Test	P Value	df	Table Value	Result
AGE	0-20 Year	4	5	6	0	14.385	0.109	9	16.919	Not Significant
	21-40 Year	10	27	11	3					
	41-60 Year	8	30	10	0					
	>60 Year	1	17	5	3					
GENDER	Male	12	45	14	4	2.038	0.565	3	7.815	Not Significant
	Female	11	34	18	2					
DOMICILE	Rural	23	79	32	6	N. A				
	Urban	0	0	0	0					
QUALIFICATION	Never Attend School	1	16	15	4	30.358	0.000	9	16.919	Significant
	Secondary	9	33	11	1					
	Graduate	11	15	6	1					
	P.G or Above	2	15	0	0					
PROFESSION	Health	9	5	0	0	30.849	0.000	9	16.919	Significant
	Business	1	9	4	2					
	Defence	1	9	3	0					
	Other	12	56	25	4					

Table 5 shows that the association between the level of score and socio demographic variable. Based on the objectives used to Chi-square test used to associate the level of knowledge and selected demographic variables. The Chi-square value shows that there is significance association between the score level and demographic variables like educational qualification and profession. The calculated chi-square values more than the table value at the 0.05 level of significance. There is no significant association between the level of scores and other demographic variables like age and gender.

5. Discussion

In the present study, the researchers found that 25% (f 35) of the subjects were having excellent knowledge, 25% (f 35) were having good knowledge, 31.4% (f 44) were having average knowledge and 18.6% (f 26) were having poor knowledge regarding covid-19 vaccination and 16.4% (f 23) of the subjects were having very hood attitude towards covid-19 vaccination, 56.4% (f 79) were having good attitude, 22.9% (f 32) were having poor attitude and 4.3% (f 6) were having very poor attitude towards covid-19 vaccination. This shows that people have average knowledge and good attitude towards covid-19 vaccination. The results also revealed that subjects with good knowledge regarding covid-19 vaccination were having good attitude towards covid-19 vaccination and subjects with poor knowledge were having poor attitude towards covid 19 vaccination.

6. Conclusion

Vaccine hesitancy is a major road block for ending the covid-19 pandemic. It may exist even among people who believe in the importance of vaccinations. Vaccine hesitancy has multiple causes including lack of knowledge, lack of awareness, past experiences, religious and moral convictions, mistrust of those involved in producing and selling vaccinations, and risk perception. The majority of the people were having average knowledge regarding covid-19 vaccination and good attitude towards covid-19 vaccination. The association between knowledge and attitude with demographic variables revealed that people with higher qualification and good profession were having good attitude and knowledge regarding Covid-19 vaccination, thus less hesitant in getting Covid vaccine. The association between knowledge and attitude revealed that subjects with good knowledge regarding covid-19 vaccination were having good attitude towards covid-19 vaccination and subjects with poor knowledge were having poor attitude towards covid 19 vaccination. These findings suggest immediate health education programs and more accurate information should be distributed and advertised by respective health authorities. Policy makers should take steps to ensure adequate knowledge, positive attitudes and perceptions towards COVID-19 vaccinations in order to reduce the vaccine hesitancy facilitated and encouraged by misinformation in the media.

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