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EFFECTS OF LOCKDOWN ON PSYCHOLOGICAL HEALTH AND FOOD HABITS OF MEDICAL, DENTAL, PHYSIOTHERAPY AND NURSING COLLEGE STUDENTS OF GUJARAT

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INTRODUCTION

Currently, all of us are experiencing emotions, thoughts and situations we have never experienced before. It is not that there were no pandemics earlier. Pandemics, particularly plague outbreaks have been known since times immemorial. The Cholera pandemic followed by the flu pandemic were highlights of the nineteenth century. Another cholera epidemic and the "Spanish Flu", ravaged the world in the early part of the twentieth century. Subsequently, while there have been outbreaks of Asian flu, SARS, MERS, Ebola, etc, the pandemic of COVID-19 is on a completely different scale. It has shaken the entire world and created global panic. As COVID-19 initially creeps in and subsequently spreads at a galloping pace, it has been ravaging country after country.[1] The pandemic has significant and variable psychological impacts in each country, depending on the stage of the pandemic. In India, the first and foremost responses to the pandemic has been fear and a sense of clear and imminent danger. Fears have ranged from those based on facts to unfounded fears based on information/misinformation circulating in the media, particularly social media. At a time when change is the only constant (concerning advisories and precautions, as we move through different stages), then What to do? What not to do? Questions are near-universal and give rise to worry and fear. Each of us responds differently to the barrage of information from global and local sources. This can lead to those who are the "worried well", those who develop distressful psychological symptoms and maladaptive coping with stress, and those who develop a mental disorder. The fears of contracting the illness are also frequent and range from misinterpreting every fever or cough as a COVID-19 infection, wanting a test done for reassurance even though there are strict guidelines for testing, to hoarding medications despite that are not reqiured. There are also real worries of job losses and economic slowdown during and following the pandemic. The list is endless and leads to a cycle of concern, worry, and distress. On the other extreme are also completely unworried or uncaring, who feel they are invincible and do not need to follow any advisory or precaution. This attitude can also lead to an endangerment to self and others.[2]

Although isolation helps in achieving the goal of reducing infections, reduced access to family, friends, and other social support systems causes loneliness increasing mental issues like anxiety and depression. There is recognition that the significant psychological consequences emerging out of this catastrophe need to be addressed. First, the overlapping of psychological problems is very common.[3] For example, anxious people may also have depression and drink alcohol to reduce anxiety and depression. Second, most people presenting with psychological disturbances are 'normal people' who have been overwhelmed by an extraordinary stressor.

Third, a vast majority of people presenting with disaster-related psychological disturbances recover spontaneously over time or with brief psychological inputs. Therefore, these presentations do not necessarily always amount to a psychiatric diagnosis. However, descriptions of psychological disturbances in particular domains help frontline personnel communicate and ensure appropriate selection of intervention.[4]

Worries about caring for such patients, adequacy of protection, taking infections to their families, long working hours, inadequate access to food, liquids and rest, and separation from families can lead to severe psychological distress among health professionals. Even for professions working in the community, the fears of risk and perceived or actual community aggression are realities that can cause tremendous anxiety. During such stressful situations, the concerned government, hospitals, educational institutions, organizations, and even individuals need to look into psychological intervention and adopt necessary measures. In addition to educating individuals to stay isolated, it is vital to educate and

prepare them to face the mental health issues they may endure during the period.[5]

OBJECTIVE AND METHODOLOGY

The target population comprised undergraduates MBBS, BDS, Physiotherapy and Nursing college students of Gujarat. The respondents in the target population were sampled by cluster sampling. We assessed the mental health of these students during the COVID-19 outbreak by using structured questionnaires. The questionnaires were anonymous to ensure the confidentiality and reliability of data. Finally, 700 respondents that completed the questionnaires were included in the final analysis (100% response rate).[6]

Rating Instrument

The study instrument comprised a structured questionnaire packet that inquired demographic information, including gender, course of study, year of study. They were also inquired regarding any of the COVID-19 symptoms experienced by them, any long term condition or disability, their contact with confirmed or suspected COVID-19 patient/material, about their cognitions and preventive behaviors regarding COVID-19 and the availability of social support. Moreover, the participants responded to the 7-item Generalized Anxiety Disorder Scale (GAD-7).[7] The GAD-7 includes seven items based on seven core symptoms and inquires the frequency with which respondents suffered from these symptoms within the last two weeks and to a 9-item Patient Health Questionnaire (PHQ-9)i.e the Depression module. Respondents report their symptoms using a 4-item Likert rating scale ranging from 0 (not at all) to 3 (almost every day), such that the total score ranges from 0 to 21 for GAD-7 and for PHQ-9 it ranges from 0 to 27.GAD-7 as well as PHQ-9 are well-validated screening instruments and it has demonstrated excellent internal consistency.[8]

Data Analysis

Data were analyzed with SPSS Version 25.0.A significance value of $p<.05$ was used. An analysis of descriptive statistics was conducted to illustrate the demographic and other selected characteristics of the respondents. A univariate analysis (Nonparametric test) was used to explore the associations between demographic variables and their impact on anxiety and depression during the COVID- 19 Pandemic.[9] Statistically significant variables were screened and included in multivariate Chi square analyses. The estimates of the strengths of associations were demonstrated by the odds ratio (OR) with a 95% confidence interval (CI). Chi Square was used to evaluate the association between COVID-19-related stressors including experience of symptoms, any long term condition, their contact with patient/material(confirmed/suspected) with experience of their change in psychological health.[10]

RESULT

Among the sample of 710 college students, 10 of them didn't gave consent so their response was not taken into consideration. Of 700 students 419(59.85%) male and 281(40.15%) female students participated. 596(85.4%) were MBBS students, 57(8.14%) were BDS students, 34(4.85%) were Physiotherapy students and 13(1.85%) were BSc nursing students. 67(9.57%) were 1st year students, 110(15.71%) were 2nd year students, 113(16.14%) were 3rd year students and 410(58.57%) were final year students

Levels of Depression and Anxiety amongst college students during Pandemic Table 1 shows how the mental health of college students was affected to varying degrees during the outbreak. The proportion of students with mild, moderate, moderately severe and severe depression were 50.8%(356), 20.7%(145), 3.3%(23) and 1.4%(10) respectively. 23.7%(166) students were regarded normal as per PHQ-9 scale.

The proportion of students with mild, moderate and severe anxiety were 34.6%(242), 4.6%(32) and 1.6%(11) respectively. 59.2%(415) students were regarded normal as per GAD-7 scale.

PHQ-9						
Variable	**TOTAL**	**NORMAL (1-4)**	**MILD (5-9)**	**MODERATE (10-14)**	**MODERATELY SEVERE (15-19)**	**SEVERE (20-27)**
GENDER						
MALE	419 (59.8)	99 (23.6)	212 (50.6)	94 (22.4)	9 (2.1)	5 (1.2)
FEMALE	281 (40.2)	60 (21.4)	149 (53)	52 (18.5)	14 (5)	6 (2.1)
ANY SYMPTOM OF COVID-19						
PRESENT	278 (39.7)	28 (10.1)	151 (54.3)	80 (28.8)	14 (5)	5 (1.8)
ABSENT	422 (60.3)	138 (32.7)	206 (48.8)	64 (15.2)	9 (2.1)	5 (1.2)
LONG TERM CONDITION/DISEASE						
PRESENT	37 (5.3)	5 (13.5)	19 (51.4)	6 (16.2)	3 (8.1)	4 (10.8)
ABSENT	663 (94.7)	154 (23.2)	341 (51.4)	140 (21.1)	21 (3.2)	7 (1.1)
CLOSE CONTACT WITH COVID-19 PATIENT						
PRESENT	46 (6.6)	5 (10.9)	24 (52.2)	12 (26.1)	4 (8.7)	1 (2.2)
ABSENT	654 (93.4)	154 (23.5)	336 (51.4)	135 (20.6)	20 (3.1)	9 (1.4)

GAD-7					
Variable	**TOTAL**	**NORMAL (1-4)**	**MILD (5-9)**	**MODERATE (10-14)**	**SEVERE (>15)**
GENDER					
MALE	419 (59.8)	245 (40.2)	153 (36.5)	16 (3.8)	5 (1.2)
FEMALE	281 (40.2)	167 (59.4)	91 (32.4)	17 (6)	6 (2.1)
ANY SYMPTOM OF COVID-19					
PRESENT	278 (39.7)	131 (47.1)	122 (43.9)	19 (6.8)	6 (2.2)
ABSENT	422 (60.3)	285 (67.5)	119 (28.2)	13 (3.1)	5 (1.2)
LONG TERM CONDITION/DISEASE					
PRESENT	37 (5.3)	20 (54.1)	9 (24.3)	4 (10.8)	4 (10.8)
ABSENT	663 (94.7)	391 (59)	235 (35.4)	29 (4.4)	8 (1.2)
CLOSE CONTACT WITH COVID-19 PATIENT					
PRESENT	46 (6.6)	19 (41.3)	20 (43.5)	6 (13)	1 (2.2)
ABSENT	654 (93.4)	392 (59.9)	226 (34.6)	26 (4)	10 (1.5)

Factors influencing college students Depression and Anxiety during Pandemic

Univariate and Multivariate analysis

Analysing demographic factors and it's impact on psychological health, gender had no significant effect on depression as well as anxiety($p>0.05$)

Moreover, students 250(89.9%) experiencing symptoms of COVID-19 and 41(89.1%) students who came in contact with COVID-19 patient/material (confirmed/ suspected) were more likely to be depressed and were statistically associated ($p<0.05$) whereas 32(86.5%) students who had long term condition/disease were found depressed but a statistical association was not found($p>0.05$)

Moreover, students 147(52.9%) experiencing symptoms of COVID-19 and 27(58.7%) students who came in contact with COVID-19 patient/material(confirmed/ suspected) were more likely to be anxious and were statistically associated($p<0.05$) whereas 17(45.9%) students who had long term condition/disease were found anxious but a statistical association was not found($p>0.05$).

PHQ-9						
Variable	**TOTAL**	**NORMAL**	**DEPRESSED**	**CHI-VALUE**	**p**	**OR**
GENDER						
MALE	419 (59.8)	99 (23.6)	320 (76.4)	0.4961	0.481239	0.8776
FEMALE	281 (40.2)	60 (21.4)	221 (78.6)			
ANY SYMPTOM OF COVID-19						
PRESENT	278 (39.7)	28 (10.1)	250 (89.9)	47.4411	<.00001	4.3385
ABSENT	422 (60.3)	138 (32.7)	284 (67.3)			
LONG TERM CONDITION/DISEASE						
PRESENT	37 (5.3)	5 (13.5)	32 (86.5)	1.8838	0.1699	1.94
ABSENT	663 (94.7)	154 (23.2)	509 (76.8)			
CLOSE CONTACT WITH COVID-19 PATIENT						
PRESENT	46 (6.6)	5 (10.9)	41 (89.1)	3.9349	0.047295	2.5256
ABSENT	654 (93.4)	154 (23.5)	500 (76.5)			

GAD-7						
Variable	**TOTAL**	**NORMAL**	**ANXIOUS**	**CHI-VALUE**	**p**	**OR**
GENDER						
MALE	419 (59.8)	245 (58.5)	174 (58.5)	0.0638	0.800658	1.0404
FEMALE	281 (40.2)	167 (59.4)	114 (40.6)			
ANY SYMPTOM OF COVID-19						
PRESENT	278 (39.7)	131 (47.1)	147 (52.9)	28.9646	<.00001	2.3344
ABSENT	422 (60.3)	285 (67.5)	137 (32.5)			
LONG TERM CONDITION/DISEASE						
PRESENT	37 (5.3)	20 (54.1)	17 (45.9)	0.35	0.554118	1.2219

ABSENT	663 (94.7)	391 (59)	272 (41)			
CLOSE CONTACT WITH COVID-19 PATIENT						
PRESENT	46 (6.6)	19 (41.3)	27 (58.7)	6.1564	0.013094	2.1262
ABSENT	654 (93.4)	392 (59.9)	262 (40.1)			

While calculating odd's ratio it was found that students who have symptoms of COVID-19, long term condition/disease or have been in contact with COVID-19 patient/material are more likely to be depressed/ anxious. Moreover female had greater risk of getting depressed and male had greater risk of getting anxious. 126(18%) students were absolutely normal and didn't experience symptoms of depression or anxiety

CONCLUSION

Psychological issues following the pandemic are likely to be common amongst medical and paramedical college students. The number of factors that may increase the chances of depression includes the following certain medications, conflict, death or loss, genetics, financial status, problems like social isolation from friends, family or social group, serious illness and substance abuse. The above factors also lead to anxiety along with mental disorders like panic disorder, phobic disorder and stress disorder. It is suggested that the government and community should collaborate to resolve this problem in order to provide high-quality, timely crisis-oriented psychological services to students. Since majority of students obtain information regarding COVID-19 from social media, digital internet newspaper and government press releases, proper information and explaination should be conveyed using these platforms and unneccessary fear/worry should not be imparted upon them. It is of utmost importance that false information/rumours should not be spread.

GAD-7		
SCORE	**SYMPTOM SEVERITY**	**COMMENTS**
5 to 9	Mild	Monitor
10 to 14	Moderate	Possible Clinically Significant Condition
>15	Severe	Active Treatemt Probably Warranted

PHQ-9		
SCORE	**DEPRESSION SEVERITY**	**COMMENTS**
0 to 4	Minimal or None	Monitor; may not require treatmenr
5 to 9	Mild	Use clinical judgement (symptom duration, functional impairment) to determine necessity of treatment
10 to 14	Moderate	
15 to 19	Moderately Severe	Warrants active treatment with psychotherapy, medications or combination
20 to 27	Severe	

Since majority of students come under mild and moderate depressive and anxiety conditions proper monitoring of them is to be enhanced and the remaining students under severe psychological conditions raises an alarming risk for diagnosis and treatment of underlying condition.

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