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Original Research Article

Evaluation survey of knowledge, attitude, belief and practices amongst nursing and paramedical students about appropriateness and challenges related to COVID-19 surcease measures

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ABSTRACT

Background: COVID-19 pandemic is harassing human beings for about 2 years from now. We are constantly designing and devising remedial modalities to get over it. A massive vaccination campaign is going on all over the world to achieve desired level of herd immunity. Still the key is preventive strategies including COVID-19 appropriate behaviour at the individual level.
Methods: A cross sectional study was undertaken amongst paramedical students of a university campus to capture their understanding about different aspects of this pandemic by an 18 items based questionnaire.
Results: More than 80% of study participants answered correctly about the asked question except aspects related to COVID-19 in children and about spread of infection via asymptomatic cases.
Conclusions: Governments of various states should start multiple educational programs at grass root level to bring about a change. Behaviour change communication (BCC) and information, education, communication (IEC) strategies would be ideal to impart health education to meet the desired goals and objectives of bringing awareness amongst lay public.

Keywords: Bhopal, COVID-19, KAP study, Paramedical students

INTRODUCTION

In context of COVID-19 pandemic, if we look at the timeline of events, Wuhan Municipal Health Commission, China, reported a cluster of cases of pneumonia in Wuhan, Hubei Province. A novel coronavirus was eventually identified (31 December 2019).

WHO had set up the IMST (incident management support team) across the three levels of the organization: headquarters, regional headquarters and country level, putting the organization on an emergency footing for dealing with the outbreak (1st January 2020).

WHO issued a comprehensive package of technical guidance online with advice to all countries on how to detect, test and manage potential cases, based on what was known about the virus at the time. This guidance was shared with WHO's regional emergency directors to share with WHO representatives in countries.

Based on experience with SARS and MERS and known modes of transmission of respiratory viruses, infection and prevention control guidance were published to protect health workers recommending droplet and contact precautions when caring for patients, and airborne precautions for aerosol generating procedures conducted by health workers (10 January 2020).

China publicly shared the genetic sequence of COVID-19 (12 January 2020).

Emergency committee of WHO reached consensus and advised the director-general that the outbreak constituted a Public Health Emergency of International Concern (PHEIC). The director-general accepted the recommendation and declared the novel coronavirus outbreak (2019-nCoV) a PHEIC. This is the 6th time WHO has declared a PHEIC since the International Health Regulations (IHR) came into force in 2005 (30 January 2020).

WHO releases the international community's strategic preparedness and response plan to help protect states with weaker health systems (3 February 2020).

Deeply concerned both by the alarming levels of spread and severity, and by the alarming levels of inaction, WHO made the assessment that COVID-19 can be characterized as a pandemic (11 March 2020).

WHO and partners launch the solidarity trial, an international clinical trial that aims to generate robust data from around the world to find the most effective treatments for COVID-19 (18 March 2020).[1]

Few glimpse of this time line is indicating that how swiftly this pandemic propagated across the boundaries of continents. After that we have seen many types of treatments, vaccines, indigenous therapies, new waves with new strains etc.

Standard operating procedures for response and surveillance of the new SARS CoV-2 variant were developed time to time. Psychosocial and mental health issues were addressed. Lockdown to knockdown health tips were made available on media to help everyone to cope up with COVID-19 stress. In addition to all this, there are guidelines for international travel. Consolidated travel advisory is there. The advisory comes after the sero survey said that around 70 per cent of the Indians have been found with COVID-19 anti-bodies. The new guideline says that one should travel only if absolutely necessary. And only those who have got both doses of the COVID-19 vaccine should opt for travel if the situation demands it. This clearly shows that full vaccination is necessary to lessen the chances of any viral infection. Till date, India administered more COVID-19 vaccine doses than all G7 nations put together. [2]

Side by side infodemic generated a huge population of uncontrollable covidiots. Subsequently, lack of COVID-19 appropriate behaviour led to emergence of resistant and virulent strains.

Apart from many losses if we concentrate on real life aftermath, more than 1.5 million children in 21 countries, including 1,19,000 from India, lost their primary and secondary caregivers to COVID-19 during the first 14 months of the pandemic, according to a study published in The Lancet.

The Pew Research Center drills down to analyse the impact of the COVID-19 pandemic on India and China's middle class. Owing to India and China's large populations (one-third of global population), the changes in these two countries have an outsized impact on global numbers. World Bank's January 2020 forecast for India and China GDP growth was 5.8% and 5.9% respectively. In January 2021, these were revised to -9.6% for India and 2% for China.[3]

This year, India in third week of July recorded a huge jump in daily coronavirus caseload as well as COVID-19 fatalities with several states adding backlog numbers (before anticipated third wave).

This is a sharp jump of around 40 per cent. In terms of COVID-19 fatalities also, India registered the biggest spike seen this month with 3,998 corona deaths.[2] Government had left no stone unturned to contain it at the earliest. All possible measures were taken for the purpose this time. But lagging Indian economy and poor old policies made it a matter of considerable concern.

Even after setting so many guidelines and after facing so much trauma, Indian population is failing in maintaining Covid-19 appropriate behaviour. Although world's largest COVID-19 immunization drive is going on in India in full swing to attain herd immunity, still probability of falling titers of antibodies and emergence of new strains is defeating every hope. So as of now, it's a 'hopeless end to endless hope story' sort of thing.

In around 1500, the Dutch philosopher Desiderius Erasmus coined the phrase "prevention is better than cure". It was used to say that it is better and easier to stop a problem, illness etc., from happening than to stop or correct it after it has started. It is now a cardinal principle of modern health care and ingrained within health and social care strategies. It literally applies to COVID-19 as well. As this disease is preventable up to a major extent by strictly following 'COVID-19 appropriate behaviour', its awareness in different strata of communities should be assessed time to time by conducting multiple surveys/studies.

Community need assessment surveys (including KAP studies) are also required to know the actuality of situation and to develop a system for timely prevention.

Aims and objectives

This study was undertaken to measure the knowledge, attitude, practices (KAP) related to COVID-19 appropriate behaviour in paramedical students of a university of central India just before the anticipated third wave.

METHODS

Study design and setting

It was a cross sectional observational study conducted at paramedical colleges (nursing, physiotherapy and other paramedical colleges) of LNCT university campus of Bhopal city.

Study population

It comprises of paramedical students of LNCT university campus of Bhopal city. Survey respondents represented a random sample of the student populations of various colleges of our university.

Inclusion criteria

All online enrolled pre final and final year students of nursing, physiotherapy, pharmacy colleges who were able to access online link for the study and able to fill, submit it within time limit were included in the study.

Exclusion criteria

All junior batches, offline students, who were not able to access the Google form link and who were unable to submit within given time limit were excluded from the study.

Online tool

Well formatted Google form was used to capture information regarding this study. Questions were developed from pre tested and validated (already used) questionnaire found on authentic sites of internet.

Variables under study

Knowledge, attitude, practices related to covid appropriate behaviour were probed amongst students of paramedical sciences.

Statistical analysis

Frequency distribution of various chosen answers opted by students were analysed.

Ethical clearance

Certificate for conducting the study was obtained by the Institutional Ethical committee. Forms were filled anonymously.

RESULTS

Overall 346 students (males and females) participated in filling online Google forms anonymously. Some of them opted all the questions whereas some of them left few questions unanswered. Majority of students were in the age group of 18 to 23 years.

Table 1: Distribution of study population according to the knowledge assessment based questions.

Knowledge assessment	Total responses	Yes/no/ don't know
K1. COVID-19 main clinical symptoms are fever, fatigue, dry cough, and myalgia. Stuffy nose, runny nose and sneezing are less common.	346	273/73/4
K2. Currently there is no effective cure for COVID-19, but early start of symptomatic and supportive treatment can help to recover from the infection.	343	292/35/16
K3. Appropriate mask, physical distancing of at least 6 feet, frequent hand washing and steam inhalation are important preventive measures for COVID-19.	343	326/12/5
K4. Those who are elderly, have chronic illnesses, and are obese are more likely to be severe cases.	343	249/45/49
K5. Consuming and having contact with wild animals would result in the infection by the COVID-19 virus.	340	88/206/46
K6. Persons with COVID-19 but are asymptomatic cannot infect the virus to others.	341	108/193/40
K7. Spreads of COVID-19 virus occurs via respiratory droplets of infected individuals.	338	282/35/21
K8. Ordinary residents can wear general medical masks to prevent the infection by the COVID-19 virus.	343	286/44/13
K9. Children and young adults need not to take measures to prevent the infection by the COVID-19 virus.	343	136/193/14
K10. Prevention of COVID-19 could be done by avoiding going to crowded places such as train stations, malls, park, schools and avoid taking public transportations.	341	305/28/8
K11. Isolation and treatment of people who are infected with the COVID-19 virus are effective ways to reduce the community transmission of the virus.	338	286/20/32
K12. People who have contact with someone infected with the COVID-19 virus should be immediately isolated in a proper place. In general, the observation period is 14 days.	344	320/11/13

Table 2: Distribution of study population according to the attitude and practice assessment based questions.

Attitude and practice assessment	Total responses	Agree/disagree/neutral or yes/no
A1. Do you agree that COVID-19 will finally be successfully controlled?	346	193/118/35
A2. Do you have confidence that world can win the battle against the COVID-19 virus?	341	318/23
A3. Accept COVID-19 vaccine if generally available	346	262/33/51
A4. Accept COVID-19 vaccine if employer/authorities recommended it	345	265/27/53
P1. In recent days, have you gone to any crowded place?	344	96/248
P2. In recent days, have you worn a mask when leaving home?	345	284/61

Both of the above tables are clearly depicting the distribution of various choices opted by students regarding their knowledge, attitude and practice about COVID-19.

DISCUSSION

As per Yale medicine infectious disease expert- it can be really exhausting to be constantly vigilant and to take precautions, like wearing a mask and physically distancing, which may be physically and emotionally uncomfortable. But sustaining these types of behaviours is really key to curbing this pandemic. There's a need to increase awareness and change attitude in a specific direction.

Information/education/communication IEC programs have to be effectively designed, implemented and evaluated. This strategy helps people to learn to look at things in a new way by sharing ideas and information. Through this fact that are received by a human which have some form of worth to him. After that behavioural changes takes place in an individual as a result of experience which he has undergone. Efforts have to be focused on population based surveys. Survey studies will lead to emergence of principles which when taken together, define the state of the art in the required direction. These principles provide a framework of experience which can guide the development of comprehensive IEC programs. This method will definitely empower people to make decisions, change behaviour in a correct direction.

In a study conducted by Lee, it was concluded that one-third of participants did not know that infected individuals can be asymptomatic, which increases their risk of exposure to the disease. Further, about half of the participants thought that antibiotics may be an effective treatment and about 74% thought that a curative treatment exists, which may give them a false sense of security. Another alarming finding was that almost half of their participants held negative/uncertain attitudes regarding contacting Chinese people and more than one-third had similar attitudes towards doctors.[4]

In the study done by Masoud et al, analysis showed that 82% of respondents usually wear face masks in crowded places, but only 52% wear masks outdoors in general.[5]

Kumar et al in their study found that knowledge, attitude, and practice of health care workers (HCWs) regarding the use of surgical face masks were inadequate. They studied that HCWs had a positive attitude but moderate-to-poor level of knowledge and practice regarding the use of surgical face mask. HCWs and general public awareness campaigns regarding the proper use of face mask by utilizing all social media available resources would be helpful during this pandemic.[6]

Salman et al at Pakistani university found that students and employees have satisfactory knowledge and attitudes to COVID-19, however their preventive practices related to the disease are inadequate. Therefore, there is dire need of campaigns to improve preventive practices such as physical distancing, hand washing and respiratory etiquette. Health regulators can use multiple communication tools (e.g. social media platforms, TV, radio, phone texts, etc.) to educate and enforce these prevention practices.[7]

Erfanie et al concluded, that Iranian general population, demonstrated good knowledge, positive attitudes, and reasonable practice regarding COVID-19 during the outbreak. Furthermore, based on the significant positive association among knowledge, attitude, and practice in their study, health education programs, particularly targeting lower knowledge individuals regarding COVID-19, are essential for encouraging positive attitude and maintain safe practices. They hoped that by increasing knowledge via public health policy-makers, and the cooperation of the Iranian authorities and the general population, optimistic control and elimination of the disease will be possible.[8]

In comparison to above studies, our research work has also revealed more or less similar results.

31.6% in our study also didn't knew that infected individuals can be asymptomatic. About 39.6% thought

that children and young adults need not to take measures to prevent the infection by the COVID-19 virus. Otherwise for rest of the questions their awareness about knowledge, attitude and practice related to COVID-19 was found to be satisfactory. But being students of paramedical sciences, we expected their awareness to be more than satisfactory.

CONCLUSION

Through this study, it was revealed that still certain persons lack basic awareness about COVID-19. It is not a good sign because as per many mathematical models and predictions, 3rd wave is about to come and chunks of people are not aware even about the basic facts. This smaller chunk of persons could become potential source for propagation of epidemic hereafter.

Governments of various states and union territories should start multifaceted educational programs at grass root level to bring about a change. Behaviour change communication (BCC) and information, education, communication (IEC) strategies would be ideal to impart health education to meet the desired goals and objectives of bringing awareness amongst lay public, so that recognising the epidemiological opportunities, a new strategic plan could be developed. It's an appropriate approach which attempts to change or reinforce a set of behaviour in a target audience (especially illiterate and defaulters) regarding a specific problem in a predefined period of time.[9,10]

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