



Assessment of Mental Health Status of College Going Students During COVID-19 Pandemic In The National Capital Region, India

Neha Jetli^{1*}, Deepika Agrawal², Anupama Singh³

^{1,2,3} Department of Community Medicine, Santosh Medical College, Santosh Deemed to be University, Ghaziabad, Uttar Pradesh

ABSTRACT

The World Health Organization (WHO) declared novel coronavirus outbreak in China as the sixth outbreak ever to be a Public Health Emergency of International Concern on 30 January 2020. Earlier pandemics have shown to increase mental health disorders. Studies show that one in three medical students has anxiety, making them more vulnerable than the general population. Therefore, an endeavour was undertaken to find the prevalence of anxiety and depression among them during the stressful times of COVID-19. A cross-sectional study was done on students studying in private medical colleges in Delhi-NCR. The sample size was calculated to be 357, taking prevalence of anxiety as 21.2% from a previous study with relative precision as 20%. A semi-structured questionnaire including Hamilton Anxiety Rating Scale (HAM-A) and Patient Health Questionnaire-9 (PHQ-9) was used to check the mental health status of the study participants. Data collected was analysed in SPSS ver.16 (trial). Out of the 359 study participants, 63.8% were females. Majority of the students were pursuing MBBS (67.4%). The average score of anxiety was 9.35 ± 9.26 with a prevalence of 46.5%. Almost 4/5th (81%) of the study participants were worried about their family and friends being infected with COVID-19. We found that 99 (27.6%) participants were suffering from depression. COVID-19 has increased anxiety and depression levels in undergraduate students pursuing medical studies. These negative mental health outcomes can last way beyond the pandemic therefore; proper screening, targeted interventions with standard guidelines for at risk population is need of the hour.

KEYWORDS: Anxiety, Covid-19, Depression, HAM-A, PHQ-9, Undergraduate students

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INTRODUCTION

The World Health Organization (WHO) declared novel coronavirus outbreak as a Public Health Emergency of International Concern on 30th January 2020. On 11th March 2020, the World Health Organization declared it as a pandemic. The first case of COVID-19 in India was reported on 30th January 2020. A nationwide lockdown was enforced from 24th March 2020 and most citizens were confined to their homes causing many psychosocial problems. The contribution of mental disorders to the total DALYs in India increased from 2.5% in 1990 to 4.7% in 2017 with anxiety disorders contributing to 19.0% of them. Studies show that students enrolled in healthcare courses are more vulnerable to developing anxiety and depression than the general population. COVID-19 lead to a negative psychological impact on vulnerable populations all over the world. The data concerning the prevalence of these mental health disorders among the students in India due to COVID-19 pandemic is still lacking.

Objectives- To find the prevalence of anxiety and depression among the students of professional colleges in National Capital Region of India during the COVID-19 Pandemic and to find the associated risk factors.

MATERIAL AND METHODS

Type of study: A Cross-sectional study.

Study population: College going/Undergraduate students pursuing medical studies in National Capital Region, India

Sample size estimation: The sample size was calculated to be 357, taking prevalence of mental health disorders as 21.2% from a previous study with relative precision as 20%. ($\alpha = 1.96$)

Materials: A semi-structured questionnaire including Hamilton Anxiety Rating Scale (HAM-A) and Patient Health Questionnaire-9 (PHQ-9) was used to check the mental health status of the study participants.

Approval from the Institutional Ethical Committee was taken prior to the study.

Collected data was compiled in MS Excel.

Regression analysis was applied on the data collected in SPSS ver.16 (trial)

RESULTS AND DISCUSSION

Out of total 359 study participants, 229 (63.8%) were females. Majority of the study participants 175 (48.7%) were of 19-21 years of age. Majority of the individuals 127 (35.4%), had a family income ranging between 50000-100000. Majority of the participants 242 (67.4%) were MBBS students. Maximum number of students 148 (41.3%) were in the 3rd year of their study. More than four-fifth, 291 (81.1%) of the students were living with their family (Table 1). We found that 167 (46.5%) participants were suffering from anxiety. With severity ranging from mild anxiety in 84 (23.4%) people, moderate anxiety in 51 (14.2%) individuals and severe anxiety in 32(8.9%) of study participants. We found that 99 (27.6%) participants were suffering from depression. With severity ranging from mild depression in 81 (22.6%) people, moderate depression in 14 (3.9%) individuals and severe depression in 4 (1.1%) of study participants. Females were twice at risk of developing anxiety than males [OR 2.26 (95% CI 1.45-3.54)]. Students pursuing BDS were three times more prone to developing anxiety than physiotherapy students [OR- 3.16 (95% CI 1.39-7.23)].

Study participants who were worried about their family and friends half of them, 148 (50.9%) were suffering from anxiety [OR-2.22 (95% CI 1.04-4.71)]. Two-third of the students, 33 (71.7%) regretting their choice of profession were suffering from anxiety [OR-3.10 (95% CI 1.53-6.28)]. Females were twice at risk of developing depression than males [OR 2.12 (95% CI 1.33-3.38)]. Study participants who quarantined during the pandemic almost half of them 25 (45.5%) were suffering from depression [OR-3.00 (95% CI 1.66-5.42)]. On similar lines, students who suffered loss of a family member or friend due to COVID-19 almost half of them 33 (48.5%) were suffering from depression [OR-3.43 (95% CI 1.90-5.80)].

Table 1: Socio-demographic characteristics of the study population.

Socio-demographic characteristics	Number (n=359)	Percentage (%)
Gender		
Male	130	36.2
Female	229	63.8
Age (in years)		
19- 21	175	48.7
22-24	157	43.8
25-27	20	5.6
More than 27	7	1.9
Family income per month (in INR)		
Less than 50000	74	20.6
50000 - 100000	127	35.4
100000 – 150000	23	6.4
150000 – 200000	38	10.6
200000 – 250000	14	3.9
More than 250000	83	23.1
Education		
MBBS	242	67.4
BDS	40	11.1
BPT	77	21.5
Year of Course		
1 st year	12	3.3
2 nd year	116	32.4
3 rd year	148	41.3
4 th year	35	9.7
Internship	48	13.3
Living with Family		
Yes	291	81.1
No	68	18.9

Table 2: Multinomial logistic regression analysis for factors associated with anxiety.

Variables under study		Anxiety		Total (100%)	p-value	aOR	95% CI
		Present (%)	None (%)				
Gender	Female	123 (53.7)	106 (46.3)	229	0.000	2.26	1.45 – 3.54
	Male	44 (33.8)	86 (66.2)	130		Reference	
Education	MBBS	103 (42.6)	139 (57.4)	242	0.656	0.89	0.53 – 1.49
	BDS	29 (72.5)	11 (27.5)	40	0.006	3.16	1.39 – 7.23
	BPT	35 (45.5)	42 (54.5)	77	Reference		
Worried about Family/ friends being infected with COVID-19	Yes	148 (50.9)	143 (49.1)	291	0.038	2.22	1.04 – 4.71
	No	19 (27.9)	49 (72.1)	68		Reference	
Have you regretted your current choice of profession?	Yes	33 (71.7)	13 (28.3)	46	0.002	3.10	1.53 – 6.28
	No	134 (42.8)	179 (57.2)	313		Reference	

Table 3: Multinomial logistic regression analysis for factors associated with depression.

Variables under study		Depression		Total (100%)	p-value	aOR	95% CI
		Present (%)	None (%)				
Gender	Female	62 (32.1)	131 (67.9)	229	0.001	2.12	1.33 – 3.38
	Male	37 (18.2)	166 (81.8)	130		Reference	
Quarantine during the COVID-19 pandemic	Yes	25 (45.5)	30 (54.5)	55	<0.001	3.00	1.66 – 5.42
	No	65 (21.4)	239 (78.3)	304		Reference	
Covid-19 death among your family/ friends	Yes	33 (48.5)	35 (51.5)	68	<0.001	3.43	1.90 – 5.80
	No	58 (20.1)	233 (79.9)	291		Reference	

CONCLUSION

COVID-19 has increased anxiety levels in undergraduate students pursuing courses in healthcare sector. The effect of lockdown and quarantine during the COVID-19 pandemic on depression was significant. These mental health issues can last even after the pandemic is controlled. Therefore, proper screening and targeted interventions with standard guidelines are highly recommended. As college going students especially pursuing medical studies are more vulnerable due to high stress levels, preventing and/or reducing the morbidity of mental health disorders is a necessity.

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