ASSESSMENT OF PSYCHOSOCIAL IMPACT OF MILD TO MODERATE COVID-19 DISEASE IN HOSPITALISED PATIENTS IN INDIA : A CROSS-SECTIONAL STUDY.

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ABSTRACT

Introduction: Covid-19 pandemic has had severe impact on mental health and well-being of people around the globe. The uncountable loss of life, disruption of face-to-face health services and the uncertainty that followed raised concerns over mental health of all people. The impact was much worse in hospitalised covid-19 individuals. Most of the studies done on Covid-19 and mental health were focused on general population and health care workers. In our clinical practise, we observed an increased level of anxiety, stress and depression among hospitalised covid-19 individuals. Hence, we aim to assess the prevalence of psychological distress in these patients and there by validate our observation.

Aims and Objectives: To assess the psychological impact of mild to moderate covid-19 disease in hospitalised patients.

Materials and methods: A cross-sectional study was conducted in mild to moderate Covid-19 patients admitted to the tertiary care centre. A total of 501 patients filled 2 questionnaires – Depression, Anxiety, and Stress Scale-21(DASS-21) and Psycho-Social Assessment scale (PSA), a self-structured questionnaire.

Results: In the depression subscale of DASS-21, 141(28.1%) had mild depression, 101(20.2%) had moderate depression, and 8 (1.6%) had severe depression. In the anxiety subscale, 105(20.9%) had mild anxiety, 198 (39.5%) had moderate anxiety, 35 (7.0%) had severe anxiety and 3 (0.6%) had extremely severe anxiety. In the stress subscale, 132(26.4 %) had mild stress, 161(32.1%) had moderate stress and 51 (10.2%) had severe stress. Patients above 30 years of age had moderate anxiety and stress, with stress being statistically significant among all age groups and gender. There were about 70% prevalence rate in all subgroups in PSA scale with anxiety being highest with 78%.

Conclusion: The present study is a frontrunner in exploring the spectrum of psychological distress in hospitalised individuals due to Covid-19 disease. The uncertainty that the pandemic has inflicted upon us and its associated social stigma and economic recession has led to widespread increase in stress, anxiety and depression on people, including youngsters. Government, policy-makers and treating physicians should continue to provide mental health evaluation as an essential health service in all covid-19 affected individuals for early risk stratification and prevention of any unfavourable outcome.

INTRODUCTION:

India has one of the highest rates of Covid-19 infection in the world which is about over 2.5 million confirmed cases.(1,2) The first case of Covid-19 in India was reported in Kerala on January 30,2020.(3) Since then, there have been multiple outbreaks and constant rise in the rate of spread of the infection globally. In response to the rapid spread of infection, various governments imposed a nationwide lockdown to prevent transmission of the infection which created a situation of socio-economic crisis and psychological distress across the countries, globally. This impact was much bigger in a developing and most populous country like India.

Because of the social distancing, isolation, economic recession and stigma associated with Covid-19, there were notable increase in levels of fear, anxiety, stress and depression among general population and even more in diseased individuals. The surge in number of cases witnessed an acute shortage of hospital beds, medical and oxygen supplies, including a steep rise in the treatment cost which added to the burden of existing economic crisis. These factors were significant in affecting the mental health of covid-19 affected individuals. Having this background, our study aimed to assess the emotional disturbances and psychosocial impact of COVID-19 in hospitalised mild to moderate covid-19 patients.

MATERIAL AND METHODS:

This was a single time, cross-sectional study conducted in patients admitted in the dedicated Covid-19 wing in a tertiary care centre. Case identification was done by either a RT-PCR or Rapid Antigen Test of nasopharyngeal swab of suspected Covid-19 patients. Only diagnosed Covid-19 patients above 18 years of age with mild to moderate illness were included in our study. According to Indian Council of Medical Research (ICMR) guidelines for Covid-19, mild disease is defined as 'upper respiratory tract infection and/or fever without shortness of breath or hypoxia' while moderate disease includes those with 'respiratory rate > 24 breaths/min and room air saturation between 90-93%'.(17) Individuals with severe disease were excluded since they were critically ill and required ventilator support. A total of 501 patients were enrolled in the study.

A laboratory confirmed case of COVID 19 is defined as a positive result by real time reverse transcriptase polymerase chain reaction (RT-PCR) assay of nasal and pharyngeal specimens. Nasal and pharyngeal swab samples are collected for extracting 2019-nCoV RNA from patients suspected of having 2019-nCoV infection and are placed into a collection tube containing virus transport medium (VTM) for extraction of total RNA. Optimum amount of cell lysates are transferred into a collection tube and are later centrifuged. The suspension is used for RT-PCR assay of 2019-nCoVRNA.

Data Collection included Patient's demographic information. These patients were subjected to structured questionnaires, the Depression, Anxiety and Stress Scale-21 (DASS − 21) and Psychosocial Assessment Scale (PSA). If the patient did not want to continue at any stage of the study, he/she was excluded from the study.

MEASURES:

The Depression, Anxiety and Stress Scale (DASS-21) is deemed to provide information about all these three psychological constructs. It consists of 21-item self-report scale on 4-point Likert with scores from 0 to 3. It is based along a continuum of severity. The scoring provides the multiplication of the scores by 2. The total depression subscale determined scores within the normal range (0–9), mild depression (10–12), moderate depression (13–20), severe depression (21–27), and extremely severe depression (28–42). Anxiety subscale involves seven questions which identify scores within the normal range (0–6), mild anxiety (7–9), moderate anxiety (10–14), severe anxiety (15–19), and extremely severe anxiety (20–42).Stress subscale contain

seven questions which define scores within the normal range (0–10), mild stress (11–18), moderate stress (19–26), severe stress (27–34), and extremely severe stress (35 or above). (6)

STATISTICAL ANALYSIS :

Data was entered in Microsoft excel. To analyse the data, SPSS (IBM SPSS Statistics for Windows, Version 26.0, Armonk, NY: IBM Corp. Released 2019) was used. Categorical variables were expressed in frequencies and proportions. Continuous variables were expressed in mean (SD). Chi-square test was applied to test the association between categorical variables. Appropriate graphs and figures were made for the results. A p-value of <0.05 is considered statistically significant.

RESULTS:

Total of 501 respondents were eligible for inclusion in the present study. The results of demographic characteristics are shown in Table 1: Around half of the respondents (52.3%) were between age of 30 to 60 years and Table 2: showed majority of respondents in the study was males (55.68%).

Age groups (years)	Number	Percentage
<30	149	29.7
31-60	262	52.3
>60	90	18.0
Total	501	100.0

Table 1: Age distribution

Gender	Number	Percentage
Male	279	55.68
Female	222	44.32
Total	501	100.0

Table 2: Gender distribution

Table 3: In the depression subscale of the DASS-21, 251 respondents (50.1%) were found normal, 141 cases (28.1%) had mild depression, 101 individuals (20.2%) were suffering from moderate depression, and 8 cases (1.6%) had been affected with severe depression. Considering the anxiety subscale, 160 respondents (31.9%) were normal, 105 cases (20.9%) had mild anxiety, 198 individuals (39.5%) suffered from moderate anxiety, 35 cases (7.0%) had severe anxiety, and 3 respondents (0.6%) were experiencing extremely severe anxiety. In the stress subscale, 157 cases (31.3%) were normal individuals, 132 respondents (26.4 %) had mild stress and 161 individuals (32.1%) were suffering from moderate stress, 51 cases (10.2%) had severe stress and none of them had extremely severe stress.

Parameter	Number	Percentage
Stress categories		
Normal	157	31.3
Mild	132	26.4
Moderate	161	32.1
Severe	51	10.2
Extremely severe	0	0
Anxiety categories		
Normal	160	31.9
Mild	105	20.9
Moderate	198	39.5
Severe	35	7.0
Extremely severe	3	0.6
Depression categories		
Normal	251	50.1
Mild	141	28.1
Moderate	101	20.2
Severe	8	1.6
Extremely severe	0	0

Table 3: Distribution of DASS-21 subscales

Relationship between Demographic Variables, Depression, Anxiety, and Stress, and Impact of COVID19

The relationships found between the demographic variables and the DASS-21 subscales (i.e., depression, anxiety, and stress) are presented. The results regarding the demographic variable such as age group and stress subscale in the DASS-21(Table 4), showed that among 149 respondents, in the age groups less than 30 years, 72 cases (48.3%) were normal , 56 respondents (37.6%) had mild stress and 16 respondents had moderate stress(10.7%) and 5 respondents (3.35%) had severe stress. Among 262 respondents between 31 to 60 years, 63 respondents had mild stress (24%), 109 respondents had moderate stress (41.6%) and 16 respondents had severe stress (6.1%). Among 90 respondents above 60 years of age, 11 respondents were normal, 13 respondents had mild stress (14.4%) and 36 respondents had moderate stress (40%) and 30 had severe stress (33.3%). Considering gender with stress subscale in DASS-21, among 222 female, 72 respondents were normal, 54 respondents had mild stress (24.3%) and 64 had moderate stress (28.8%) and 32 had severe stress (14.4%). Among 279 male respondents, 78 had mild stress (28%) and 97 had moderate stress (34.7%) and 19 had severe stress (6.8%). Therefore stress subscale in DASS-21 was significant among all age groups but insignificant among gender.

The results regarding the demographic variable such as age group and anxiety subscale in the DASS-21(Table 5), showed that among 149 respondents, in the age groups less than 30 years, 52 cases were normal , 29 respondents had mild anxiety(19.4%) ,54 respondents had moderate anxiety(36.2 %), 13 respondents had severe anxiety(8.7%) and 1 had extremely severe anxiety. Among 262 respondents between 31 to 60 years, 55 respondents had mild anxiety (21 %) and 108 respondents were moderately anxious (41.2 %), 15 respondents were severely anxious (5.7%) and 2 respondents were with extremely severe anxiousness. Among 90 respondents above 60 years, 26 respondents (28.8%) were normal, 21 respondents had mild anxiety (23.3 %) and 36 respondents had moderate anxiety (40%), 7 respondents had severe anxiety (7.8%). Considering gender with anxiety subscale in DASS-21, among 222 female respondents, 76 respondents were normal, 52 respondents had mild anxiety (23.4%) and 74 had moderate anxiety (33.3%), 19 (8.5%) had severe anxiety, 1 respondent was with extremely severe anxiousness. Among 279 males, 53 had mild anxiety (19%), 124 had moderate anxiety (44.4%), 16 respondents had severe anxiety (5.7%) and 2 were extremely anxious (0.7%). Therefore anxiety subscale was insignificant among all age groups and gender.

The results regarding the demographic variable such as age group and depression subscale in the DASS-21(Table 6), showed that among 149 respondents, in the age groups less than 30 years, 73 cases were normal , 38 respondents (25.5%) had mild depression and 35 respondents had moderate depression(23.5%), 3 had severe depression (2%). Among 262 respondents between 31 to 60 years, 71 respondents had mild depression (27.1%) and 46 respondents had moderate depression (17.6%), 5 had severe depression (1.9%). Among 90 respondents above 60 years, 38 respondents were normal, 32 respondents had mild depression (35.6%) and 20 respondents had moderate depression (22.2%). Considering gender with depression subscale in DASS-21, among 222 females, 119 respondents were normal, 58 respondents had mild depression (26.1%) and 41 had moderate depression (18.4 %), 4 had severe depression (1.8%). Among 279 male respondents, 83 had mild depression (29.7%), 60 had moderate depression (21.5%) and 4 had severe depression (1.4%). Therefore, depression subscale in DASS-21was insignificant among all age groups and gender.

The psychosocial impact of COVID-19 was also assessed using the PSA scale (Table 7). A Self structured questionnaire, having 20 questions was administered to the patients that assess the anxiousness related to the disease, costs involved in treatment, social withdrawal and isolation, feeling of uncertainty of future, depression/loss of enthusiasm due to disease. Questions were subcategorised as either related to anxiety, stress or depression. Participants were asked to mark their response as either yes (score 1) or no (score 0). This was a qualitative questionnaire unlike DASS-21 which can classify the severity. The prevalence of anxiety, stress and depression were assessed using this PSA scale. The prevalence of anxiety (Table 8) was 78.4%, stress was 70.5% (Table 9) and depression was 74.7 % (Table 10).

Age categories (Years)	Stress categories						severe	severe	Total	P-value
	Normal		Mild		Moderate					
	N	%	N	%	n	%	N	%		
<30	72	48.3	56	37.6	16	10.7	5	3.35	149	<0.001
31-60	74	28.2	63	24	109	41.6	16	6.1	262	
>60	11	12.2	13	14.4	36	40	30	33.3	90	

Gender										
Female	72	32.4	54	24.3	64	28.8	32	14.4	222	0.03
Male	85	30.4	78	28	97	34.7	19	6.8	279	

Table 4: Association of stress subscale with age and gender

Age categories (Years)	Anxiety categories										Total	P-value
	Normal		Mild		Moderate		Severe		Extremely severe			
	N	%	n	%	N	%	n	%	n	%		
<30	52	34.9	29	19.4	54	36.2	13	8.7	1	0.7	149	0.88
31-60	82	31.2	55	21	108	41.2	15	5.7	2	0.8	262	
>60	26	28.8	21	23.3	36	40	7	7.8	0	0	90	
Gender												
Female	76	34.23	52	23.4	74	33.3	19	8.5	1	0.5	222	0.12
Male	84	30.1	53	19	124	44.4	16	5.7	2	0.7	279	

Table 5: Association of anxiety subscale with age and gender

Age categories (Years)	Depression categories								Total	P-value
	Normal		Mild		Moderate		Severe			
	N	%	n	%	n	%	n	%		
<30	73	49	38	25.5	35	23.5	3	2	149	0.27
31-60	140	53.4	71	27.1	46	17.6	5	1.9	262	

>60	38	42.2	32	35.6	20	22.2	0	0	90	
Gender										
Female	119	53.6	58	26.1	41	18.4	4	1.8	222	0.52
Male	132	47.3	83	29.7	60	21.5	4	1.4	279	

Table 6: Association of depression subscale with age and gender

Items in PSA scale	Number	Percentage
1.I feared that I will die (Anxiety)		
No	150	29.9
Yes	351	70.1
2.I feared that I would not be able to afford treatment (Stress)		
No	192	38.3
Yes	309	61.7
3.I feared I would lose all my money during treatment (Anxiety)		
No	207	41.3
Yes	294	58.7
4.I feared I would give this disease to my loved ones (anxiety)		
No	86	17.2
Yes	415	82.8
5.I felt I would be rejected by my neighbours and the society (Anxiety)		
No	123	24.6
Yes	378	75.5
6.I live with the guilt of giving this infection to my family members (Depression)		
No	265	52.9

Yes	236	47.1
7.I am angry I got this disease and others didn't (Stress)		
No	190	37.9
Yes	311	62.1
I suspected that my report was falsely positive (stress)		
No	204	40.7
Yes	297	59.3
I feared I would contract another disease during my stay in the hospital (Anxiety)		
No	194	38.7
Yes	307	61.3
10.I feel guilty I contracted the infection because I didn't take adequate precautions (Depression)		
No	168	33.5
Yes	333	66.5
I felt that I was not being looked after in the hospital (Depression)		
No	196	39.1
Yes	305	60.9
I am loosing hope for the future (Depression)		
No	205	40.9
Yes	296	59.1
I had a feeling of uncertainty about the future (Anxiety)		
No	147	29.3

Yes	354	70.7
I felt that I'm not well informed about the disease (Stress)		
No	204	40.7
Yes	297	59.3
15.I felt that I am not responding to the treatment (Depression)		
No	188	37.5
Yes	313	62.5
I have lost enthusiasm in activities of my interest despite having free time in isolation (Depression)		
No	123	24.6
Yes	378	75.5
I thought this was a punishment for my past deeds (Depression)		
No	143	28.5
Yes	358	71.5
I introspected over the past events of my life (Anxiety)		
No	117	23.4
Yes	384	76.7
I missed my daily routine (Stress)		
No	63	12.6
Yes	438	87.4
I craved to meet my loved ones (Stress)		
No	53	10.6
Yes	448	89.4

Table 7: Psychosocial Assessment Scale.

Anxiety	Number	Percentage
Yes	393	78.4
No	108	21.6
Total	501	100.0

Table 8: Prevalence of anxiety according to PSA Scale

Stress	Number	Percentage
Yes	353	70.5
No	148	29.5
Total	501	100.0

Table 9: Prevalence of stress according to PSA Scale

Depression	Number	Percentage
Yes	374	74.7
No	127	25.3
Total	501	100.0

Table 10: Prevalence of depression according to PSA Scale

DISCUSSION:

COVID-19, which is caused by severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) was first reported in Wuhan, China, in December, 2019, and was declared as a pandemic by WHO in March 2020.(7) 19 lakhs confirmed cases have been declared in India, as of 05th August 2020. Widespread outbreaks of infectious disease, such as COVID-19 are associated with psychological distress and symptoms of mental illness.(8) Apart from physical and economic issues, this disease has taken a huge mental and emotional toll on the patients, their caretakers, family and the health care workers. The fact that COVID-19 is more transmissible than SARS and the case-fatality rate of 2.3% which was substantially higher than that for seasonal influenza, caused anxiety and stress among general population and in Covid-19

affected individuals who feared of the possibility of transmitting the disease to their loved ones (8). The uncertain incubation period of the virus and its possible asymptomatic transmission caused additional psychological stress. Second, the government's initial downplaying of the epidemic's severity eroded public's trust in the government's decision making, transparency and competency. Third, unprecedented large-scale quarantine measures in all major cities, which essentially confined residents to their homes, likely had negative psychosocial effect on the residents. Fourth, reports of shortages of medical supplies, protective gears, medical staff, and hospital beds caused enormous concern throughout the nation. Last, a unique "info-demic"—an overabundance of (mis)information on social media and elsewhere—posed a major risk to public mental health during this health crisis. As during the 2003 SARS and 2014 Ebola virus disease outbreaks, generalized fear and fear induced over reactive behaviour were common among the public in the initial phase of the pandemic.

COVID -19 INFECTIONS ON MENTAL HEALTH:

Psychological effects during a pandemic can be mitigated by a number of personal, social and environmental factors. These factors include, for example, severity and transmissibility of infection, inadequate psychological and social assistance, loss of income and receiving insufficient information regarding the disease.

Most prevalent psychological symptoms observed was

- Anxiousness
- Depression
- Emotional disturbance
- Stress
- Mood alterations and irritability
- Insomnia
- Posttraumatic stress symptoms
- Anger
- Frustration
- Emotional exhaustion

Various cross sectional and longitudinal studies have been conducted on analyzing psychological impact of COVID-19 on mental health on general population and on disease

affected individuals. This study investigated the prevalence of depression, anxiety, and stress in the hospitalised patients.

Bai et al (10) conducted a cross-sectional study with 338 staff members in a hospital in East Taiwan, infected with SARS. Seventeen staff members (5%) reported with an acute stress disorder. The quarantine experience was the most relevant predictor of acute stress disorder which manifested mainly with frustration, anxiety, irritability, insomnia, poorer concentration and performance, reluctance to work due to the contact with febrile patients. Sixty-six staff members (20%) felt they are being rejected in their neighbourhood.

Liu et al (11) conducted a cross-sectional study with 549 hospital staff members. Overall, in which 9% staff members had higher depressive symptoms after 3 years of quarantine. Among subjects having higher depressive symptoms, nearly 60% were quarantined while only 15% of the group with lower depressive symptoms had been imposed restrictions. There were few limitations such as (i) Results had the cross-sectional nature; (ii) the absence of a true control group comparison; (iii) Depression measured with the use of CES-D. In his study, he concluded that Hospital staff and subjects in quarantine due to COVID outbreak are found to have increased risk for depression for long term.

Reynolds et al (12) conducted a Cross-sectional study involving 1912 adult individuals. Among quarantined individuals, of individuals with those who potentially have SARS, 20% reported with fear, 18% had nervousness, 18% felt sadness and 10% were guilt. Maladaptive psychological reactions such as avoidance behaviours (e.g. reducing direct contact with patients and not reporting to work properly) are common even after quarantine. The study has few limitations such as (i) 55% response rate (ii) younger persons were not given importance; (iii) Information on specific socioeconomic details were not collected. He concluded the study that Improvements can be made in compliance and psychological distress may be reduced by minimizing duration, revising requirements, and providing enhanced education/support. In line with literature dealing with the psychological impact of COVID-19 pandemic (Odriozola-Gonz´alez et al., 2020; Sim et al., 2010; Torales et al., 2020; Wang et al., 2020d) and with the more recent systematic review (Xiong et al., 2020), the results of this study show the presence of a strong stress and psychopathological factor during the lockdown caused by the spread of SARS-CoV-2 disease.

Xiong et al., 2020 (13) In his study, he documented that prevalence of high stress levels ranged from 8.1% to 81.9%, of high depression levels were from 14.6% to 48.3%, of high anxiety levels were from 6.33% to 50.9% and high scores about PTSD from 7% to 53.8%.

The differences between genders reflect the findings of other studies carried out on the COVID-19 pandemic (Li et al., 2020; Liu et al., 2020; Wang et al., 2020d), with the female population appearing to be generally more exposed to the effects of the pandemic with a more severe symptomatology than of the one of the male population. In our study as shown in Table 2: showed majority of respondents in the study was males (55.68%).

Reskati et al 2021(14) in his study found that among 1075 respondents, 22.5% of the cases had moderate-to-severe depression, 38.5% of the individuals were suffering from moderate-to-severe anxiety, and 47.2% of the participants were experiencing moderate-to-severe stress. In 14.5% of the respondents, the psychosocial impact of COVID-19 also varied from the possibility of post-traumatic stress disorder (PTSD) to immunosuppression (p < 0.01). With the high prevalence rates of depression, anxiety, and stress, mental health professionals are suggested to develop psychosocial interventions .The results regarding the stress subscale in the DASS-21, showed that the respondents, in the age groups of 18–30 and 31–40 years, had obtained significantly higher stress scores (B = 3.08, 95% CI: 0.56 to 5.63 for the18–30 age group and B = 3.12, 95% CI: 0.68 to 5.57 for the 31–40 age group). The results for the anxiety subscale of the DASS-21 also demonstrated that men gained significantly lower anxiety scores (B = -1.38, 95% CI, −2.55 to −0.21) and the individuals in the age group of 31–40 years obtained higher anxiety scores (B = 2.37, 95% CI: 0.43 to 4.31).In our study around half of the respondents (52.3%) were between age of 30 to 60 years which was in accordance with above study.

Chakrabarti et al 2021(15) in his study he assessed mental health among Covid-19 patients in south Indian private teaching hospital, where he concluded that prevalence of depression and insomnia or sleep disturbances was nearly 40% and 28.8%, respectively, among the inpatients. Depression was significantly observed in female group. This the first study assessing psychological issue among Indian population, and the present study is the second study assessing psychological issue among Covid-19 patients in India. . He observed the adverse effects among patients and found that depression and suicidal ideation has resulted in many hospital suicidal deaths in covid-19 patients admitted with mild-to-moderate covid-19 disease in India and other parts of the world due to financial crisis, decreased life quality. The

prevalence of depression, insomnia or sleep disturbances, suicidal ideation in his study suggested that awareness is needed from health care professionals for conducting regular counselling in Covid-19 wards.

Passavanti et al 2021 (16) on summarizing the answers of the online questionnaire through his study, he noticed that between 60% and 80% of the population sample shows stress levels that are above normal and at levels ranging from mild to severe; in particular, between 17% and 36% of the investigated sample shows levels that range from moderate to severe. Likewise, between 54% and 69% of the sample indicates levels of depression ranging from mild to severe, of whom between 40 and 44% at a moderate or severe level. In the sample, 45% of the interviewed subjects also show levels of anxiety above average with 39% of cases at a medium or severe level.

In present study ,we evaluated DASS 21 scale and PSA scale in three subcategories which includes stress, anxiety and depression, in which PSA scale showed overall prevalence of 70% in all three subscales identifying psychological issue. As covid-19 created an environment of increased ratio of unemployment which lead to increased financial burden, poor quality of life increasing cost of treatment, uncertainty regard outcome and prognosis. All these put these patient in developing increased risk of psychological symptoms which reflected with high level of stress and anxiety among Indian population ,whereas depression level was low as this study was done in second wave post its peak, and there was good treatment outcome.

The strength of this study is that, this is the first study in India to evaluate for Covid-19 related mental health in hospitalised individuals. There are no validated questionnaires to assess for psychological distress in people affected by Covid-19. We proposed a questionnaire form (PSA form) to assess for depression , stress, anxiety in Covid-19 patients. Larger clinical studies need to be performed to validate PSA score for future use. The limitations of the study include recall bias of symptoms.

CONCLUSION:

It is evident from our study that Covid-19 hospitalised patients are at higher risk of developing stress, anxiety and depression. Our responsibility to patients does not end in only treatment of the illness, but also to identify and evaluate for mental health issues. Therefore an integrated approach by social and preventive medicine experts, psychiatrists, psychologist and physicians is warranted to combat this issue

CONFLICTS OF INTEREST :

There are no conflicts of interest.

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