

A CROSS SECTIONAL OBSERVATIONAL STUDY OF AWARENESS OF COVID-19 INFECTION AND MENTAL HEALTH SCREENING AMONG MBBS STUDENTS

Dr.M.Shiva Kumar^{1*}, D.Sathish Kumar²

^{1*} Associate Professor, Department of Pharmacology, Fathima Institute of Medical Sciences, Kadapa.

² Pharmacovigilance Associate, Department of Pharmacology, Kurnool Medical College, Kurnool.

Corresponding Author: Dr.M.Shiva Kumar

¹ Associate Professor, Department of Pharmacology, Fathima Institute of Medical Sciences, Kadapa.

Abstract

Introduction: A large number of studies support that the conclusion that the novel corona virus (SARS-CoV-2) and its corresponding disease (COVID-19) have dramatically impacted people's mental health and behavior, with very few studies suggesting otherwise. Mental health hotlines in india experienced 1,000% increases during the month of April, when most people were under lockdown because of the pandemic.

Materials and Methods: This study was a cross-sectional, observational survey conducted on an online platform. A predesigned questionnaire with multiple choice answers were created using google forms. Each question had only one correct answer. There were 10 questions on awareness and one validated mental health screening scale in the Google form. The questionnaire in google form was sent to undergraduate medical students of all three years of Fathima Institute of Medical Sciences, Kadapa from January 2021 to March 2021. The first page of the google form explained the study and written consent form for participation in the study, followed by questionnaires. The link to the Google forms was sent to all three years medical students only through WhatsApp. The study was restricted only to Fathima Institute of Medical Sciences, undergraduate students. Once the students consented to the study, they were directed to answer the questions on awareness and the mental health screening scale and submit the completed forms. Participants, who took this survey voluntarily were good in English and received no payments for completing the survey.

Results: The survey link was sent to 456 students belonging to all three years of Fathima Institute of Medical Sciences, Kadapa. All were above 18 years of age. Out of 456 students 320 students responded to the survey. The participants were aged between 18 to 25 years. The male and female distribution was almost similar in the study. Almost 95.5 % of students lived with their family during the lockdown period (Table 1). The participants were residing in various parts of India during the lockdown period.

Conclusion: Currently in the peak of infection, our focus is on reducing transmission and preventing mortality. Managing psychological issue of people, especially healthcare workers is equally important during this pandemic. Enhanced awareness to disease and providing psychological support will allay COVID-19 fears among the people.

Key Words: Covid-19, mental health, behavior.

INTRODUCTION

A large number of studies support that the conclusion that the novel corona virus (SARS-CoV-2) and its corresponding disease (COVID-19) have dramatically impacted people's mental health and behavior, with very few studies suggesting otherwise. Mental health hotlines in india experienced 1,000% increases during the month of April, when most people were under lockdown because of the pandemic. Some medical facilities have seen more deaths from suicide, presumably because of exceedingly poor mental health, than from COVID-19 infections. Substance disorders in many people who were previously abstinent are expected to relapse during COVID-19, which will cause long-term economic and health impacts.¹

Although impacts are felt across populations and especially in socially-disadvantaged communities and individuals employed as essential workers-college students are among the most strongly affected by COVID-19 because of uncertainty regarding academic success, future careers, and social life during college, amongst other concerns.² Even before the pandemic, students across the globe experienced increasing levels of anxiety, depressive moods, lack of self-esteem, psychosomatic problems, substance abuse, and suicidality. Therefore, students may need additional resources and services to deal with the physical and mental health repercussions of the disease.³

University administrators could best serve students if they better understood the impacts of COVID-19 and the risk factors of its psychological impacts. These impacts are of critical importance to warrant immediate mental health interventions focused on prevention and treatment.⁴ Psychiatric and counseling services have historically been underutilized by college students. Understanding what subpopulations may suffer from unique combinations of psychological impacts may facilitate targeted interventions and successful treatment and coping strategies for individuals at greatest risk.⁵

The behavior of the general public or people, influenced by their knowledge and perception will play a vital role in containment and course of COVID-19 pandemic.⁶ There have been some published studies to evaluate the awareness and mental health status of general population and health care workers, but very few on students. Hence the present study aims to evaluate the

awareness of COVID-19 infection and screen the mental health status of medical students of a tertiary care teaching hospital during the lockdown period of COVID-19 pandemic.

MATERIALS AND METHODS

Study Design: A cross-sectional, observational survey.

Study Duration: January 2021 to March 2021.

Study location: The questionnaire in google form was sent to undergraduate medical students of all three years of Fathima Institute of Medical Sciences, Kadapa.

This study was a cross-sectional, observational survey conducted on an online platform. A predesigned questionnaire with multiple choice answers were created using google forms. Each question had only one correct answer. There were 10 questions on awareness and one validated mental health screening scale in the Google form. The questionnaire in google form was sent to undergraduate medical students of all three years of Fathima Institute of Medical Sciences, Kadapa from January 2021 to March 2021. The first page of the google form explained the study and written consent form for participation in the study, followed by questionnaires. The link to the Google forms was sent to all three years medical students only through WhatsApp. The study was restricted only Fathima Institute of Medical Sciences, Kadapa. Once the students consented to the study, they were directed to answer the questions on awareness and the mental health screening scale and submit the completed forms. Participants, who took this survey voluntarily were good in English and received no payments for completing the survey.

FCV-19S scale could help identify fear and anxiety attached to COVID-19 and help in addressing the issue. This scale had 7 items (questions) that were to be rated on a 5-point Likert scale ranging from strongly disagree to strongly agree. The maximum score possible for each item is 5, and the minimum score is 1. A total score is calculated by adding up each item score (ranging from 7 to 35). The collected data was entered in to Excel sheet. Strict confidentiality was maintained on all information, without revealing the identity of the participant in the study.

Statistical analysis: Descriptive statistics was used in the study to analyze the findings based on percentage of correct responses. Mean and standard deviation were used to estimate the proportion of correct responses.

RESULTS

The survey link was sent to 456 students belonging to all three years of medical students of Fathima Institute of Medical Sciences, Kadapa. All were above 18 years of age. Out of 456 students 320 students responded to the survey. The participants were aged between 18 to 25 years. The male and female distribution was almost similar in the study. Almost 95.5 % of

students lived with their family during the lockdown period (Table 1). The participants were residing in various parts of India during the lockdown period.

S.No	Age Group	Number	Percentage
1	18-20 years	157	49
2	21-22 years	151	47
3	23-25 years	12	4

Table 1: Age Distribution

S.No	Gender	Number	Percentage
1	Male	151	47
2	Female	169	53

Table 2: Gender Distribution

S.No	Questionnaires	Percentage of correct response (N=320)
1	What is corona virus?	98 (313)
2	What are the symptoms of COVID-19?	90 (288)
3	How does COVID-19 spread?	94 (300)
4	Can the virus that causes COVID-19 be transmitted through air?	28 (89)
5	Can COVID-19 be caught from a person who has no symptoms?	87 (278)
6	Who is at risk of developing severe illness?	48 (153)
7	Is there a vaccine, drug or treatment for COVID-19?	91 (291)
8	Is there anything I should not do?	84 (268)
9	What can I do to protect myself and prevent the spread of disease?	99 (316)
10	In any case, if you have fever, cough and difficulty breathing?	92 (294)

Table 3: Percentages of correct responses to questionnaires

The mean score was 8.15 ± 1.05 , with a median of 8. The overall awareness and knowledge of COVID-19 was satisfactory with 81.49% reporting correct answers. Out of all students, 10% were not clear about common symptoms of COVID-19 infection, 5% did not know how does COVID-19 spread, 12.6% did not know COVID-19 can be transmitted through asymptomatic cases and almost 10% thought there is a proven drug, vaccine or treatment to COVID-19 (Table 2). The most frequent questions with wrong answer were regarding transmission of virus through

air (71.45%) and 51% of participants were not clear on people at risk of developing severe illness. Almost 99% of the participants were aware of COVID-19 to be a viral infection known to cause respiratory infection and know how to protect self and prevent spread of disease.

S.No	Items on COVID-19 Scale	Strongly disagree (%)	Disagree (%)	Either agree nor disagree (%)	Agree (%)	Strongly agree (%)
1	I am most afraid of COVID-19.	32 (10%)	80 (25%)	74 (23%)	105 (33%)	29 (9%)
2	It makes me uncomfortable to think about COVID-19.	58 (18%)	121 (38%)	48 (15%)	80(25%)	12.8(4%)
3	My hands become clammy when I think about COVID-19.	108 (34%)	144 (45%)	48 (15%)	13(4%)	13(2%)
4	I am afraid of losing my life because of COVID-19.	90 (28%)	105 (33%)	64(20%)	51(16%)	10(3%)
5	When watching news and stories about COVID-19 on social media, I become nervous or anxious.	60 (19%)	90(28%)	54(17%)	102(32%)	12.8(4%)
6	I cannot sleep because I'm worrying about getting COVID-19	144 (45%)	134 (42%)	32 (10%)	6 (2%)	3 (1%)
7	My heart races or palpitates when I think about getting COVID-19.	118 (37%)	128 (40%)	41 (13%)	25 (8%)	6 (2%)

Table 4: Percentages of responses to various items on fear of coronavirus-19

The mean score of 320 participants was 16.32 ± 5.55 on fear of coronavirus-19 scale, the least score was 7 and maximum 35. As shown in table 4 almost 43% of the participants were most afraid of COVID-19 (agree and strongly agree), 34% of participants became nervous or anxious, watching news and stories about COVID-19 on social media (agree and strongly agree) and nearly 20% of participants (agree and strongly agree) were afraid of losing life because of COVID-19 indicating severe distress among them. Almost 37.9% of the participants had a mean score of 18 and above. Those with higher score have a greater fear of COVID-19.

DISCUSSION

One of the main findings from this study was around 12.6% of participants did not know COVID-19 could be transmitted from asymptomatic cases. Transmissions from asymptomatic cases play a main role in rapid spread of COVID-19 infection. In a study by Bhagavathula et al showed significant proportion of healthcare workers had poor knowledge of its transmission (61%) and symptom onset (63.6%). The overall awareness and knowledge of COVID-19 was satisfactory with 81.49 % reporting correct answers in our study. A similar study by Modi et al in-healthcare students found 71.2% reporting correct response indicating adequate awareness, medical students fared better than other subgroups as in our study.⁷

Lot of research, resources and manpower is currently being focused throughout the globe on finding the magic drug that could cure COVID-19 and vaccine to prevent infection. Many pharmaceutical giants are trying to reposition their drugs for COVID-19 infection and have started clinical trials on the same. Industries around the world are working on ventilators, sanitizers, masks, personal protection equipment, and software applications to trace primary & secondary contact to meet the challenges of this pandemic. One area that has received least attention is to take care of fear, stress, and anxiety of both the general public and healthcare workers. During a pandemic outbreak of a contagious infectious disease, people's psychological reaction plays a crucial role in spread of the disease. Identification, assessment and addressing fear and anxiety of COVID-19 infection are the crucial clog missing in the wheel.⁸

This study showed, almost 40% of the participants were most afraid of COVID-19. The mean fear of COVID-19 scale score in our study was 18 and above in 37.9% of participants. The higher score could correlate with depression, anxiety, fear of COVID-19 among these individuals. Similar studies in the past done on SARS epidemic in 2003 and H1N1 pandemic in 2009, found high levels of stress, worries, fear, stigma among health care workers.⁹

The need of the hour is how we address the fear and anxiety to COVID-19 both in general public and more importantly among the health care workers including medical students throughout the world. Psychological support and mental care of the people should be adequately supported during any pandemic as they play an important role in containment and spread of infectious disease. Psychological reactions to pandemics include maladaptive behaviors, emotional distress and defensive responses. High levels of stress and fear among the population adds to the problem, as the person will not be able to take care of self and his family. Increase number of cases, risk of being infected, fever a common symptom in any infection can be mistaken for COVID-19 infection, increasingly worried for their family at home, high mortality rates in some countries, long work hours in personal protection equipment, lack of ventilators, and deaths among health care workers to COVID-19 are some of the factors putting severe stress on already

stretched health care workers. The behavioral changes of stress are increase in alcohol or tobacco use, irritability and frequent arguing, outburst of anger, trouble in sleeping, crying frequently, worrying excessively, having difficulty in communication and inability to feel pleasure. Some of the emotional problems are being fearful, feeling depressed, feeling angry and overwhelmed by sadness.¹⁰

CONCLUSION

This study provides some insight in to the knowledge and awareness of COVID-19 infection and the associated fear among medical students. Till date there are very few large-scale studies to analyses the complete physiological impact of COVID-19 in all strata of population, especially health care workers. Currently, in the peak of infection, our focus is on reducing transmission and preventing mortality. Managing psychological issue of people, especially healthcare workers also begs for urgent attention. The government and policy makers should do all it can to tackle this hidden problem to effectively control the pandemic.

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