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Knowledge, attitude and practice toward COVID-19 among students after reopening of college: a cross-sectional analysis

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Abstract
Background: After schools, colleges and university campuses opened after 290days of restrictions and lockdown imposed in the wake of the COVID-19 pandemic in Kerala colleges opened from Jan 2021.its necessary to understand about the corona disease and it's also essential for controlling the spread of disease knowing students' knowledge, attitude, and practices (KAP) towards COVID-19.
Materials and Methods: It's a cross-section study done on students after reopening of colleges and online Google questions regarding the KAP of the population about COVID-19 was asked, and participants' demographic characteristics and source of information regarding COVID-19 were recorded and analysed.
Results: We studied 1000 students after college reopening, majority are in age group 20-23yrs, 85% as adequate knowledge, 64 had positive attitude and 80% are with safety practices.
95.4% student's knows the spread, signs and symptoms, risk factors, co-morbidity of disease,
That have slight negative attitude as more than half 51% as history of group gathering after college reopens 70% Good practices of COVID protective measures 98.7% using N95 mask.
Conclusions: Majority of students as good knowledge, positive attitude, and good practice. Suggested for online theory classes and small group practical classes, hostel restriction's for better health of students in college.

Keywords: Attitude**,** COVID-19, knowledge, practice, college students

Introduction
At the end of 2019 world faces a new challenge to overcome the new viral disease, The novel Coronavirus officially called as COVID-19, it is 1st identified in the city of Wuhan in China [1]. Later its spreads to all the nations' world-wide including india, World health organisation on 12th March 2020 decleared it as an global pandemic [2].
COVID-19 is a coronavirus family similler to SARS faced in Asia and MERS in Middle Eastcountry. Its gaining infectivity speed with each mutation as incubation of 2 weeks [3], and mortality range up to 7weeks [4]. India as 2nd largest population in Asia and faces high no of case in each waves of attack measures are to be taken to spread of the infection.
The most common symptoms of COVID-19 are

- Fever
- Dry cough
- Fatigue

Others less common includes

- Loss of taste or smell,
- Nasal congestion,
- Conjunctivitis (also known as red eyes)
- Sore throat,
- Headache,
- Muscle or joint pain,
- Different types of skin rash,
- Nausea or vomiting,

- Diarrhoea,
- Chills or dizziness.

People aged 60 years and over, and those with underlying medical problems like high blood pressure, heart and lung problems, diabetes, obesity or cancer, are at higher risk of developing serious illness.

COVID-19 is spread by dust particles and fomites while close unsafe touch between the infector and the infected individual. Airborne distribution has not been recorded for COVID-19 till today there is no treatment to come back infection only 2 vaccines available in India are Covishield and Covaxin. spread of infection as to be prevented by simple measures Stay safe by taking some simple precautions, such as physical distancing, wearing a mask, especially when distancing cannot be maintained, keeping rooms well ventilated, avoiding crowds and close contact, regularly cleaning your hands, and coughing into a bent elbow or tissue [5, 6].

After schools, colleges and university campuses opened after 290days of restrictions and lockdown imposed in the wake of the COVID-19 pandemic in Kerala colleges opened from Jan 2021.its necessary to understand about the corona disease.

Certain behavioural and life style changes by authorities and educating people regarding the knowledge, attitudes, and practices (KAP) toward COVID-19 plays important role [7].

Aims and objectives

The objective of the study is to assess the knowledge, attitudes and practices toward COVID-19 among students after reopening of college.

Material and Methods

This is a cross-sectional survey was conducted from 01st Jan to march 2021,during unlock phase of the nation data collected through online Google questionnaire, ethics committee approval was not taken as it's an basic KAP study after consent socio-demographic and KAP questions allow to answer, KAP developed as guidelines given by WHO And data are tabulate and analysis done by using (SPSS) version 24.0 on frequencies, mean, median, percentages, standard deviation and Chi-square test are used to get results.

The inclusion criteria

- Age group more than 20 years
- filled all the questions
- Residents of India

Exclusion criteria

- Not willing to participate
- Incomplete answering

Results

We studied a group of 1000 students after the college reopen among them large number of study students in 20 - 23yrs, more of females(550), more are less equal number in each religion, 61.2%are from rural area, living in joint family(54.3%) and 61% are unmarried.

Coming to study proper of knowledge of COVID-19, 95.4% student's know that its mainly infect from the infected person, they know main symptoms and signs like fever (92.4%), dry cough (96.6%), breathlessness (85.7%) even after this 1.3%of students don't know symptoms. 60.30% of students aware that it will spread from both persons who is having signs and symptoms and without any symptoms, about severity of disease 70.10% infection is not dangers for life in all infected person and 85.60% of students know the comorbid conditions whom infection is dangers including pregnancy (72.10%),92.9% knows India is one of the country to produce COVID 19 vaccine in 2types n its effective to COVID19 infection prevention, certain measures like hand washing (82.4%) with soap, mask and avoiding crowed area will prevent disease,91.10% will go with quarantine and isolation can prevent spread, maintain 2 feet distance away can prevent spread, But eating non veg can spread only go with 8.80% and eating habits of vitamin-c rich food will boost the immune response (42.1%) habits like alcohol consumption prevents infection in 68.9% lastly from pet animals 72.5%tells it won't spread from it.

Our study group attitude towards COVID-19 shown in table 3, more than half (51%) of the people are involved in closed gathering like birthday party, functions after relaxing lockdown, not have any hope that we can prevent infection effectively in India, our students are opposing of lockdown (70%) to prevent spread of infection.

Table 4 will give their practices in COVID era, maximum number of students are all following the protective measures even after unlock of lockdown and opening colleges like wearing N95mask, frequent hand washing, avoiding unnecessary visiting public places.48.7% only agrees with govt ideas of medicine stocking. Experiencing happy family time and bounding with family members in lockdown (85.4%). 44.7% of students are changing mask every day.

Table 1: Demographic data of the college students groups

Age group (years)	Number (%)
20-23	654(65.4)
24-26	188(18.8)
27-30	93(9.3)
31-33	54(5.4)
≥34	11(1.1)
Gender	
Male	450(45)
Female	550(55)
Religion	
Hinduism	34(134.1)
Christianity	324(32.4)
Muslim	301(30.1)
Others	34((3.4)
Marital status	
Unmarried	610(61)
Married	390(39)
Type of family	
Nuclear	457(45.7)
Joint	543(54.3)
place of residence	
Urban	388(38.8)
Rural	612(61.2)

Table 2: COVID-19 disease: Knowledge among college students.

	Knowledge	**No.**	**%**	
K1	How does infection spread?			
	Close Contact with diseased person	954	95.4	
	Sneezing	662	66.2	
	Coughing	789	78.9	
	Sharing things	685	68.5	
	Through food	45	4.5	
	Don't know	11	1.1	
K2	COVID-19 features			
	Breathlessness	857	85.7	
	Fever	924	92.4	
	Dry Cough	966	96.6	
	Throat pain	442	44.2	
	Watery discharge form nose	662	66.2	
	Generalized weakness	423	42.3	
	Muscle pain	748	74.8	
	Don't know	13	1.3	
		Yes	No	Don't know
		No. (%)	No. (%)	No. (%)
K3	All infected persons will spread irrespective of its symptoms	603 60.30%	300 30.00%	97 9.70%
K4	COVID-19 infected persons life is danger	287 28.70%	701 70.10%	12 1.20%
K5	Disease is danger in comorbid conditions like high blood pressure, diabeties, asthma, cancer patient	856 85.60%	140 14.00%	4 0.40%
K6	Pregnant patients are come in danger category	721 72.10%	125 12.50%	154 15.40%
K7	COVID -19 vaccines and availability, production and effective ness of Indian vaccines.	12 1.20%	929 92.90%	59 5.90%
K8	Protective measures – hand washing with soap, face mask.	824 82.40%	124 12.40%	52 5.20%
K9	Contact tracing and quarantining them is important to prevent spread?	911 91.10%	78 7.80%	11 1.10%
K10	Maintaining 2 feet distance will prevent spread of infection	945 94.50%	52 5.20%	3 0.30%
K11	Infection spread with non-veg food	88 8.80%	589 58.90%	323 32.30%
K12	Eating food rich in vitamin-c increases immunity?	421 42.10%	384 38.40%	195 19.50%
K13	Habit of alcohol drinking are safe from infection	689 68.90%	121 12.10%	190 19.00%
K14	Pet animals spread infection	78 7.80%	725 72.50%	197 19.70%

Table 3: COVID-19: disease Attitude among college students.

	Attitude	**Yes**	**No**
		No. (%)	**No. (%)**
A1	Any recent events of Group gathering like birthday party, marriage, religious functions, market, malls	489 49%	511 51%
A2	India can able to control infection of COVID-19 and its morbidity.	300 30%	700 70%
A3	Complete lockdown in country will prevent people contact and spread of infection	296 30%	704 70%

Table 4: COVID-19 disease: Practices among college students.

	Practices	**No.**	**%**
P1	What kind of preventive measures you take while leaving home?		
	Wear N95 mask	987	98.7%
	Distancing of 2 feet from each other	420	42%
	Frequent washing hands with soap	489	48.9%
	Avoid Greeting by touching	985	98.5%
	Avoid visiting public place	789	78.9%
	Self-quarantine on contacts with infected person	457	45.7%
	None	10	1%
		Yes No. (%)	No. No(%)
P2	Do you go with govt rules of medicines stocking	487	513

		48.7%	51.%
P3	Lockdown gave time to spend with family and bounding	854 85.4%	146 14%
P4	Changing of mask everyday	447 44.7%	553 55.3%

Discussions

Corona vires after invading the human race at end of 2019 causing economy variations of countries like India [8] in India now 2nd wave as rampant and in phase of community transmission. We are aim to mental preparedness to the reopened college students regarding KAP of COVID-19.

We found that 85% had adequate knowledge lesser than zhong *et al*. in china study (90%) [9] And higher than study by clementa *et al*. (80%) [10].

Majority of students as good information of spread through contact with diseased person (95.4%) which is similar to other studies done on public early days by azlan [11] students aware of signs and symptoms of COVID-19 same findings in azlanand tomar studies [11, 12].

Students know the spread of disease in persons without symptoms they know that lives of all infected persons are not in dander only those with comorbid conditions are high risk of dander. Severity will be reduced in vaccinated patient they also know types of vaccine's available in India

Well aware of preventive measures like hand washing with soap, N95mask, 2feet distancing, contact tracing and quarantining.

Some misunderstandings about non-veg food consumptions spread from pets and alcohol drinking prevents spread.

In 2nd wave after reopen students lost hopes of winning in India as so many mutations are present in cases 70% of people have negative attitude in winning.

Students in unlock of lockdown have several incident of attaining group gathering 51%. Also as positive hope that complete lockdown prevents spreed.in tomar study 96% [12].

Even though more negative attitude in students but more than 90% using good measures to prevent COVID-19, 98.7% using N95 mask, avoid greeting by touch, 78%avoiding public place. In study of rios were masks when going out 74.31% only which is lesser than our study [13].

Conclusion

Study students after reopening as adequate information of COVID-19 KAP but due to prolong and restriction students thinking future and life they are having little negative attitude but good safe practice.

Government or college principle should have rules n restriction to the students while running colleges, studies showed that in reopening colleges difficult to have safe practices. Suggested for online theory classes and small group practical classes, hostel restriction's for better health of students in college.

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