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A Study on Knowledge, attitude and practices towards Covid-19 pandemic among health care workers in a Tertiary care hospital in a district of Assam - a cross-sectional study.

Dr Alpana Rabha

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ABSTRACT:

Background : Covid-19, the SARS-Cov2 newly emerged disease recognized as global threat to the general population as well as to the health professionals. The disease declared as pandemic by WHO in March'11, 2020 . Since then millions of people got infected , recovered and died globally.. Due to rapid spread and infectivity nature of the disease , the health professionals are most vulnerable to get infected if they have no knowledge about the SARS ,CoV2 as well as preventive measures against the disease. So, the study had been initiated to find out the knowledge, attitude and practices towards Covid-19 pandemic among the health care workers working in a Tertiary care hospital.

Methodology : The aim of the study was to assess the knowledge, attitude & practices towards Covid-19 among the health workers of Tertiary care hospital and to find out the level of association between health care workers. The study had been conducted from August 21 - October 21 at a Tertiary care hospital. The data were collected by questionnaire method containing of four parts - socio-demographic information, knowledge , attitude and practice assessing. Data were analysed by SPSS version 20. The tests applied percentages, chi-square, ANOVA and Correlation..

Results: A total of 175 HCWs were participated in this study . The knowledge among 170 (96.14%) participants had good , 5 (2.86%) had average , 171 (97.71%) had good attitude & 4 (2.29%) average , 161 (92%) good practices & 13 (7.4%) average & only 1(0.5%) poor practice. From ANOVA (One way) analysis shows that there was significant difference observed between participants educational qualification and knowledge score at the $p< 0.5$ level [$F (4,170) = 5,140$, $p = 0.001$]. The correlation test result shows that knowledge and attitude of the participants were at 95% of Cl ($p = 0.007$)

Conclusion: In this study concluded that majority of the study participants had good knowledge, positive attitude , and practice towards Covid-19. Further training and interventions have to be required for the health care workers.

Key words : Covid-19, Pandemic , Health workers

I. INTRODUCTION

The Covid-19 pandemic in India is a part of the worldwide pandemic of coronavirus disease 2019 (Covid-19) caused by SARS-CoV2. As of 27th September, 2021 according to Official figures, India has the second highest number of confirmed cases in the world, 33,678,786 reported cases of Covid-19 infection and the third highest number of Covid-19 deaths at 479,133 deaths[2]. However these figures exhibit severe under-reporting. In India, first cases of Covid-19 were reported on 30th January, 2020 in Kerala. Since then the disease had spread all over the country very rapidly. The transmission of SARS-CoV2 can occur through respiratory secretions (directly through droplets or indirectly through contaminated objects or surfaces as well as close contacts) . Because of high fatality and transmission rates towards human beings, the WHO and CDC provided different guidelines for prevention and control of Covid-19 . Government of India also had taken numerous steps towards prevention and control of the disease.

Government of India had also taken numerous steps to prevent and control of Covid-19 pandemic in India. Standard recommendations to prevent infection spread includes, maintaining hand hygiene, covering mouth and nose when coughing or sneezing, avoid close contact (maintaining 6

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feet distance away) with anyone showing symptoms of respiratory problems . Apart from these, various measures like suspension of all inter-national & domestic flights, nationwide lockdown , restriction of gatherings in public places, closing of schools and universities, and suspension of religious places , etc also had been initiated. India.

Worldwide, the major challenges lie in delivering proper care to Covid -19 patients and to prevent the spread of infection among health care personnel and the general public.. Previous studies have reported poor knowledge, and awareness about the disease results in inefficient management and unexpected outcome in the patients as well as the care provider[3]. It is documented that during the SARS outbreak in 2002, one fifth of all cases were belonged to health care sector[4]. The role of health care workers in Covid-19 emergency situation, are the main backbone of playing a great role not only in the direct patient care but also in the field of at community level to prevent the transmission of disease. Hence, regular and intensive trainings for all health-care workers is necessary to promote preparedness and efficacy in crisis management[3]. .

Knowledge of a disease can influence paramedic's attitudes and practices , and incorrect attitudes and practice directly increase the risk of infection. Understanding paramedic's KAP and possible risk factors helps to predict the outcomes of planned behaviour[4]. In addition to knowledge, attitude and practice (KAP) also serve as important components in influencing the performance of HCW[5]. Inadequate awareness , improper practice and negative attitudes can directly affect the patient's care and increase the risk of infection[5-6]. Previous studies have shown that there is need to upgrade the existing knowledge of healthcare workers to overcome the challenges of patient management and also to address the associated stigma and fear of acquiring the infection through occupational exposure[7]. So, the present study aims to assess the knowledge , attitude and practices on Covid-19 pandemic among the health care workers in a Tertiary care hospital.

II. MATERIALS & METHODS:

A cross-sectional study was conducted at a Tertiary care hospital among the health care workers working at the hospital from August 2021 to October 2021. Before initiation of the study, the permission had been obtained from the Head of the Institution. The data were collected by self designed pretested questionnaire distributed to the health care workers working in the health facility following by proper maintaining the covid-19 protocol. After taking the full informed consent of the participants , the study had been initiated. Those who were absent on the day of survey & un-willing to take participate in the study had been excluded from the study.

A total of 175 HCWs were participated in the study .The participants were nursing staffs, laboratory , ICU & OT technicians, pharmacists, ward boys & girls, Cleaners included for the study.

The questionnaire consists of two parts : demographical data and KAP questionnaires.

Knowledge on Covid-19 pandemic was assessed using 13 questions, each correct response was marked as 1 point and 0 for incorrect response. Similarly, for positive attitude , one point is allotted, and for negative attitude, no score was given. In practice section, for each correct answer, participants score was given as one point.

Data were analysed with SPSS 20.0 version. The tests applied mean, percentages, chi square, correlation and ANOVA (One-way) for analysis.

III. RESULTS :

Table no (1) : Knowledge regarding Covid-19 among the study participants:

Variables	No of respondents (%)		
	Yes	No	No response
1.Covid-19 transmitted by respiratory droplets	172 (98.3%)	3 (1.7%)	-
2.SARS-COV2 transmitted by consumption of food	64(36.6%)	101(57.7%)	10 (5.7%)
3.Covid-19 is similar with seasonal flu	162(92.6%)	13 (7.4%)	-
4.Covid-19 causes serious illness and death	169 (96.6%)	5 (2.9%)	1(0.6%)

International Journal Dental and Medical Sciences Research
Volume 4, Issue 5, Sep-Oct 2022 pp 58-63 www.ijdmsrjournal.com ISSN: 2582-6018

5.Aware about WHO recommendation for Covid-19	170 (97.1%)	4(2.3%)	1(0.6%)
6. Covid-19 is a virus infection	168 (96.0%)	-	7(4.0%)
7.Covid-19 is infected by close contact with infected person	172(98.3%)	2(1.1%)	1(0.6%)
8.Fever, sore throat & shortness of breath are possible symptoms of Covid19	171(97.7%)	1(0.6%)	3 (1.7%)
9.Isolation period is 2 weeks	170 (97.1%)	4(2.3%)	1(0.6%)
10.Specific drug therapy is available for Covid-19	99(56.6%)	72(41.1%)	4(2.3%)
11.Antibiotics are first line of treatment	134(76.6%)	37(21.1%)	4(2.3%)
12.Hand wash and use of mask helps in disease prevention	174(99.4%)	-	1(0.6%)
13.Patients with underlying chronic diseases are at higher risk of getting infection and death	171 (97.7%)	-	4(2.3%)
14.Health workers are at higher risk of infection	173 (98.9%)	2(1.1%)	-
15.Covid-19 could be fatal	155(88.6%)	13(7.4%)	7(4.0%)
16.Covid-19 vaccines are available in the market	43(24.6%)	130(74.3%)	2(1.1%)
17.Recommendations by the Govt of India/ Assam is sufficient	136(77.7%)	31(17.7%)	8(4.6%)
18.Washing hands reduces the risk of Covid-19	167(95.5%)	6(3.4%)	2(1.1%)
19.Following the special advice received from the hospital	173(98.9%)	2(1.1%)	-
20.For prevention, individual should not go out & remain in houses during pandemics175(100%) - -	174(99.4%)	-	1(0.6%)
21.Isolation/ quarantine are effective ways to reduce the spread of virus	175(100%)		

Table no (2) : Attitudes towards Covid-19 among the participants:

Variables	No of Respondents		
	Yes	No	No Response
1.Believe that you can prevent yourself from being infected by Covid-19 by practicing proper social distancing, wearing mask & hand hygiene	175(100%)	-	-
2.Avoid attending crowded places or mass function, even when individual by close acquaintances	163 (93.1)	11 (6.3%)	1 (0.6%)
3.It is necessary to follow official updates about the Covid-19 infection	172(98.3%)	-	3(1.7%)
4.Ready to treat Covid-19 patients	171(97.7%)	3(1.7%)	1(0.6%)
5.Think that the Govt initiatives to prevent Covid-19 are adequate	149(85.1%)	19 (10.9%)	7 (4.0%)
6.Think that lockdown is helping in decreasing the number of cases	159 (90.9%)	12 (6.9%)	4 (2.3%)
7.If getting Covid-19, will you accept isolation in health facility	173 (98.9%)	2 (1.1%)	-
8.Are you vaccinated with Covid-19 available to your health facility	172 (98.3%)	1(0.6%)	2 (1.1%)
9Do you believe that vaccination is important for prevention of Covid-19	173 (98.9%)	2 (1.1%)	-
10.Covid-19 patients should be kept in isolation	172 (98.3%)	-	3 (1.7%)
11. Do you believe that transmission of Covid-19 can be prevented by washing hands with soap & water or use of hand	170 (97.1%)	4 (2.3%)	1 (0.6%)

International Journal Dental and Medical Sciences Research
Volume 4, Issue 5, Sep-Oct 2022 pp 58-63 www.ijdmsrjournal.com ISSN: 2582-6018

sanitizer frequently by touching any other objects or surfaces?	

Table No: (3) Chi square test result of Gender and Knowledge, Attitude and Practice

Variables	X^2	df	p Value	Statistical result
Gender and knowledge	2.06	1	0.151	Insignificant
Gender and attitude	1.64	1	0.201	Insignificant
Gender and practice	2.49	2	0.288	Insignificant
Staff category and knowledge	0.42	1	0.515	Insignificant
Staff category and attitude	3.45	1	0.063	Insignificant
Staff category and practice	3,91	2	0.142	Insignificant
Place of residence and knowledge	1.75	1	0.186	Insignificant
Place of residence and attitude	1.10	1	0.295	Insignificant
Place of residence and practice	7.34	2	0.026	Significant

The table no 3: Shows that there was no significant difference between gender & knowledge of the participants, between gender and attitude, and between gender and practice of the participants. But, the place of residence and practice were found statistically significant at p=0.05 level.

Table No:4 ANOVA (One way) table of Educational Qualification and KAP :

Variables	**F** (Between group df & within group df)	F-value	P-value	Statistical result
Educational qualification and knowledge	(4,170)	5.140	0.001	Significant
Educational qualification & attitude	(4,170)	0.296	0.881	Insignificant
Educational qualification & practice	(4,170)	1.083)	0.366	Insignificant

Table No 5: Shows Scoring of Knowledge, attitude and practice among Health care workers:

Staff category	Total knowledge score Good (%) Average (%)	Total	Total attitude score Good (%) Average (%)	Total	Total practice score Good (%) Average (%) Poor (%)	Total
Nursing staff	93(97.89) 2(2.11)	95	91(95.79) 4(4.21)	95	90(94.74) 4(4.21) 1(1.05)	95
Other HCWs	77(96.25) 3(3.75)	80	80(100) -	80	71(88.75) 9(11.25) -	80
Total	170(97.14) 5(2.86)	175	171(97.71) 4(2.29)	175	161(92) 13(7.43) 1(0.57)	175

Table no 6: Correlation table of KAP:

Variables	Total knowledge score	Total attitude score	Total practice score

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Total knowledge score	Pearson correlation Sig (2-tailed)	1	.203 .007	.065 .390
Total attitude score	Pearson correlation Sig (2-tailed)	.203 .007	1	-.044 .565
Total practice score	Pearson correlation Sig. (2-tailed)	.065 .390	-.044 .565	1

The correlation results shows that knowledge and attitude of the participants were significant at 95% Cl (p 0.007) but knowledge and practice were insignificant (p = 0.390) and similarly attitude and practice were insignificant (p =0.565).

Table no (7) : KAP status on Covid-19 among the participants:

Scores	Knowledge (%)	Attitudes (%)	Practice (%)
Good	170 (97.14%)	171 (97.71%)	161 (92%)
Average	5 (2.86%)	4(2.29%)	13 (7.43%)
Poor	-	-	1 (0.57%)

Table no 7. Shown that 170 (97.14%) participants had good knowledge, 171 (97.71%) had good attitudes & 161 (92%) had good practices on Covid-19. 5 (2.86%), 4(2.29%) and 13 (7.43%) had average knowledge, attitudes & practices on Covid-19. Only 1(0.57%) had poor practices on Covid-19.

IV. DISCUSSION:

In the present study , most of the participants were in the age groups 18-29 yrs which was also observed in a study done by Sabira et al[(11)]. The number of female participants were more in comparison to male participants . Around 93 (53.14%) participants were unmarried ; similar findings also observed in a study done by Amitava Acharya et.al [12] . Most of the study participants were from rural areas (50.86%) , 62.29% living in nuclear families , 79 (45.14%) had education up-to HS . The level of knowledge among the study participants were found 97.14% , attitude 97.71% , & practice 92% considered as good in this study , and 5 (2.86%) , 4(2.29%) & 13 (7.43%) as average and only 1 (0.57%) had poor level of practice among the HCWs. A study done by Hope Inegbenosun et al [13] found that only 53.80% possessed a good level of knowledge regarding Covid-19. The present study revealed that the knowledge among male participants were 50 (100%) whereas among females found to be 120 (96%) . Present study found that all the study participants had believed on all protective measures on Covid-19, 97.7% had positive attitudes for treatment of covid patients, 98.9% had believed on isolation and 97.1% had believed on hand washing as preventive measures. Similar findings also observed by Ambika Sharma et al [14].

Present study reveals that the preventive measures practiced by all the study participants > 99% which was found to be good. In a study done by Modi PD et al reported to be 75% only.[21] In this study , 173 (98.9%) believed that vaccination is important for prevention were as in a study done by Akshaya S Bhagavathula et al[15]. found only 20% of study participants believed on vaccination. Practice of social distancing in this study was found to be 92% where as 95.05% considered by Ayushi Rastogi et al [16].

V. CONCLUSIONS:

The study found that majority of Health care workers having good knowledge , positive attitude, and good practice .Further study have to be initiated to find out factors associated with the knowledge gap between the participants.

Limitations:

The study had been conducted only a smaller portion of an area. The findings can not be generalised at all.

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