A Comparative Study of Perceived Stress and Anxiety, among Patients with Bipolar Affective Disorder, and the General Population, during COVID-19 Pandemic, Conducted in Government Hospital for Mental Care, Visakhapatnam

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ABSTRACT

BACKGROUND

Generally during pandemic, mental health needs are largely neglected and patients with psychiatric illness are given less medical care as majority of the health professionals are involved in acute management of the pandemic. In this study we wanted to determine the difference between stress and anxiety in patients with bipolar affective disorder (BPAD) and the general population.

METHODS

It was a cross sectional study and convenient sampling was used. The study was conducted in Government Hospital for Mental Care, Visakhapatnam. The study included 60 participants of whom 30 participants are patients with bipolar affective disorder who were currently in remission and 30 participants were from general population and were evaluated using semi structured proforma for sociodemographic data and perceived stress scale to assess perceived stress, Hamilton anxiety rating scale to assess anxiety. Results were analyzed statistically.

RESULTS

The results showed statistically significant difference in severity of perceived stress and anxiety among patients with bipolar affective disorder and the general population.

CONCLUSIONS

Our study results re-emphasize the fact that there should be an increased awareness about patients with psychiatric illness like bipolar affective disorder as targets for care with regular psychiatric intervention during Covid-19 pandemic. With our study, we want to re-iterate the fact that patients with psychiatric illness experience exacerbation of symptoms during infectious disease epidemic. Patients diagnosed with bipolar affective disorder can also have comorbid anxiety disorder, even after treating the mood disorder episode. Residual anxiety may persist and in times of infectious diseases epidemic, these anxiety symptoms will exacerbate leading to poor quality of life and non-compliance to medication. With our study we want to recommend that proper care and regular follow-up schedules have to be formulated by mental health professionals and mental health institutions to reduce and prevent exacerbation of symptoms and improve treatment compliance which in turn helps in preventing relapse of bipolar affective disorder.

KEYWORDS

Bipolar Affective Disorder, Perceived Stress, Anxiety, Covid-19

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BACKGROUND

A very special type of pneumonic disease that generated the covid-19 pandemic was first identified in Wuhan, China in December 2019 and is spreading all over the world.[1] The covid-19 pandemic has caused significant concerns for population mental health and the effective provision of mental health services in the wake of increased demands and barriers to service delivery.[2] Covid-19 is highly infectious and potentially life-threatening illness.

In India, Covid-19 infections are increasing rapidly day by day. Covid-19 pandemic psychological impact on patients with psychiatric disorder like bipolar affective disorder remains largely unknown. There are only few studies[3-7] that are available on psychological impact of covid-19 pandemic on patients with pre-existing psychiatric disorders. Government of India announced nationwide lockdown on 25 march 2020 to 31 may 2020.[8] The pandemic and its related containment measures namely quarantine, social distancing and self-isolation can have a detrimental impact on mental health. In particular, the increased loneliness and reduced social interactions are well-known risk factors for several mental disorders.[9]

The Covid-19 pandemic, with necessary measures such as social distancing, has significantly affected people's habits, and psychological wellbeing. This directly impacts individuals suffering from bipolar affective disorder, since they depend on a well-balanced routine, regular sleeping hours, and sparse psychological stress, in order to prevent relapses.[10] Anxiety disorders are the most prevalent comorbid diagnoses in patients with bipolar disorder (BD). The lifetime prevalence of anxiety disorders is 45 % when bipolar disorder is present; patients with bipolar disorder are 3 to 7 times more likely to meet criteria for diagnosis of an anxiety disorder than the general population[11]

The strict lockdown measures to control the spread of covid-19 had resulted in restriction of transport services, daily activities, and distribution of medical services in the country and these abrupt changes could significantly impact the psychological well-being of psychiatric patients and exacerbating residual anxiety symptoms and also decreasing their access to medical services.

Treating patients with mental illness during covid-19 pandemic poses a serious challenge to mental healthcare workers. Many mental healthcare workers could be exhausted as they were reassigned to treat covid-19 patients. During covid-19 pandemic, most of the psychiatrists were not prepared to provide mental health services and were unable to reach their patients during the lockdown.

Another major concern is treating psychiatric in-patients during Covid-19 pandemic as in-patient wards found to be breeding ground for the coronavirus,[12] patients who are stable can be treated at their home to decrease the chance of infection. Ideally, immuno-psychiatry services should protect physical and mental health of psychiatric patients by providing telepsychiatry consultation, home delivery of medications, psychological support, and monitoring inflammatory markers related to stress during a large infection outbreak.[3]

Due to strict lockdown measures, delivery of mental health services was impaired and mental health care needs of the patients with psychiatric illness were largely unmet during covid-19 pandemic. Not only patients with psychiatric illness but also the general population experienced stress and anxiety during Covid-19 pandemic.[13] Most of the mental health issues of the pandemic will have to be managed by psychiatrists in the years to come. Mostly we may see a raise of mental health issues, as extreme stressors may increase or cause mental health issues.

The number of those who will need psychiatric help or consultation is going to increase tremendously in the next weeks or months, requiring a need to reassessment of our current practices. From a psychopathological viewpoint, the present Covid-19 pandemic is relatively a new form of stressor or trauma for psychiatrists.[14] It has been compared with natural disasters, such as earthquakes or tsunamis.[15]
The current study is designed to assess and compare the perceived stress and anxiety among patients with bipolar affective disorder and the general population during covid-19 pandemic.

The purpose of the study was to compare the severity of perceived stress and anxiety among patients with BPAD who are in remission and the general population.

METHODS

This study is a cross sectional hospital-based study, consisting of 60 participants out of which 30 participants were patients with BPAD who were in remission and 30 participants were the general population. It was conducted in Government Hospital for Mental Care, Visakhapatnam, for over a period of three months from June 2020 to August 2020 by convenient sampling method.

Inclusion Criteria for Patients

- Patients who were diagnosed to have bipolar affective disorder and are currently in remission (f31.7) based on the ICD-10 classification of mental and behavioural disorders were selected for the study.
- Patients who had given written informed consent were taken up for the study.
- Patients aged 18 and above were selected for the study.

Inclusion Criteria for Healthy Controls

- Healthy controls aged 18 and above were selected for the study.
- Those who had given written informed consent were selected for the study.
- Those who do not have any history of psychiatric illness are selected for the study.

Exclusion Criteria

- Suspected or confirmed cases of Covid-19.
- Individuals with intellectual disability.
- Individuals with severe co-morbid medical illness.

Operational Procedure

Individuals who fulfilled inclusion criteria were taken into the study. The participants were enrolled after taking informed consent from them. Sample consisted of two groups, one group consisted of 30 participants who are patients with bipolar affective disorder currently in remission and second group consisted of 30 participants who are healthy controls and they were assessed using perceived stress scale and Hamilton anxiety rating scale and a semi-structured proforma was used to collect the sociodemographic details of the participants which included age, gender, education, occupation.

Study Tools

- A semi-structured proforma: It was a self-designed proforma used to collect the socio-demographic details of the participants which included age, gender, education and occupation.
- Perceived stress scale:[16] Developed by Cohen et.al (1983), consists of 10 questions which asks about feelings and thoughts of the patient during the last month.
- Hamilton anxiety rating scale:[17] developed by Hamilton M (1959), consists of 14 items. Each item is scored on a scale of 0 to 4, with a total score range of 0 – 56, where scores of 14 - 17 indicate mild anxiety, 18 - 24 indicates moderate anxiety, 25 - 30 indicates severe anxiety.

Statistical Analysis

Statistical analysis of the data was carried out using SPSS software version 25.0. Pearson's chi square test was used to determine if there was any difference in the stress and anxiety among patients with bipolar affective disorder and healthy control group.

RESULTS

Socio-Demographic Characteristics

Patients with bipolar affective disorder group has mean age of 32.76 and that of general population was 35.83 and age difference between two groups is statistically insignificant as P-value is 0.119. Majority of the participants in both groups are males (66 %) and males were more in number in general population group whereas females were more in number in patients' group, gender difference between two groups is statistically insignificant as P-value is 0.785 Most of the participants of both the groups belong to low socioeconomic group (76.6) and socioeconomic status between two groups is statistically insignificant as p value is 0.373. Majority of them in both groups completed secondary school of education (73 %) and education status between two groups is statistically insignificant as P-value is 0.243. 60 % of the patients with psychiatric illness were unemployed compared to general population, where only 36.7 % were unemployed. Occupational status between two groups is statistically insignificant as P-value is 0.071. [Table 1]

Variables		Patients with BPAD N (%)	General Population N (%)	P-Value	Chi-Square Value
Age ¥ (Mean ± SD)		32.76 ± 8.05	35.83 ± 6.91	0.119	-
Socio-economic status	Low	22 (73.3)	24 (80.0)	0.542	0.373
	Middle	8 (26.6)	6 (20.0)		
Gender	Males	19 (63.3)	21 (70.0)	0.785	0.30
	Females	11 (36.7)	09 (30.0)		
Education	Primary	10 (33.3)	6 (20.0)	0.243	1.364
	Secondary and above	20 (66.7)	24 (80.0)		
Occupation	Employed	12 (40.0)	19 (63.3)	0.071	3.27
	Unemployed	18 (60.0)	11 (36.7)		

Table 1. Comparison of Socio-Demographic Variables among the Two Groups

¥-Independent t test applied

Comparison of Stress and Anxiety between the Two Groups

70 % of the patients with bipolar affective disorder received a moderate severity score in perceived stress scale whereas in general population only 26.6 % received a score of moderate severity, indicating that severity of perceived stress was more in patients with bipolar affective disorder. There is a statistically significant difference between two groups in perceived stress as P-value is 0.001. 63.3 % patients with bipolar affective disorder scored mild severity in Hamilton anxiety rating scale whereas in general population group, only 26.7 % scored mild severity, indicating that severity of anxiety is more in patients with bipolar affective disorder. There is statistically significant difference between two groups in anxiety as P-value is 0.02. Table 2 shows association of grades of perceived stress between two groups.

Perceived Stress Scale	Patients with BPAD Frequency	%	General Population Frequency	%	P-Value	Chi-Square Value
Mild	9	30.0 %	22	73.3 %		
Moderate	21	70.0 %	8	26.6 %	0.001*	11.279
Total	**30**	**100.0 %**	**30**	**100.0 %**		

Table 2. Association of Grades of Perceived Stress Scale with BPAD

*indicates statistically significant association

Hamilton Anxiety Rating Scale	Patients with BPAD Count	%	General Population Count	%	P-Value	Chi-Square Value
Absent	11	36.6 %	23	76.6 %		
Mild	19	63.3 %	7	23.3 %	0.02*	9.774
Total	**30**	**100.0 %**	**30**	**100.0 %**		

Table 3. Association of grades of Hamilton Anxiety Rating Scale with BPAD

*indicates statistically significant association

DISCUSSION

To reduce the spread of covid-19 virus, many countries started implementing lockdown including India. In India almost no one witnessed lockdown before in their lifetime.
In India, Lockdown caused financial difficulties and difficulty in availing medical services to large number of people. Generally, in countries like India people tend to seek medical support for physical illness but for psychological disorder people tend to hesitate seeking medical help because of stigma. This situation was further worsened during covid-19 pandemic lockdown in India. Everywhere in the world,

psychiatric hospitals have to change the current practice guidelines they're following in order to provide care and support not only to the persons with mental health problems, but also to those people who do not have psychiatric illness and are suffering from the psychosocial issues of the Covid-19 pandemic.

Few studies showed increased prevalence of stress and anxiety during covid-19 pandemic.[13,18] In our study we found that patients with bipolar affective disorder experience more perceived stress and anxiety than general population during covid-19 pandemic. Thus, our study findings rejected the original null hypothesis, as there was no difference in perceived stress and anxiety among patients with bipolar affective disorders and the general population. Our study findings were similar to the study conducted by Fengyi hao et al.[3] who reported that stress and anxiety were higher in psychiatric patients than in healthy controls during covid-19 epidemic.

Our Study findings were also similar to the study conducted by Tamsyn E Van Rheenen et al.[19] $_{who}$ found out that psychological distress was heightened in the mood disorder group compared to the group with no mental disorder during Covid-19 pandemic. Similarly, study conducted by Gordon G J Asmundson et al. found that people with anxiety related or mood disorders were more negatively affected by covid-19 compared to those with no mental health disorder. Study conducted by Jian-yin Qiu et al. also found that covid-19 pandemic causing stress and anxiety in people around the world.[18]

Treating the patients with bipolar affective disorder with co-morbid anxiety is difficult as there is an increased psychological distress and poor compliance to treatment. Adequate mood stabilization should be achieved before attempting to treat anxiety disorders and in many cases, residual anxiety persists which may exacerbate during infectious disease epidemic.

Covid-19 virus is highly contagious and has caused severe psychological distress in patients with bipolar affective disorder due to the concern of that they might have been infected with covid-19 virus and the fear of death due to covid-19. Other contributing factors are unable to procure medications on time, unable to seek help from their mental health care professional, increased financial difficulty, long duration of stay at home due to strict implementation of covid-19 lockdown.

In our study we also found that even the general population are experiencing stress and anxiety during covid-19 pandemic. The spread of the covid-19 virus and strict lockdown measures can negatively impact the mental health of people. Reasons for the incidence of stress and anxiety in general population can be due to worries about their own health and that of their family members (particularly geriatric people or people suffering from any medical illness), as well as precariousness about the coming times, can induce or exaggerate fear and anxiety. If these worries are sustained, they may raise the risk of psychiatric conditions like panic disorder, obsessive–compulsive disorder, stress and trauma-related disorders among adults.

So, it is necessary to maintain the psychological well-being of individuals and to develop interventions that can improve the psychological well-being of the people during the covid-19 pandemic. In India, Covid-19 cases are increasing rapidly, and many doctors are being deployed in covid-19 hospitals to manage the covid-19 patients who have made mental health care needs of patients with psychiatric disorders as well as general population a low priority. Our study emphasises the need for improved access to telepsychiatry services and if possible, prompt home delivery of psychotropic medications to the patients, may play role in reducing the stress and anxiety during covid-19 pandemic in patients with bipolar affective disorder.

Mental health services should also be made available to general population as in our study, we found out that they are also experiencing stress and anxiety during covid-19 pandemic. Preventive strategies like maintaining healthy lifestyle, regular workouts, balanced diet, adequate sleep and interacting with family members may play a crucial role in reducing the incidence of stress and anxiety. Simple advices may be provided to the general population like:

1. Limiting the sources of stress: To trust information about covid-19 pandemic from official information portals and avoiding baseless information about the covid-19 pandemic.
2. Destroy the solitude: Spending more time with friends and family members. Even if they are at distant locations, video-calling or phone calls with them may help in decreasing the feeling of loneliness. Seeking professional help may also help in reducing the feeling of loneliness.
3. Maintaining daily routine: Keeping a daily routine like waking up in the morning and going to bed at night regularly at the same time, having breakfast, lunch and dinner at regular times every day and staying physically active during the day.
4. Having own personal time and space: Meditation, reading books, yoga can be practiced without going out unnecessarily because of boredom.
5. Seeking mental health expert help: Taking professional help when we are unable to cope with stress and anxiety on our own can help reduce stress and anxiety and also loneliness.

CONCLUSIONS

Our study results re-emphasize the fact that there should be an increased awareness about patients with psychiatric illness like bipolar affective disorder as targets for care with regular psychiatric intervention during covid-19 pandemic. With our study, we want to re-iterate the fact that patients with psychiatric illness experience exacerbation of symptoms during infectious disease epidemic. Patients diagnosed with bipolar affective disorder can also have comorbid anxiety disorder, even after treating the mood disorder episode, residual anxiety may persist and in times of infectious diseases epidemic these anxiety symptoms will exacerbate leading to poor quality of life and non-compliance to medication. With our study we want to recommend that proper care and regular follow-up schedules have to be

formulated by mental health professionals and mental health institutions to reduce and prevent exacerbation of symptoms and improve treatment compliance which in turn helps in preventing relapse of bipolar affective disorder.

Strengths

The data was collected by using two standard and validated scales, the perceived stress scale and the Hamilton anxiety rating scale which are used for the assessment of stress and anxiety in psychiatric hospital settings and in other similar studies.

Limitations

- Study sample was small, and convenient sampling method was used.
- This study was conducted in only one hospital and the results might not be the same throughout the India.

Data sharing statement provided by the authors is available with the full text of this article at jebmh.com.
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REFERENCES

[1] Singh BP, Singh G. Modeling tempo of COVID-19 pandemic in India and significance of lockdown. J Public Aff 2020:e2257.
[2] Thome J, Coogan AN, Simon F, et al. The impact of the COVID-19 outbreak on the medico-legal and human rights of psychiatric patients. Eur Psychiatry 2020;63(1):e50.
[3] Hao F, Tan W, Jiang L, et al. Do psychiatric patients experience more psychiatric symptoms during COVID-19 pandemic and lockdown? A case-control study with service and research implications for immunopsychiatry. Brain Behav Immun 2020;87:100-106.
[4] Souza R, Bernatsky S, Reyes R, et al. Mental health status of vulnerable tsunami-affected communities: a survey in Aceh Province, Indonesia. J Trauma Stress 2007;20(3):263-269.
[5] Thome J, Coogan AN, Simon F, et al. The impact of the COVID-19 outbreak on the medico-legal and human rights of psychiatric patients. Eur Psychiatry 2020;63(1):e50.
[6] Asmundson GJG, Paluszek MM, Landry CA, et al. Do pre-existing anxiety-related and mood disorders differentially impact COVID-19 stress responses and coping? J Anxiety Disord 2020;74:102271.
[7] Plunkett R, Costello S, McGovern M, et al. Impact of the COVID-19 pandemic on patients with pre-existing anxiety disorders attending secondary care. Ir J Psychol Med 2020:1-9.
[8] https://en.wikipedia.org/wiki/COVID-19_pandemic_lockdown_in_India
[9] Fiorillo A, Gorwood P. The consequences of the COVID-19 pandemic on mental health and implications for clinical practice. European Psychiatry 2020;63(1):E32.
[10] De Siqueira RL, Khafif TC, Nascimento C, et al. Emotion regulation and bipolar disorder: strategies during the COVID-19 pandemic. Bipolar Disord 2020;22(8):879-882.
[11] Ott CA. Treatment of anxiety disorders in patients with comorbid bipolar disorder. Ment Health Clin 2018;8(6):256-263.
[12] Lazzari D, Bottaccioli AG, Bottaccioli F. Letter to the Editor: Kim, S.-W., Su, K.-P., using psychoneuroimmunity against COVID-19, Brain, Behavior and Immunity (2020). Brain Behav Immun 2020;87:170-171. https://doi.org/10.1016/j.bbi.2020.03.025.
[13] Salari N, Hosseinian-Far A, Jalali R, et al. Prevalence of stress, anxiety, depression among the general population during the COVID-19 pandemic: a systematic review and meta-analysis. Global Health 2020;16(1):57.
[14] Kang L, Li Y, Hu S, et al. The mental health of medical workers in Wuhan, China dealing with the 2019 novel coronavirus. Lancet Psychiatry 2020;7(3):e14.
[15] Morganstein JC, Ursano RJ. Ecological disasters and mental health: causes, consequences and interventions. Front Psychiatry 2020;11:1.
[16] Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. J Health Soc Behav 1983;24(4):385-396.
[17] Hamilton M. The assessment of anxiety states by rating. Br J Med Psychol 1959;32(1):50-55.
[18] Qiu JY, Zhou DS, Liu J, et al. Mental wellness system for COVID-19. Brain Behav Immun 2020;87:51-52.
[19] Van Rheenen TE, Meyer D, Neill E, et al. Mental health status of individuals with a mood-disorder during the COVID-19 pandemic in Australia: initial results from the COLLATE project. J Affect Disord 2020;275:69-77.