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Knowledge, attitude, and practices associated with covid-19 among undergraduate NCC cadets of Tripura, india

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ABSTRACT

COVID-19 is a pandemic that has taken over the entire world and its Knowledge Attitude and Practices (KAP) is important for NCC cadets in order to be well-versed future social workers. This work is carried out to evaluate the adequacy of knowledge of NCC cadets to deal with the ongoing pandemic and their attitudes and practices or roles towards the prevention and control of the pandemic. National Cadet Corps has offered its volunteer cadets for national duty to fight COVID-19. The Exercise has been code named 'Ex NCC Yogdan' and guidelines for temporary employment of the cadets has already been issued as per the direction of Ministry of Defence. A KAP study was conducted in the Undergraduate NCC cadets of Tripura. A questionnaire was sent via Google forms through social media platforms to the participants. Statistical analysis was done by ANOVA, student t-test. The mean \pm SD scores attained for knowledge, attitude and practices were 7.47 ± 1.23 , 16.80 ± 2.50 . The scores attained by different age groups, semesters and genders were comparable. The knowledge of the students in regard of main symptoms (99.8%), mode of spread (92.83%), time taken for the manifestation of the disease (98.15%) and precautions to prevent the spread of the virus (99.02%) is satisfactory. 88% of the students are confident about being able to take care of symptoms. 82% students are positive about working as frontline workers. Positive attitude and practices are seen in NCC cadets of Tripura, the knowledge is adequate and they can be a vital asset to spreading awareness about COVID-19.

Keywords: Attitude, COVID-19, Knowledge, NCC Cadets

1. INTRODUCTION

Corona Virus disease-19 (COVID-19) is a respiratory illness which has given rise to a worldwide ongoing pandemic and its causative agent is a single stranded RNA virus known as SARS-CoV2 (Severe Acute Respiratory Syndrome Corona Virus-2). It is spread in the community through respiratory droplets from one person to another. The common symptoms include fever, cough, fatigue, shortness of breath, and loss of smell and taste. It was first identified in Wuhan, China in December, 2019 and has since spread throughout the world. The WHO declared it as a pandemic on 11 March 2020 (WHO, 2020).

Starting on 24th March, 2020, a 21-day lockdown was imposed that limited the movement of a population of a billion people in order to decrease the spread of the disease while the number of cases was approximately 500. The lockdown consisted of measures such as: Banning people from stepping out of their homes unless for essential services; closure of services barring essentials like hospitals, pharmacies, Grocery stores, etc.; Closure of places of worship, suspension of educational institutions such as schools, colleges and research institutions; Closure of Private and commercial establishments (only work from home allowed). The lockdown was further extended in 3 more phases extending till 31st May, 2020 after which a phased manner of resumption of the above activities was started from 8th June, 2020 and termed as "Unlock 1.0", while in containment areas, the lockdown continued. With various services being allowed to resume, there is a need for the safety measures, such as use of face shields, masks, good hand hygiene, social distancing to be followed in order to prevent spread of the virus. According to a study by ICMR, the adherence to social distancing measures would reduce the incidence of new cases by 62% and thus cause the flattening of the epidemic curve and thus spread cases over a longer duration than in the case with no adherence to this practices (Zhong et al. 2020).

As this disease is still at a stage where it is being studied, there are a lot of myths related to its spread and many facts are being changed with new discoveries. The opening of many establishments has led to a steady rise in the daily number of cases. With this, National Cadet Corps has offered its volunteer cadets for national duty to fight COVID-19. The Exercise has been code

named ‘Ex NCC Yogdan’ and guidelines for temporary employment of the cadets has already been issued. The Ministry of Defence on 2nd April,2020 said, “National Cadet Corps (NCC) has offered a helping hand to civilian authorities in the country’s fight against COVID-19 by extending the services of cadets under ‘Exercise NCC Yogdan.’” and added, “It has issued guidelines for temporary employment of its cadets to augment relief efforts and functioning of various agencies involved in battling the pandemic.” Only Senior Division volunteer cadets above 18 years of age will be employed. They should be employed in small cohesive groups of eight to 20 under the supervision of Permanent Instructor Staff or/and an Associate NCC Officer.

The tasks envisaged for NCC cadets include, manning of helpline/call centres; distribution of relief materials/medicines/ food/essential commodities; community assistance; data management and queue & traffic management. According to the guidelines, cadets should not be employed in handling of law and order situation or for active military duties or at hot spot s Express News Service (2020). Thus this study evaluates the knowledge of NCC senior division cadets to deal with the ongoing pandemic in case of an all hands on deck condition arises requiring NCC cadets to step up for dealing with the pandemic. The study assesses the attitude of the NCC cadets, as they have been forced to stay at home as colleges has been on a standstill since the lockdown started and the only means of education has been through online platforms with no prior experience in handling such situations and the lack of practices regarding the adherence to social distancing protocols required to limit the spread of the virus.

2. METHODS

The cross sectional study was done between 1st and 20th February, 2021. The study population consists of NCC cadets of 1st, 3rd and 5th semesters. The selection criterion for the sample was only the inclusion of NCC cadets of the three semesters of different degree colleges across Tripura. A questionnaire based survey was conducted. Since it was not feasible to do a sampling survey in person due to the lack of time as well as maintaining social distancing was essential, still there are some active cases were reported in our state an online survey was done. The questionnaire was self designed along with some help from published literature.(Roy et al. 2020; CDC 2020) “Google Forms”, an online platform that allows users to make and conduct surveys, was used for the responses to be submitted. The link to the questionnaire based survey was sent to the participants through online social networking platforms such as “Whatsapp”.

The questionnaire consisted of three parts. The first part was the demographics part which included the variables: Name, age, gender, college and semester of the NCC cadets. The second part included the knowledge assessment which consisted of 10 questions in form of multiple choices with three options with one correct answer among them that followed 2020 WHO guidelines regarding COVID-19 and/or CDC guidelines for COVID-19 (WHO 2020; Maheshwari et al. 2020). The third part included the attitude and practices assessment which consisted of 10 questions in form of multiple choices with three options which signified positive, neutral and negative attitudes. The Knowledge part, consisting of 10 questions was calculated on the basis of 1 score on correct answer and 0 for incorrect answer. The Attitude and Practices part consisting of 10 questions was calculated on basis of 2 score on positive response, 1 score for neutral response and 0 score for negative response. This gave a total Knowledge score of 10, Attitude and Practices score of 20, and thus a total score of 30. The data was analyzed using SPSS version 23.0. The sample was compiled in form of Mean and standard deviations and the categorical data were converted to frequencies and percentages. The analysis was done by ANOVA for the semester wise comparison while t-test was used for the comparison between gender. The statistical significance was set at p<0.05.

3. RESULTS

The total number of participants in the survey was 206. Out of these, 79 (38.35%) were females while 127 (61.65%) were males (Table 1). The semester wise distribution is as follows: Semester-I (1st year) – 111 (53.88%), Semester-III (2nd year) – 48 (23.30%), Semester-V (3rd year) – (22.82%).

Table 1: Demographic representation of the survey

SEMESTER	GENDER			
	MALE		FEMALE	
	N	%	N	%
1 st Semester	71	63.96	40	36.04
3 rd Semester	30	62.50	18	37.50
5 th Semester	26	55.32	21	44.68
TOTAL	127	61.65	79	38.35

Knowledge

The result of the knowledge survey has shown that the knowledge of the students in regard of main symptoms (98.8%), mode of spread (92.53%), Time taken for the manifestation of the disease (97.35%) and precautions to prevent the spread of the virus (99.02%) is satisfactory, however, some information that wouldn’t be considered general, such as the whether the vaccine can able to totally resists further infection (11%) and how new variants / types would affect the individuals (23%), whether a COVID-19 positive mother should breastfeed her new born (23%) hasn’t been upto the mark.

Attitude and practices

A high percentage of students have shown a positive response in terms of attitude as well as practices. 86% have said that even though they are worried, they are confident of protecting themselves by applying preventive health measures. 69% are positive that even though the situation is not fully under control, they believe there will be better times in the future. It has been observed

that only 45% of the students are able to study diligently while 41% and 14% students have said that they try to study as and when possible, and haven't studied much during the lockdown, respectively. About 82% students are positive about working as frontline workers if required and 18% NCC cadets had already performed the duties being a part of 'Ex NCC Yogdan'.

Since the main preventive measures include maintaining social distance and wearing mask, 94% always wear mask and maintain social distancing while 6% have mentioned that they follow these measures most of the times. 96% of the students are confident about how the symptoms are to be managed if they develop the same, 3% say that they would pay no attention to the symptoms while 1% feel that they wouldn't know what to do. 94% of the NCC cadets would try to get back to normal life once the situation is under control while still following preventive measures while 6% are worried about how the regular life is going to work out.

Analysis of KAP scores with respect to demographics

Table 2 describes the comparison between male and female gender of the Knowledge, Attitude and Practices scores. The knowledge, the attitude and practices scores of males seem to be slightly higher than females. However, the p value is not <0.05, thus no significant difference was found in terms of genders.

Table 2: Comparison of knowledge, attitude and practices scores between male and female gender

	Male (N=127)		Female (N=79)		p-value
	Mean	SD	Mean	SD	
Knowledge Score	7.56	1.16	7.35	1.32	0.248
Attitude and Practice Score	16.59	2.93	16.25	2.70	0.411
Total Score (Out of 30)	24.15	4.09	23.6	4.02	0.594

Table 3: Comparison of knowledge, attitude and practices scores between NCC cadets of different semesters

	SEMESTER	N	Mean	SD	p-value*
Knowledge Score	1 st	111	7.59	1.20	0.106
	3 rd	48	7.54	1.35	
	5 th	47	7.13	1.08	
	TOTAL	206	7.47	1.23	
Attitude and Practices Score	1 st	111	16.90	2.91	0.815
	3 rd	48	16.73	2.02	
	5 th	47	16.64	1.80	
	TOTAL	206	16.80	2.50	
Total Score	1 st	111	24.49	4.11	0.342
	3 rd	48	24.27	3.37	
	5 th	47	23.77	2.88	
	TOTAL	206	24.27	2.81	

*ANOVA test

Analysis of KAP scores with respect to Semester

Table 3 describes the comparison between the 1st, 3rd and 5th semester NCC cadets in terms of the knowledge, attitude and practices scores. The Knowledge scores are higher for 1st semester cadets as compared to 3rd and 5th semester NCC cadets might simply be because of the greater exposure to media including television, WhatsApp and Facebook etc. The differences are not statistically significant since the p value is not <0.05. Likewise it seems that the attitude and practices are comparable across various semesters due to the social awareness about the disease.

Table 4: Knowledge, attitude and practices scores for the study

	N	MEAN	SD
Knowledge Score	206	7.48	1.23
Attitude and Practices Score	206	16.46	2.85
Total Score	206	23.94	4.08

4. DISCUSSION

In the study, the knowledge, attitude and practices of the NCC cadets of General Degree colleges of Tripura were assessed towards COVID-19. Table 4 shows that mean Knowledge score was 7.48 out of 10 and the mean attitude and practices score was 16.46 out of 20, showing that the knowledge, attitude and practices of NCC cadets although appreciable, can still be improved. There was no significant difference in the scores when compared between the genders which in a similar study but not with NCC cadets but done in students of Doon Medical College, Dehradun showed that the practice scores were affected by gender (Agarwal et al. 2020).

Another study done on medical students of Lucknow, showed that nearly 70% students were reluctant to attend clinics from fear of getting infected or passing on to others, while in our study, 82% students are positive about working as frontline workers, if

required (Zhou et al. 2020). The difference in result may possibly be attributed to the fact that the study was conducted earlier as compared to ours while the virus was still new and not much was known about it, leading to greater fear about it in the minds of the survey participants.

A comparison made with a study conducted in Hubei, China shows that nearly all of the participants (98.0%) wore masks when going out in recent days while in our study, 94% mentioned that they always wore mask and maintained social distancing while 6% have mentioned that they followed these measures most of the times, but not always (Maharshi et al. 2020). The difference is marginal this may be credited to the fact that at present the NCC cadets were very much aware about the mode of infection, precautionary measures etc. Similarly, the participants in Hubei, China also showed better consciousness being one of the earliest places affected has dealt with the pandemic for a longer period of time and more people have been directly affected by it.

Exclusive Breast feeding is recommended by WHO for mothers who are suspected or confirmed cases of COVID-19 (Maharshi et al. 2020). In our study, only 23% of the participants had replied in affirmative of this fact. In a study done on general public of India, the percentage of people who had this knowledge was 15% (Maharshi et al. 2020). A reason for this disparity is probably because of the scientific knowledge of college students obviously being higher than that of general public.

Limitations include the sample size being limited to NCC cadets of Tripura. Another limitation maybe due to report bias as the survey was filled individually, thus the participant may inaccurately produce information.

5. CONCLUSION

In conclusion, Positive attitude and practices are seen in NCC cadets of Tripura and the knowledge is adequate. This study may be used as an indicator for increasing the KAP of NCC cadets as well as the general public through them since in order to contain this pandemic, the whole country needs to step up and follow preventive measures.

Although the government has been making a lot of efforts to spread awareness, special awareness programs and workshops can be introduced for NCC cadets and general degree students and thereafter, a chain of information can be started using them as an easy yet cost effective method of increasing the awareness in general population.

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