

# Level Of Knowledge Regarding Omicron Infection Among People

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## Abstract

**Introduction:** The new variant named Omicron though mild in infection is more transmissible as compared to previous variant Alpha and Delta. Omicron is highly virulent and can invade the positive effects of antibodies produced by vaccination. Thus, the intense community transmissions are the major concerns due to this omicron variant. Health care system has faced burden due to growing cases of Omicron..

**Material and method:** The study was initiated after the approval from institutional ethics committee. Total 100 participants were enrolled in the studies which were fulfilling the inclusion criteria. The study employed quantitative research approach and non-probability purposive sampling technique was used. Informed written consent was taken from each participant. The study participants were interviewed using self-structured tool and the response was recorded. The data was analysed using proper statistical measures and data was interpreted using bar graphs and tables. The association with the demographic variables was considered significant 0.05 level and below.

**Result:** In the study following results were drawn out from findings of the study, among 100 participants, all the participants were fully vaccinated. Though majority of the participants came from lower socioeconomic status, the knowledge score was average to good.

**Conclusion:** All the study participants were fully vaccinated and majority of the study participants had average to good knowledge on omicron awareness.

**Keywords:** knowledge level, omicron infection, People

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## INTRODUCTION

Omicron has emerged as variant of concern. The reason behind this is due to mutation and increased efficacy of infection even in fully vaccinated people. Currently use commercially available PCR kits are been used to detect the presence of infection with omicron variant in infected people. Omicron variant has faster rate of infection as compared to the previous variant showing that the variant has growth advantage. Omicron has overall 30 mutations in its spike protein, which is the main protein required to recognize host cell receptor. Genetic analysis and genome sequencing revealed omicron variant was present in 77 samples from Gauteng province, South Africa. In November 2021. The infection of Omicron in South Africa was mild in nature with cold and cough but affected people of young age.

World Health Organization was thus compelled to set stringent guidelines to and make strategic plans for the countries at greater risk. The major actions taken were increasing surveillance and sequencing to know the spread of disease, genome sequencing for publicly available database, to report initial cases with the initial reports and understand the severity and diagnostic methods, effectiveness of public health and social measures, immune responses, antibody neutralization and other necessary characteristics.

Owing to the emergence of such new variants, it was thought there is need to assess the awareness of the present omicron variant in current population.

## MATERIAL AND METHODS

The study was initiated after the approval from institutional ethics committee. Total 100 participants were enrolled in the study which were fulfilling the inclusion criteria. The study employed quantitative research approach and non-probability purposive sampling technique was used. Informed written consent was taken from each participant. The study participants were interviewed using self-structured tool and the response was recorded. The data was analysed using proper statistical measures and data was interpreted using bar graphs and tables. The association with the demographic variables was considered significant 0.05 level and below.

### Inclusion Criteria

1. People willing to participate in the study.
2. People who are physically and mentally fit.

### Exclusion Criteria

1. People who are physically and mentally challenged

## RESULT

### Section I: Demographic variables of the study population.

Total 100 people willingly participated in the study. Forty percent (n=40) of the participants were male and 60% (n=60) were female . Thirty percent (n=30) of the study population were in age group of 18-25 years, 34% (n=34) were in the age group of 26-35 years and 36% (n=36) were in the age group of 36- 50 years . The educational status of the study participants revealed that majority of the study participants

were poorly educated. Fourteen percent (n=14) were educated upto primary level; 32% (n=32) received education till secondary level; 1 person (1%) received education till S.S.C level and 28 people (28%) were educated till H.S.C level. Only 16% (n=16) and 9% (n=9) people of the study population were educated till graduation and Postgraduation level respectively . Fifty-three people (53%) were living with single parent, 23 people (23%) were having nuclear family and 24 people (24%) were having joint family . Many of the unemployed study participants were females. Thirty-eight people were unemployed and 40 people (40%) were doing labour work. Total 4 and 9 people were doing service and housekeeping respectively. Nine percent (n=9) of the study population were doing self-employed or doing some kind of business .

Owing to poor education and employment, majority of the study participants had low monthly income which was below Rs 30,000/-. Total 11 people (11%) had monthly income upto Rs 10,000/-. Thirty four percent (n=34) of the study population had income in range of 11,000-20,000/- and 21,000-30,000/- each. Only 12 people (12%) had monthly income in range of Rs 31,000-40,000/- and nine people (9%) had income Rs40,000/-

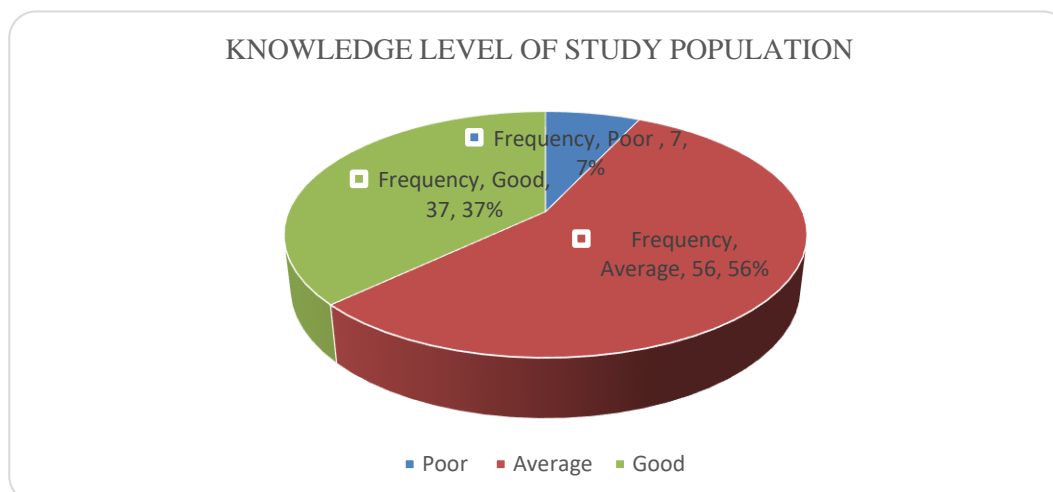
### Section II: Level of knowledge regarding Omicron infection

The knowledge score of 10 or below was considered poor, score between 11-15 was considered as average and above 16 to 20 was considered as good. Majority of the participants (56%, n=56) had average knowledge of omicron awareness. Thirty seven percent population had good knowledge whereas only 7 people had poor knowledge score of omicron awareness (Table 0.1)

**Table 1:** Frequency distribution of Knowledge Category

	<i>Frequency(n)</i>	<i>Percentage (%)</i>
Knowledge Category	Poor	7
	Average	56
	Good	37

Table 0.1 shows that the knowledge regarding omicron infection among people



This figure shows that the distribution of knowledge level of study population

### Section III: Association of knowledge score with demographic variables.

**Table 02:** Association between Demographic Characteristics & Knowledge Category

		<i>Knowledge Category</i>			<i>Total</i>	<i>Chi-Square Value</i>	<i>p-value</i>
		<i>Poor</i>	<i>Average</i>	<i>Good</i>			
Age Group	18-25	2	16	12	8.31	0.40	
	26-30	0	9	7			
	31-35	2	9	7			
	36-40	3	12	3			
	>40	0	10	8			
Family	Joint	2	16	6	16.01	0.003	
	Nuclear	4	16	3			
	Single	1	24	28			
Education	10th	0	0	1	21.97	0.02	
	12th	2	18	8			
	Degree	0	5	4			
	Graduate	0	13	3			
	Primary	0	3	11			
Employed	Secondary	5	17	10	5.28	0.07	
	No	0	21	17			
Income Category	Yes	7	35	20	16.46	0.01	
	10000-20000	1	8	17			
	20000-30000	4	15	8			
	30000-40000	2	22	7			
Gender	40000-50000	0	11	5	1.41	0.49	
	Female	4	31	25			

Significant association was found between demographic variables viz family type, education level and income category. The association was considered significant 0.05 level and Other demographic variables viz gender, employment was not found to be significantly associated with knowledge score [table 0.3]

## CONCLUSION

Following the study's ending it comes across that the people have average knowledge about the omicron infection.

Overall, 37% people have good knowledge about the omicron infection. Whereas 56 people have average knowledge about the same. Apart from this there is 7% people that have poor knowledge about the omicron infection.

## DISCUSSION

According to recent statistics from the John Hopkins University's Coronavirus Resource Centre released on Feb 19, 2022, SARS-CoV-2 has infected over 421 million people around the globe which has resulted in 5.8 million deaths. Omicron Variant was detected in late November 2021 and declared as 'variant of concern'. Omicron is largely affecting the people who are not vaccinated. Present vaccines provide protection against delta variant and also against omicron variant to some extent. Vaccines help in preventing severe symptoms that may require hospitalization. Extended time gap for the second dose also increased the risk of symptomatic COVID-19 infection. More research is needed to fully understand the effect of vaccine against newer variants.

An electronic survey was conducted to study perception and knowledge regarding SARS-CoV-2 Omicron variant among Healthcare workers. The survey tool was distributed via social media which included awareness (2 items), source of information (1 item), knowledge (10 items), and perceptions (10 items). Health care workers who answered  $\geq 80\%$  of the items correctly were considered having good knowledge and perception. The health care workers, mostly doctors were all aware of the new infection.

A total of 940 of the 1054 HCW participants completed the SARS-CoV-2 Omicron. But only 24.3% of the Healthcare workers demonstrated good knowledge and perception about Omicron. HCWs who participated in various training and discussion programs had higher knowledge about Omicron variant. Therefore, educational interventional programs are good to improve knowledge and perceptions of HCWs (Bhagavathula *et al.*, 2022).

Reports suggest that it is necessary to understand the

transmission and severity of omicron infection, efficacy of vaccine, effectiveness of public health and social measures (PHSM) against Omicron. It is also essential to validate diagnostic methods, immune responses, antibody

neutralization, immune responses, knowledge, attitude, and behaviour toward PHSM, vaccines. Sequencing of some samples is necessary in certain groups for SAR-CoV-2 variant surveillance. It is necessary to monitor the severity of illness and burden on healthcare systems (like bed occupancy) (Kishore and Venkatesh, 2022). In Cohort study from Bangladesh, demographic variables like age, education, urban location affects the knowledge score. Inverse association between knowledge score and fear score was reported. Subjects were aware and used mask and avoided crowded places to avoid omicron infection. Though there was fear in elderly and female population about COVID-19 infection, majority of subjects reported positive attitude revealing that COVID-19 infection can be prevented using proper measures (Hossain *et al.*, 2020).

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