



**A STUDY TO ASSESS THE KNOWLEDGE AMONG HEALTH CARE PROVIDERS  
REGARDING SAFETY PRECAUTIONS OF COVID-19 AND VACCINATION USES IN A  
SELECTED HOSPITAL KOLAR WITH A VIEW TO DEVELOP INFORMATION  
BOOKLET**

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**ABSTRACT**

**Background:** Coronaviruses are a large family of zoonotic viruses that cause illness ranging from the common cold to severe respiratory diseases. There are several coronaviruses known to be circulating in different animal populations that have not yet infected humans. The novel human coronavirus disease COVID-19 has become the fifth documented pandemic since the 1918 flu pandemic. COVID-19 was first reported in Wuhan, China, and subsequently spread worldwide. The coronavirus was officially named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) by the International Committee on Taxonomy of Viruses based on phylogenetic analysis. **Aim:** To assess how medical professionals understanding about Covid-19 safety precautions and immunizations. **Methods and Subjects:** In order to determine health professionals' understanding of safety protocols and vaccination is using in to produce an information booklet for the RLJH&RC hospital in Kolar, the research employed a descriptive survey methodology and a simple method of random sampling with 120 healthcare providers as respondents. **Results:** Based on the observations, 4.1% (5) of sample having acceptable understanding of the key concerns for COVID-19 and vaccination across health care professionals, 65.9% (79) of samples have appropriate level, and 30% (36) of samples have inadequate knowledge. **Conclusions:** In accordance with the literature review, health care providers have a fair level of understanding about immunization and Covid-19 safety procedures. As a result, in order to acquire the required expertise in the hospital sector, health-care professionals must increase their expertise of the application of Covid-19 safety protocols and vaccination.

**KEYWORDS:** Health care providers, Safety precautions, Covid-19, and Vaccination uses.

**INTRODUCTION**

The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes, so it's important that you also practice respiratory etiquette. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness.<sup>[1]</sup>

The outbreak was first reported to the local government on 27 December 2019 and published on 31 December. On January 11 2020 report of first known death due to an illness caused by novel corona virus. On February 07/20 Chinese medic who tried to warn about the virus dies

from covid-19 On 25 February, the reported number of newly confirmed cases outside mainland China exceeded those reported from within for the first time. By 6 March the reported number of new cases had dropped to fewer than 100 nationally per day, down from thousands per day at the height of the crisis. On march 03 2020 WHO warns of severe and mounting disruption to global supply of PPEs. Lockdown in hard-hit Wuhan was officially lifted on 8 April.<sup>[2]</sup>

A COVID-19 vaccine is a vaccine intended to provide acquired immunity against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus causing coronavirus disease 2019 (COVID-19). Prior to the COVID-19 pandemic, there was an established body of knowledge about the structure and function of coronaviruses causing diseases like severe acute

respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS), which enabled accelerated development of various vaccine technologies during early 2020.<sup>[3]</sup>

GISAID, and by 19 March, the global pharmaceutical industry announced a major commitment to address COVID-19. In Phase III trials, several COVID-19 vaccines have demonstrated efficacy as high as 95% in preventing symptomatic COVID-19 infections. As of April 2021, 13 vaccines were authorized by at least one national regulatory authority for public use: two RNA vaccines (the Pfizer–BioNTech vaccine and the Moderna vaccine), five conventional inactivated vaccines (BBIBP-CorV, CoronaVac, Covaxin, WIBP-CorV and CoviVac), four viral vector vaccines (Sputnik V, the Oxford–AstraZeneca vaccine, Convidecia, and the Johnson & Johnson vaccine), and two protein subunit vaccines (EpiVacCorona and RBD-Dimer). In total, as of March 2021, 308 vaccine candidates were in various stages of development, with 73 in clinical research, including 24 in Phase I trials, 33 in Phase I–II trials, and 16 in Phase III development. Many countries have implemented phased distribution plans that prioritize those at highest risk of complications, such as the elderly, and those at high risk of exposure and transmission, such as healthcare workers. As of 30 March 2021, 574.25 million doses of COVID-19 vaccine have been administered worldwide based on official reports from national health agencies. The efficacy of Covid-19 vaccine is an issue leading to hesitancy among the people to undergo the vaccination since it may remain 60% effective in some individuals while it may reach 70% efficacy in others. A vaccines advisory group to WHO identified complacency, Inconvenience in accessing vaccines, and lack of confidence as key reasons underlying hesitancy.<sup>[4]</sup>

Lack of understanding of the condition by healthcare workers (HCWs) may result in access to the medical and exacerbate the infection's transmission. Though they are conscious of the risk and seriousness of disease, many individuals all over the world, especially health professionals, choose not to receive immunizations.<sup>[5]</sup>

## MATERIAL AND METHODS

### Objectives

1. To determine, using the Structured Knowledge Questionnaire, the degree of awareness among medical professionals regarding safety protocols and vaccination usage.
2. To determine the association between specific social demographic elements and the knowledge score.
3. To create an informative leaflet about Covid-19 immunisations, safety measures, and uses.<sup>[5]</sup>

### Research Approach and Design

Research approach is the whole design including assumption, the process of enquiry, the type of data collected and the measuring of findings.

The research approach used in the study was quantitative approach.

Research design refers to a researcher's overall plan for obtaining answers to the research question.

The research design, adopted for the study was descriptive survey design.

### Settings

The setting selected for the present study was in R.L. Jalappa medical teaching tertiary care hospital and research Centre, which is 1,200 bedded hospital and nearly 75-80% beds are occupied. As per the state govt. authorities the Hospital was directed to be the Covid – care Centre for 450 beds. The bed occupancy for Covid care was ranging between 92-95%.

### Population

The population for the present study consisted of all the Health care providers.

### Sample

The samples for the present study consist of all Health care providers in R. L. Jalappa hospital & research center, and also who fulfilled the criteria of sample collection.

### Sample SIZE

The sample size consists of 120 Health Care Providers working in R. L. Jalappa hospital, Kolar.

### Sample technique

Simple Random sampling technique (Lottery method) will be adopted to collect the data for the present study.

### Sampling criteria

#### Inclusion criteria

1. Health Care Workers who are working in R.L. Jalappa Hospital, Kolar.
2. Willing to participate in this study.

#### Exclusion criteria

1. The Health Care Workers who are not available at the time of data collection

### Data collection tool

A structured knowledge questionnaire will be used for data collection in the study.

### Development of the tool

The adopted tool consisted of the following sections.

### Section –A

It consists of Socio Demographic Variables such as Age, Gender, Qualification, Experience and previous exposure to information within 6 months.

**Section –B**

It consists of Structured Knowledge Questionnaire which contains questions pertaining to Safety Precautions on Covid-19 and Vaccination uses.

**Method of data gathering:** After formal approval of authorities and respondents

**The following stages were used to collect data**

STEP 1: The ethics and research committees of the college granted ethical permission.

STEP 2: The institution's Medical Super Indent issued formal consent.

STEP 3: The researcher gathered information based on inclusion and exclusion criteria.

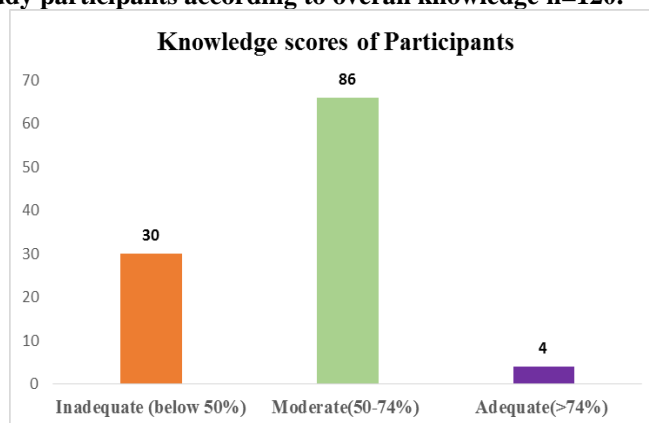
STEP 4: Formal permission was obtained from respondents prior to data collection.

STEP 5: Raising health-care workers' awareness of Covid-19 precautions and vaccine use.

**Plan for data analysis**

To achieve the study's goals, Descriptive and inferential statistics were used to analyze the acquired data.

**Table 1: Distribution of study participants according to overall knowledge n=120.**



**Fig. 1: Overall level of Knowledge of the participants.**

**Table 2: Association between Demographic variables with perception regarding healthy living strategies.**

SI. No	Demographic Variables	Perception level		X <sup>2</sup> calculated value	df	P value	Inference
		Below or equal to Median (≤120)	Above Median (>120)				
1.	<b>Age</b>			7.6142	3	.054697	NS
	1) 60-65 Years	7	9				
	2) 66-70 Years	37	22				
	3) 71-75 Years	5	13				
2.	<b>Gender</b>			0.3704	1	.542784	NS
	Male	25	26				
	Female	27	22				
3.	<b>Qualification</b>			6.188	5	0.28835	NS
	A) Postgraduate	1	1				
	B) Graduate	1	5				
	C) PUC\ Diploma	8	13				
	D) High School	13	8				
	E) Primary	12	9				
F) No Formal Education	17	12					
4.	<b>Marital Status</b>			8.5996	3	.035116	*SS
	A) Married	31	15				
	B) Unmarried	4	9				
	C) Divorce	3	5				
5.	<b>Type Of Family</b>			1.2688	3	.736552	NS
	A) Nuclear Family	31	24				
	B) Joint Family	16	14				

	C) Extended Family D) Any Other Specify	4 2	6 3				
<b>6.</b>	<b>History Of Co-Morbid Condition</b> A) With Co-Morbid Condition B) Without Co-Morbid Condition	42 10	36 12	0.4841	1	.486557	NS
<b>7.</b>	<b>Health Check Up Done In Past</b> A) 6 Months B) 1 Year C) 2 Year D) 5 Year	4 16 13 19	13 11 15 9	9.2597	3	.02603	*SS
<b>8.</b>	<b>Physical Activity</b> A) Yes B) No	41 11	39 9	0.0901	1	.763994	NS
<b>9.</b>	<b>Personal Habits</b> 1.bad habits 2. No bad habits	34 18	35 13	0.662	1	.415853	NS
<b>10.</b>	<b>Source Of Information</b> Health Professionals Family /Friends/ Neighbours Mass Media	0 47 5 0	2 36 6 4	7.401	3	0.0601575	NS

**NOTE:** P<0.05, \*SS-Statistically significant, NS-Non significant, Table value Df- 1(3.84), Df – 3(7.82), Df – 5(11.07).

Result reveals that there was no significant value association between the knowledge score and socio-demographic variables as the  $\chi^2$  value was less than table value (3.84) age ( $\chi^2 = 0.71$ ,  $df=2$ ,  $p= 0.69$ ), gender ( $\chi^2=0.05$ ,  $df=2$ ,  $p=0.97$ ), Clinical postings  $\chi^2=3.16$ ,  $df=2$ ,  $p=0.21$ ), Worked in Covid-19 ward ( $\chi^2=2.16$ ,  $d \chi^2 f=2$ ,  $p=0.34$ ), Undergone for Covid-19 training ( $\chi^2 2=1.21$ ,  $df=2$ ,  $p=0.54$ ) thus the stated assumption is rejected. Whereas only with regard to Affected by Covid-19 ( $\chi^2 =5.21$ ,  $df=2$ ,  $p=0.07$ ) and Qualification ( $\chi^2 =9.15$ ,  $df=6$ ,  $p=0.16$ ) the stated assumption, three and six is accepted as the calculated  $\chi^2$  value was less than the table value.

Finally, the researcher concluded that the findings of the study clearly showed that the Health Care Providers knowledge on safety precautions on Covid-19 and vaccination is not associated.

#### Recommendations

Nursing professionals should enhance their knowledge regarding the safety precautions on Covid-19 and vaccination using structured knowledge questionnaires. The study helps nursing researchers to develop appropriate protocol for Health Care Providers regarding the safety precautions on Covid-19 and vaccination uses.

#### CONCLUSION

Health care provider's knowledge on safety precautions on Covid-19 and Vaccination is moderate. Hence, the Health Care Providers have to enhance their knowledge on safety precautions on Covid-19 and Vaccination.

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