A descriptive study to assess the knowledge, attitude and practice on covid-19 among the nursing assistants

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Abstract

The present study aimed to assess the Knowledge, Attitude and Practice on COVID-19 among the Nursing Assistants in Saveetha Medical College and Hospital. The objectives were to assess the level of knowledge, attitude and practice among nursing assistants about COVID-19.To correlate the knowledge with the practice among nursing assistants about COVID-19.The descriptive research design was used to assess the knowledge, attitude and practice among the nursing assistants in Saveetha Medical College and Hospital. The total number 100 study participants were participated who met all inclusion criteria. Non-probability Convenience sampling technique used. Data collected by administering Semi-structured questionnaire. The data oraganized and analysed by using descriptive and inferential statistics. The result shows that 86(86%) had moderate knowledge, on COVID-19. 71(71%) had moderately favourable attitude and 73(73%) had moderate practice towards COVID-19. The result shows a moderate positive correlation which was found to be statistically significant at p<0.001 level and clearly infers that when knowledge on COVID-19 increases among the nursing assistants increases their attitude and practice level also increases.

Keywords: COVID-19, knowledge, attitude, practice, nursing assistants

Introduction

Coronovirus disease (COVID-19) is a deadly disease caused by a novel coronavirus. Most people infected with the COVID-19 virus will develop mild to moderate respiratory illness and recover without special treatment. Severe acute respiratory syndrome (SARS-CoV-2) caused by the elderly and people with basic illnesses such as cardiovascular disease, diabetes, and chronic respiratory diseases [1]. COVID-19 first appeared in Wuhan, Hubei province, China in December 2019. Later it was declared a pandemic by the World Health Organization on March 11, 2020 [2].

The spread of droplets is due to close contact (within 1 m) of people with respiratory symptoms (such as coughing and sneezing), such as the risk of infection is in contact with the mucous membranes (mouth and nasal cavity) and conjunctiva (eyes). Therefore, the spread of the COVID-19 virus can be in direct contact with the infected person, or it can occur directly through indirect contact with environmental surfaces and substances. (For example, hospital equipment) [3]. COVID-19 patients report a wide range of symptoms, from mild symptoms to serious illness. People with these symptoms may have COVID-19: fever or chills, cough, shortness of breath, fatigue, muscle or body pain, headache, loss of new taste or odor, sore throat, stuffy or runny nose, nausea or vomiting, diarrhoea [4].

The PCR test for COVID-19 is a test used to diagnose people who are currently infected with SARS-CoV-2, which is the coronavirus that causes COVID-19. The PCR test is the "gold standard" test to diagnose COVID-19 (5). Nasopharyngeal swab reverse transcription LAMP and RT-LAMP may be a powerful solution for rapid and cost-effective COVID-19 diagnosis, especially in developing and low-income countries [6]. Preventive measures for COVID-19 include maintaining social distancing, frequent hand washing, and avoiding touching your mouth, nose, and face [7].

In late January 2020, when three Indian students traveled, India witnessed the coronavirus (also known such as COVID-19 or SARS-CoV-2). It ranged from Wuhan, China, in the center of the outbreak, to Kerala in the south. At the same time, several other cases have been found in other parts of the country, most of which are related to people who have traveled to the affected countries [13]. India, a country in Southeast Asia, registered its first case of COVID19 on January 30, 2020. As of May 4, 2020, the country had reported 42,533 cases and 1,373 deaths [8]. First case of COVID-19 in Tamil Nadu, the positive case was confirmed on March 7, 2020, and the number of infections exceeded thousands by April 12, 2020. Tamil Nadu is one of the states most affected by the pandemic [12].

Health Care workers are the spine of the medical system. A healthy and skilled workforce is the basic requirement to ensure the health of the community. During crises such as the COVID-19 pandemic, it is also important Health Care Workers have a full understanding of the disease and take preventive measures to protect themselves and the entire community. The quality of medical staff is very high, most of them have received training on COVID-19 [11]. Globally, healthcare workers are at the forefront to contain the COVID-19 outbreak, diagnose and treat infected patients. Unfortunately, health care workers are also the source and route of transmission in hospitals and communities [15].

According to the World Health Organization, health care workers are at risk for the following reasons: prolonged contact with large numbers of patients and insufficient rest time; lack of personal protective equipment; lack of measures to prevent hospital transmission. Treatment, increased work pressure, and lack of rest indirectly increase the possibility of infection among medical personnel. Delayed recognition of COVID-19 symptoms and lack of experience in treating respiratory pathogens [14]. Due to overcrowding, the spread of the disease among medical personnel has been exaggerated, lack of isolation facilities and environmental contamination, and may be due to the knowledge of medical personnel and knowledge of infection control practices, exacerbated by insufficient awareness [9].

Therefore, to alleviate the growing number of COVID-19 cases, it is necessary for medical personnel to follow recommended measures to prevent the spread. These measures are mainly influenced by the knowledge, attitudes and practices (KAP) of frontline personnel (16). Approximately 14% of COVID-19 cases reported to WHO are Health Care Workers. WHO recommends washing hands regularly, maintaining physical and social distancing, keeping the room well ventilated, and maintaining respiratory hygiene to prevent the spread of COVID-19. Inadequate knowledge and wrong attitudes of medical staff will directly affect practice and lead to late diagnosis, improper infection control and disease transmission [10].

Therefore, the purpose of the study was to assess the knowledge, attitude and practice on COVID-19 among the Nursing Assistants. The findings of the study may help to determining the existing level of knowledge, attitude and practices.

Materials and Methods
A quantitative research approach with descriptive research design was adopted for the study. A non-probability convenience sampling technique were used to select the study participants. A total of 100 nursing assistants (n=100) were selected once they met all the inclusion criteria. The inclusion criteria for the study participants were the nursing assistants who were available during the study period, who can read and write Tamil. The purpose of the study was to assess the knowledge, attitude and practice among the nursing assistants. The data collection procedure started after obtaining an formal permission from Saveetha Medical College and Hospital. Semi-structured questionnaire was developed to collect the demographic data and to assess the existing level of knowledge, attitude and practice. An oral informed consent was obtained before the Data collection. The collected data were tabulated and analysed using descriptive and inferential statistics.

Results
Section A: Demographic Variables
Most of the health care workers, 51(51%) were aged >40 years, 83(83%) were female, 100(100%) were Nursing Assistants, 87(87%) were diploma holders, 38(38%) had >9 years of work experience and 100(100%) were working in Saveetha Medical College and Hospital.

Section B: Assessment of level of knowledge, attitude and practice on covid-19 among the nursing assistants

The first objective was to assess the knowledge on COVID-19 among the nursing assistants
The assessment of level of knowledge on COVID-19 among the nursing assistants revealed that 86(86%) had moderate knowledge, 12(12%) had inadequate knowledge and 2(2%) had adequate knowledge on COVID-19 (Table 1 and figure 1)

Table 1: Frequency and percentage distribution of level of knowledge on COVID-19 among nursing assistants N=100

Level of Knowledge	No.	%
Inadequate Knowledge (≤50%)	12	12.0
Moderate Knowledge (51 – 75%)	86	86.0
Adequate Knowledge (<75%)	2	2.0

Table -1 represents, frequency and percentage distribution of the level of knowledge, in that 12 (12%) had inadequate knowledge, 86(86%) had moderate knowledge and 2 (2%) had adequate knowledge, among the nursing assistants.
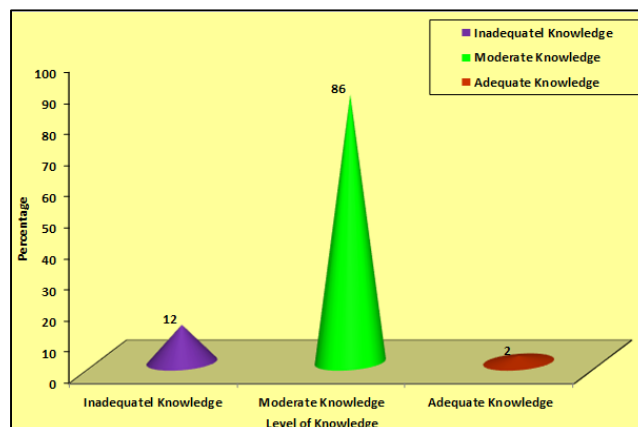

Fig 1: Percentage distribution of level of knowledge on COVID-19 among nursing assistants

The second objective was to assess the attitude on COVID-19 among the nursing assistants
The assessment of attitude towards COVID-19 revealed that 71(71%) had moderately favourable attitude, 17(17%) had un-favourable attitude and 12(12%) had moderately favourable attitude on COVID-19. (Table 2 and Figure 2).

Table 2: Frequency and percentage distribution of level of attitude on COVID-19 among nursing assistants N = 100

Level of Attitude	No.	%
Unfavorable Attitude (≤50%)	17	17.0
Moderately Favorable Attitude (51 – 75%)	71	71.0
Favorable Attitude (<75%)	12	12.0

Table-2 represents, the frequency and percentage distribution of level of attitude, in that 17(17%) had unfavorable attitude, 71(71%) had moderately favorable attitude, 12(12%) had favorable attitude, among the nursing assistants.
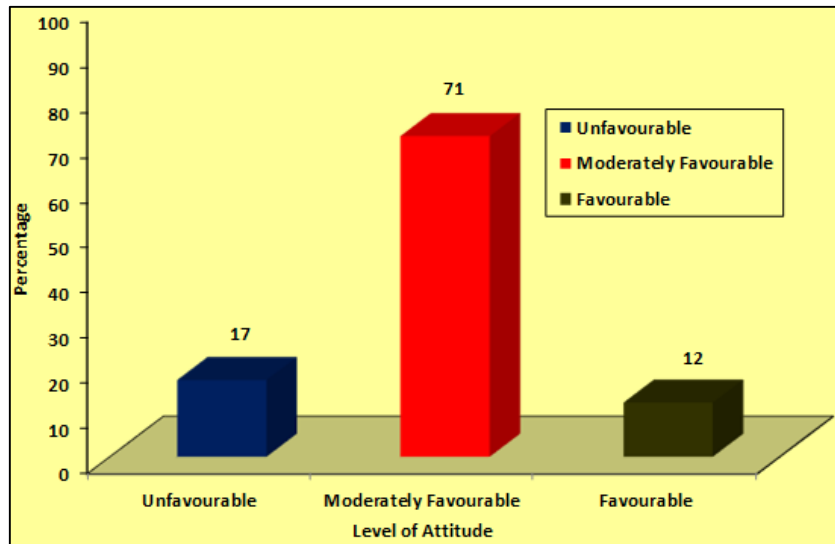

Fig 2: Percentage distribution of level of attitude on COVID-19 among nursing assistants

The Third objective was assess the practice towards COVID-19 among the nursing assistants
The assessment of practice towards COVID-19 among the nursing assistants revealed that 73(73%) had moderate practice, 19(19%) had adequate practice and 8(8%) had inadequate practice on COVID-19. (Table 3 and Figure 3)

Table 3: Frequency and percentage distribution of level of practice on COVID-19 among nursing assistants N = 100

Level of Practice	No.	%
Inadequate (≤50%)	8	8.0
Moderate (51 – 75%)	73	73.0
Adequate (<75%)	19	19.0

Table 3. Represents the frequency and percentage distribution of level of practice, in that 8(8%) had inadequate practice, 73(73%) had moderate practice, 19 (19%) had adequate practice, among the nursing assistants.
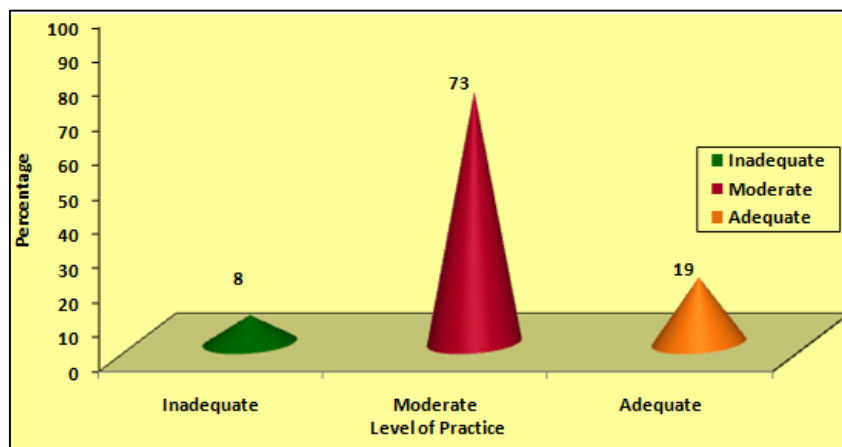

Fig 3: Percentage distribution of level of practice on COVID-19 among nursing assistants

Section C: Relationship between knowledge, attitude and practice on covid-19 among health care workers N = 100.

Table 4: Correlation between knowledge, attitude and practice on COVID-19 among health care workers

Variables	Mean	S.D	Karl Pearson's Correlation Value
Knowledge	9.22	1.39	r = 0.385
Attitude	25.73	4.83	p = 0.0001, S***
Knowledge	9.22	1.39	r = 0.390
Practice	6.67	1.01	p = 0.0001, S***
Attitude	25.73	4.83	r = 0.345
Practice	6.67	1.01	p = 0.0001, S***

***p<0.001, S – Significant

The findings shows that the mean score of knowledge was 9.22±1.39, the mean score of attitude was 25.73±4.83 and the mean score of practice was 6.67±1.01. The calculated Karl Pearson's Correlation value of r = 0.0.385 between knowledge and attitude, r = 0.390 between knowledge and practice and r = 0.345 between attitude and practice shows a moderate positive correlation which was found to be statistically significant at p<0.001 level. This clearly infers that when knowledge on COVID-19 increases among health care workers increases their attitude and practice level also increases

Section D: Association of level of knowledge, attitude and practice on covid-19 with selected demographic variables
The findings of the study shows that none of the demographic variables had shown statistically significant association with level of knowledge on COVID-19 among health care workers.

Table 5: Association of level of knowledge on COVID-19 among health care workers with their selected demographic variables N = 100

Demographic Variables	Inadequate		Moderate		Adequate		Chi-Square Value
	No.	%	No.	%	No.	%	
Age							χ^2=1.340 d.f=2 p = 0.512 N.S
18 – 40 years	4	4.0	44	44.0	1	1.0	
>40 years	8	8.0	42	42.0	1	1.0	
Gender							χ^2=0.422 d.f=4 p = 0.406 N.S
Male	2	2.0	15	15.0	0	0	
Female	10	10.0	71	71.0	2	2.0	
Qualification							-
Doctors	-	-	-	-	-	-	
Nursing Assistants	12	12.0	86	86.0	2	2.0	
Paramedics	-	-	-	-	-	-	
Highest level of education							χ^2=0.445 d.f=2 p = 0.801 N.S
Graduate / Post Graduate	2	2.0	11	11.0	0	0	
Diploma	10	10.0	75	75.0	2	2.0	
Primary education	-	-	-	-	-	-	
Illiterate	-	-	-	-	-	-	
Work experience							χ^2=6.046 d.f=4 p = 0.196 N.S
<5 years	2	2.0	29	29.0	0	0	
5 – 9 years	4	4.0	25	25.0	2	2.0	
>9 years	6	6.0	32	32.0	0	0	
Area of work							-
Saveetha Medical College and Hospital	12	12.0	86	86.0	2	2.0	
Other specialized hospital	-	-	-	-	-	-	

N.S - Not Significant

Table 6: Association of level of attitude on COVID-19 among health care workers with their selected demographic variables N = 100

Demographic Variables	Un-favourable		Moderately Favourable		Favourable		Chi-Square Value
	No.	%	No.	%	No.	%	
Age							χ^2=0.950 d.f=2 p = 0.622 N.S
18 – 40 years	7	7.0	37	37.0	5	5.0	
>40 years	10	10.0	34	34.0	7	7.0	
Gender							χ^2=0.417 d.f=2 p = 0.812 N.S
Male	2	2.0	13	13.0	2	2.0	
Female	15	15.0	58	58.0	10	10.0	
Qualification							-
Doctors	-	-	-	-	-	-	
Nursing Assistants	17	17.0	71	71.0	12	12.0	
Paramedics	-	-	-	-	-	-	
Highest level of education							χ^2=0.328 d.f=2 p = 0.849 N.S
Graduate / Post Graduate	2	2.0	10	20.0	1	1.0	
Diploma	15	15.0	61	61.0	11	11.0	
Primary education	-	-	-	-	-	-	
Illiterate	-	-	-	-	-	-	

Work experience							χ^2=4.457 d.f=4 p = 0.348 N.S
<5 years	7	7.0	23	23.0	1	1.0	
5 – 9 years	4	4.0	23	23.0	4	4.0	
>9 years	6	6.0	25	25.0	7	7.0	
Area of work							
Saveetha Medical College and Hospital	17	17.0	71	71.0	12	12.0	-
Other specialized hospital	-	-	-	-	-	-	

N.S - Not Significant

The findings of the study shows that none of the demographic variables had shown statistically significant association with level of attitude on COVID-19 among health care workers.

Table 7: Association of level of practice on COVID-19 among health care workers with their selected demographic variables N = 100

Demographic Variables	Inadequate		Moderate		Adequate		Chi-Square Value
	No.	%	No.	%	No.	%	
Age							χ^2=2.448 d.f=2 p = 0.294 N.S
18 – 40 years	2	2.0	36	36.0	11	11.0	
>40 years	6	6.0	37	37.0	8	8.0	
Gender							χ^2=4.354 d.f=2 p = 0.113 N.S
Male	2	2.0	9	9.0	6	6.0	
Female	6	6.0	64	64.0	13	13.0	
Qualification							-
Doctors	-	-	-	-	-	-	
Nursing Assistants	8	8.0	73	73.0	19	19.0	
Paramedics	-	-	-	-	-	-	
Highest level of education							χ^2=0.162 d.f=2 p = 0.922 N.S
Graduate / Post Graduate	1	1.0	9	9.0	3	3.0	
Diploma	7	7.0	64	64.0	16	16.0	
Primary education	-	-	-	-	-	-	
Illiterate	-	-	-	-	-	-	
Work experience							χ^2=6.043 d.f=4 p = 0.196 N.S
<5 years	2	2.0	20	20.0	9	9.0	
5 – 9 years	2	2.0	27	27.0	2	2.0	
>9 years	4	4.0	26	26.0	8	8.0	
Area of work							-
Saveetha Medical College and Hospital	8	8.0	73	73.0	19	19.0	
Other specialized hospital	-	-	-	-	-	-	

N.S - Not Significant

The findings of the study shows that none of the demographic variables had shown statistically significant association with level of practice on COVID-19 among health care workers.

Discussion

Corono virus disease is a viral pandemic disease affecting globally. Heath care professionals are very prone to affect with COVID-19.The main focus of the study to assess the knowledge, attitude and practice on Covid-19 among the health care workers. A total of 100 samples were selected by Non-Probability Convenience sampling technique. Data collection were collected administering semi-structured questionnaire. The collected data was analyzed using descriptive and inferential statistics. The analysis revealed that the mean score of knowledge was 9.22±1.39, the mean score of attitude was 25.73±4.83 and the mean score of practice was 6.67±1.01. The calculated Karl Pearson's Correlation value of r = 0.0.385 between knowledge and attitude, r = 0.390 between knowledge and practice and r = 0.345 between attitude and practice shows a moderate positive correlation which was found to be statistically significant at p<0.001 level. This clearly infers that when knowledge on COVID-19 increases among health care workers increases their attitude and practice level also increases.

Conclusion

The findings of the present study revealed when the knowledge on COVID -19 among the nursing assistants increases, the attitude and practice also increases. Adequate knowledge leads to good attitude and practices.

Author's Contribution

All the authors actively participated in the work of study. All the authors read and approved the final manuscript.

Conflict of Interest

The author declare no conflict of interest.

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