

PSYCHIATRIC MANIFESTATIONS DURING COVID - 19 PANDEMIC

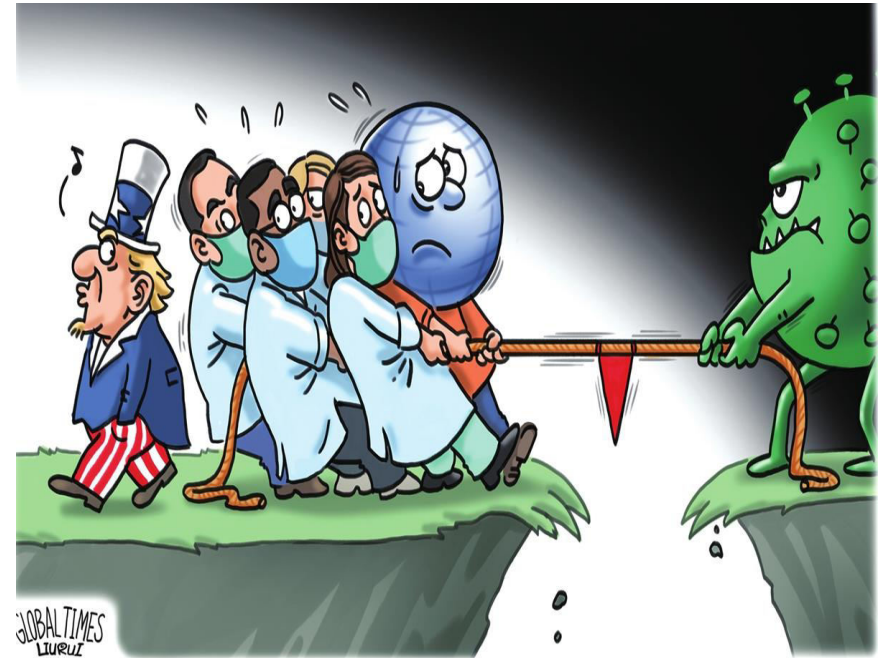


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INTRODUCTION

- The COVID 19 pandemic has resulted in pain, suffering and anxiety for the entire population apart from huge losses to humanity as well as major disruptions in the lives of everyone.
- On 30 January 2020 first case of covid 19 was reported after which INDIA started to encounter raised number of cases and the management of the pandemic and its short term and long term implications has been quite challenging for health care professionals.



- The initial focus was necessarily on the physical consequences of the infection per se.
- However, there is recognition that the significant psychological consequences emerging out of this catastrophe need to be addressed.
- These have arose out of direct consequences of infection or of restrictive measures imposed to curtail the spread of infection or the socio-economic impact of the pandemic.

POSITIVE EFFECTS

Social and personal bonding

Self care and hygiene

Care for family

Sense of hope and positive thinking



NEGATIVE EFFECTS

Financial burden

Loss of job

Social distancing

Increased screen time

Education

Increased workload

Domestic violence

Worry about health

Inadequate housing

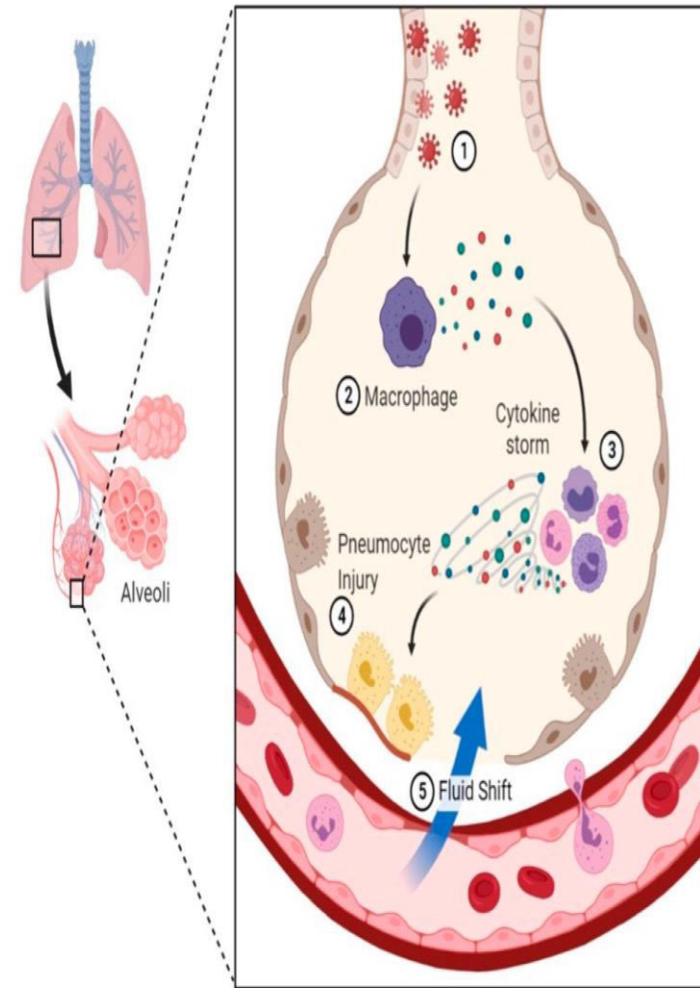


Link between Covid 19 and Psychiatric disorders.

- **Biological**
- **Psychological**
- **Social**

BIOLOGICAL

1. Viruses may enter the brain through angiotensin receptors in olfactory tubercles and can replicate in neurons.
2. Cytokine storms cause inflammatory reactions.
3. Autoimmune response - antibodies are usually detected in cerebrospinal fluid.
4. Medications used to treat covid like a few antivirals, chloroquine and steroids have the potential to induce psychiatric syndromes.

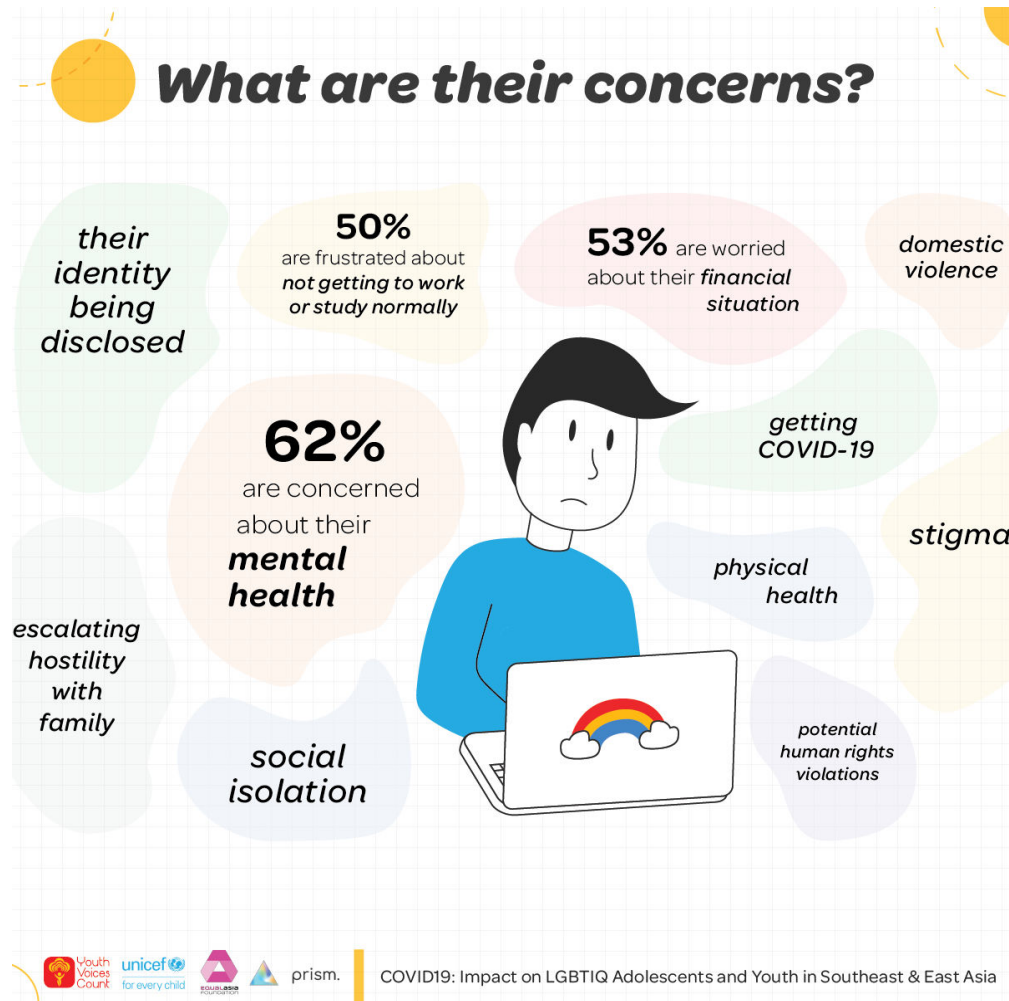


Pathophysiology of COVID-19

- ① **Viral Entry**
ACE-2 & TMPRSS-2 Receptors
- ② **Macrophage Activation**
CD-8+ T cells, Neutrophils, Lymphocytes
- ③ **Pro-inflammatory Cascade**
IL-6, IL-10, IL-2, IL-1 β , TNF- α , IFN- γ , VEGF, ROS, Proteases
- ④ **Acute Lung Injury**
Alveolar oedema, Tachycardia, Tachypnoea, Hypotension
- ⑤ **Respiratory Failure**
Acute Respiratory Distress Syndrome, Systemic Inflammatory Response Syndrome, Multi-Organ Dysfunction Syndrome

Erickson MA, Rhea EM, Knopp RC, Banks WA. Interactions of SARS-CoV-2 with the Blood-Brain Barrier. *Int J Mol Sci.* 2021 Mar 6;22(5):2681. doi: 10.3390/ijms22052681. PMID: 33800954; PMCID: PMC7961671.

PSYCHOLOGICAL



- Poor social and emotional support.
- Unemployment, economic, and financial burden.
- Traumatic memories.
- Grief due to loss of close relatives and significant others.
- Stigma towards the infected person.
- Stress due to increased burden and concerns of infecting others in health care workers and other supporting essential service providers.

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N. & Rubin, G. J. 2020. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. The Lancet, 395, 912-920.

SOCIAL

- Reduced health care accessibility to other health conditions due to a strained health care system that is focusing on response to pandemic.
- Excess negative news in mass media and social media
- Slowdown of the global economy

LONG TERM PSYCHIATRIC MANIFESTATIONS

- A high rate of **anxiety, depression, and stress-related disorders** are being noted post-recovery from acute covid infection. The complete understanding on the post-covid clinical picture is yet to evolve.
- Prevalence rates of different psychiatric disorder in post discharge stage

PTSD: 33%

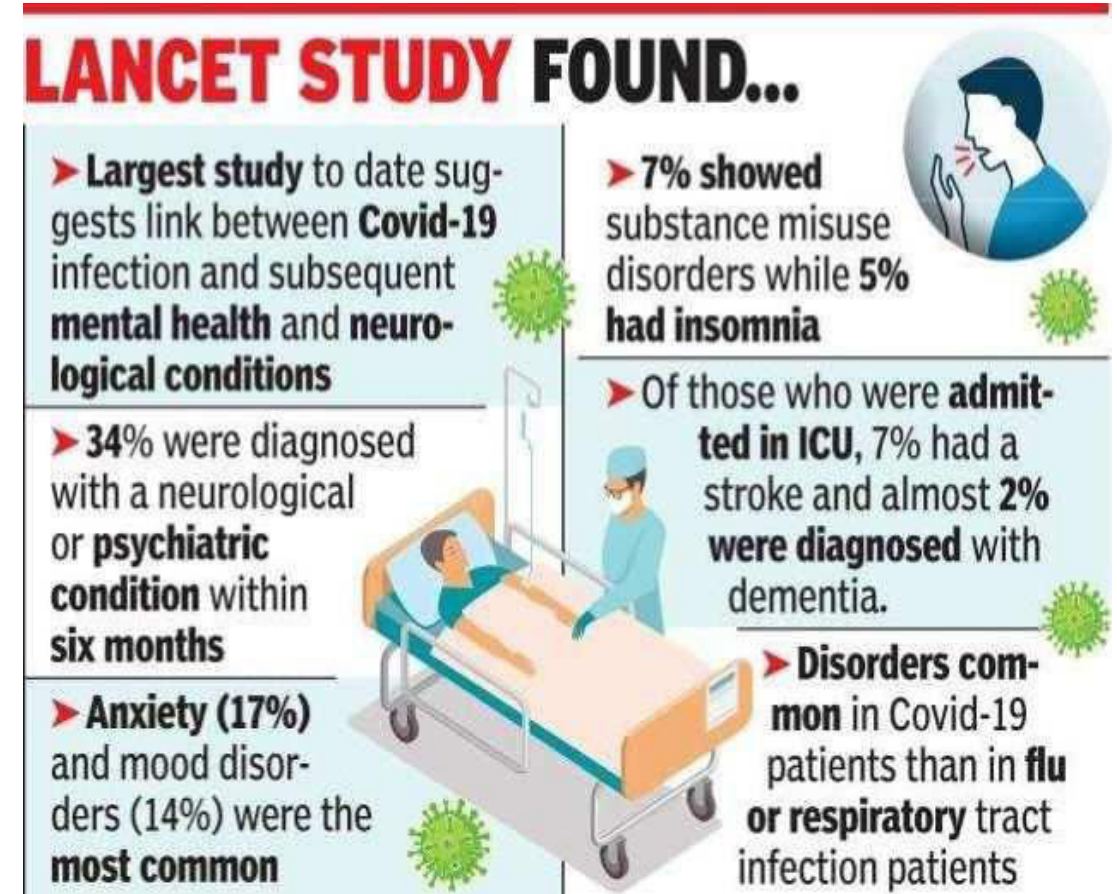
Depression and Anxiety : 15%

- At the end of one year

Depression : 29%(23 - 34)

Anxiety: 34% (25 - 42)

PTSD: 34% (22 – 50%)



Wu T, Jia X, Shi H, Niu J, Yin X, Xie J, Wang X. Prevalence of mental health problems during the COVID-19 pandemic: A systematic review and meta-analysis. J Affect Disord. 2021 Feb 15;281:91-98. doi: 10.1016/j.jad.2020.11.117. Epub 2020 Dec 3. PMID: 33310451; PMCID: PMC7710473.

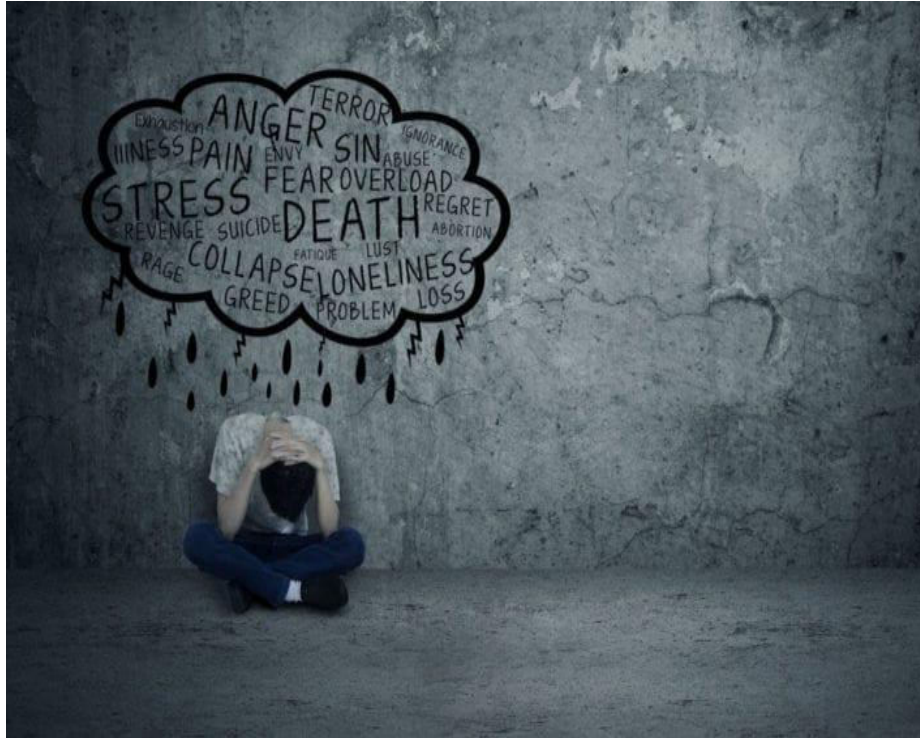
- Mrs. N is a housemaid. Her husband lost his job in the textile shop as it closed down, after which she has become sad and withdrawn. She has *reduced interaction* with others including her neighbour's to whom she was *close* to. She has become very slow in her work and feels tired almost all the time. She has made a lot of *mistakes in her cooking* and reports that she cannot remember things. When asked, she reports that she has become *very sad and worried* after her husband's job loss; now she is the only earning member. There are debts and she feels that she will not be able to repay. Her husband has also become more irritable and is drinking more. She feels *hopeless and thinks of dying* but feels she needs to go on at least because of her two young kids.

Symptoms:

- low mood
- Decreased or loss of capacity to enjoy things
- Decreased energy and tiredness after even minimum effort
- Lowered attention/ concentration- complaints of poor memory
- Loss of self-esteem and self-confidence
- Ideas that one is worthless, or has done something wrong
- Feeling of helplessness (no help will be available), and that there is no hope for the future.
- Death wishes, suicidal thoughts or attempts
- Sleep and appetite disturbances

Discussion:

- There are economic and social costs of pandemic and resultant shutdowns such as economic downturns, job and livelihood losses which can lead to significant mental health problems. The symptoms that Mrs. N is reporting are suggestive of depression.



- A meta analysis conducted worldwide during covid pandemic showed prevalence rates of depression ranging from 7.45% to 48.30% which is 7 times higher than past year.

Bueno-Notivol J, Gracia-García P, Olaya B, Lasheras I, López-Antón R, Santabárbara J. Prevalence of depression during the COVID-19 outbreak: A meta-analysis of community-based studies. *Int J Clin Health Psychol*. 2021 Jan-Apr;21(1):100196. doi: 10.1016/j.ijchp.2020.07.007. Epub 2020 Aug 31. PMID: 32904715; PMCID: PMC7458054.

Antidepressants

a) Drug interactions:

- Tricyclic antidepressants, escitalopram may prolong QTc interval. Hence, they have to be used carefully with azithromycin.
- Methylprednisolone might decrease levels of tricyclic antidepressants.
- SSRI'S may increase the risk of bleeding due to its serotonin uptake blockade. hence, there are potential interactions between anticoagulants used for prophylaxis/treatment of hypercoagulability in covid-19.

b) Precautions in covid-19 patients :

- Antidepressants, especially SSRI'S, have been found to be safe in those with co-existing medical conditions including respiratory and cardiovascular disorders.
- Escitalopram and Sertraline are safer in view of lesser drug interactions and side effects.

Plasencia-García BO, Rico-Rangel MI, Rodríguez-Menéndez G, Rubio-García A, Torelló-Iserte J, Crespo-Facorro B. Drug-drug Interactions between COVID-19 Treatments and Antidepressants, Mood Stabilizers/Anticonvulsants, and Benzodiazepines: Integrated Evidence from 3 Databases. Pharmacopsychiatry. 2021 Jun 25. doi: 10.1055/a-1492-3293. Epub ahead of print. PMID: 34171927.

- **Fluvoxamine** is a selective serotonin reuptake inhibitor (SSRI) that is approved for the treatment of obsessive-compulsive disorder and is used for other conditions, including depression.
- Fluvoxamine is also an agonist for the sigma-1 receptor, through which it controls inflammation.
- Reduction in platelet aggregation, decreased mast cell degranulation and increased melatonin levels, which collectively have a direct antiviral effect, regulate coagulopathy or mitigate cytokine storm, which are known hallmarks of severe COVID-19.
- Fluvoxamine **should not be used** within 2 weeks of receipt of other SSRIs or MAOIs and should be used with caution with other QT-interval prolonging medications.

Sukhatme VP, Reiersen AM, Vayttaden SJ, Sukhatme VV. Fluvoxamine: A Review of Its Mechanism of Action and Its Role in COVID-19. Front Pharmacol. 2021 Apr 20;12:652688. doi: 10.3389/fphar.2021.652688. PMID: 33959018; PMCID: PMC8094534.

ANXIETY DISORDER

- Anxiety is the commonest psychiatric symptom in clinical practice and anxiety disorders are one of the commonest psychiatric disorders in general population.
- Anxiety is often differentiated from fear, as fear is an apprehension in response to external danger while in anxiety the danger is largely unknown (or internal).

- *Mr. X is a 35 years old bank clerk. His bank is busy. Recently after the first few cases of COVID-19 were reported from his neighborhood, he became a **bit worried about the possibility of him getting infected** but since he has received gloves and masks he is quite comfortable and carries out his work. The moment he comes home, he changes his clothes and washes his hands as prescribed. But when he listens to the news on TV, **he worries for some time as to whether he would infect his mother** who is 90 years old. These thoughts last for 10-15 minutes, but he can **dismiss them and carry on with his routines**.*

- Discussion:

Mr. X only has **occasional anxious** thoughts with **NO IMPAIRMENT IN HIS DAILY FUNCTIONING**. Occasional psychological symptoms without any major impact on his life is NORMAL in the current scenario. He just requires **reassurance** that his concerns are understandable and that the safety precautions he has been taking are fine enough.

GENERALISED ANXIETY DISORDER

- PERSISTENT AND CONTINUOUS
- Insidious onset and chronic

PHOBIC ANXIETY DISORDER

- INTERMITTENT AND EXPECTED (EXPOSURE)
- Irrational fear of a specific object, situation or activity often leading to persistent avoidance.

PANIC DISORDER

- INTERMITTENT AND SEVERE
- Characterized by discrete episodes of acute anxiety.

POST TRAUMATIC STRESS DISORDER

- TRAUMATIC AND RE EXPERIENCING
- This disorder arises as a delayed and protracted response to an exceptionally stressful or catastrophic life events or situation.

MANAGEMENT

- Majority of these individuals often feel unheard or dismissed by the health care staff and family. this might make them go to other doctors in hope that they might be treated differently.
- Do not turn them away or dismiss their problem.
- Make them “feel understood” – first listen to their symptoms in detail.
- Provide them with accurate updated clinical information about covid-19.
- For severe and disabling anxiety unresolved with the above steps, consider referral to a psychiatrist for detailed assessment including consideration of long-term medications.

PSYCHOTIC DISORDERS

- **Schizophrenia:** it is one of the most complex , chronic and challenging psychiatric disorder which affects how a person think, feel and behave. It is a syndrome comprising of disorganised thoughts, delusions, hallucinations, emotions and psychosocial dysfunction.
- Delusional disorder
- Schizoaffective disorder
- Substance induced psychotic disorder

ANTIPSYCHOTICS

a) Potential drug interactions in covid-19 patients:

- Potential drug interactions can occur either due to cytochrome p450 enzyme modulation by psychotropics/antivirals or synergistic action on QTc prolongation.
- Certain antipsychotics such as haloperidol, quetiapine, ziprasidone, pimozide, amisulpride are known to prolong QTc interval.

b) Precautions in covid-19 patients:

- Combination of antipsychotics with antivirals should be avoided especially in those who are at risk of comorbid cardiac conditions, hypokalemia , use of loop diuretics, QTc prolonging drugs.
- Remdesivir and favipiravir (weak CYP inhibiting action) despite theoretical considerations related to CYP based interactions, it has been suggested that there is unlikely to be clinically relevant interactions with antipsychotics.
- Limited evidence suggests that doxycycline and oseltamivir are unlikely to have interactions with psychotropics.

Bishara D, Kalafatis C, Taylor D. Emerging and experimental treatments for COVID-19 and drug interactions with psychotropic agents. *Ther Adv Psychopharmacol*. 2020 Jun 22;10:2045125320935306. doi: 10.1177/2045125320935306. PMID: 32612804; PMCID: PMC7309390.

SEDATIVES AND HYPNOTICS

- Cumulative or higher doses of benzodiazepines rarely cause respiratory depression. Hence, longer acting benzodiazepines like diazepam or clonazepam may be avoided. Further, they have CYP related interaction with antiviral drugs.
- Lorazepam is preferred as it has the least interaction with antiviral drugs and is shorter acting.
- Favipiravir can increase the levels of clonazepam, midazolam and zolpidem.

Plasencia-García BO, Rico-Rangel MI, Rodríguez-Menéndez G, Rubio-García A, Torelló-Iserte J, Crespo-Facorro B. Drug-drug Interactions between COVID-19 Treatments and Antidepressants, Mood Stabilizers/Anticonvulsants, and Benzodiazepines: Integrated Evidence from 3 Databases. *Pharmacopsychiatry*. 2021 Jun 25. doi: 10.1055/a-1492-3293. Epub ahead of print. PMID: 34171927.

ACUTE PSYCHIATRIC CONDITIONS IN COVID - 19 PATIENTS

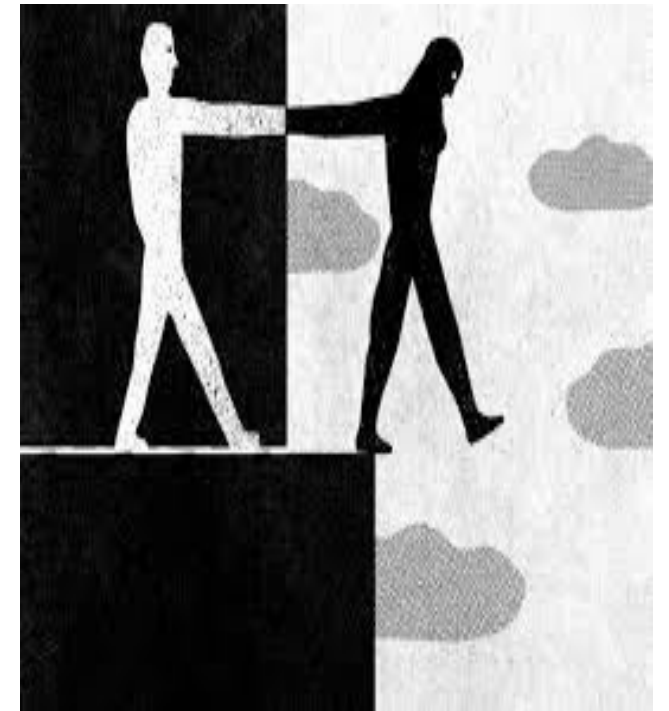
- Delirium
- Acute psychosis/ mania
- Anxiety (acute panic attacks and long term treatment)
- Depressive disorders
- Insomnia (when benzodiazepines are contraindicated)

Suicidality in the Context of COVID-19 Pandemic

- The ongoing covid-19 pandemic has led to significantly increased levels of stress at the community, family, and individual levels.
- Emerging evidence has indicated that the covid-19 pandemic has profound psychological and social effects.
- During the pandemic suicides by those who have tested positive for covid-19 infection, suicides among celebrities, deaths of health care professionals, have led to increased levels of anxiety, fear, and psychological stress. The psychological sequelae of the pandemic will probably persist for months and years to come.

Risk factors associated with suicide (in the context of covid 19)

1.	COVID survivors who suffer from PTSD , fear / anxiety of infecting others and victims of stigma.
2.	People who lost their family members due to COVID and those with unresolved grief.
3.	Persons who have lost job and livelihood during pandemic.
4.	People with mental illness including substance use disorders.
5.	Financial loss.
6.	People with extreme mood swings.



MANAGEMENT

Non-pharmacological management:

- What immediate intervention can be provided?
 - Offering help.
 - Be a good listener.
 - Avoid making dismissive comments.
 - Be non - judgmental.
 - State that you can understand the person's feelings.
 - Building a contract or trust

- A crisis plan that include:
 - Distraction from the suicidal thoughts
 - Writing down thoughts in a diary
 - Promising to oneself about not making an attempt
 - Talking to friends or family about their feelings and thoughts
 - Support through a crisis helpline
 - Medium and high risk cases then
- Initiate high suicidal risk management
- Specialist assessment

Telangana	Roshni - 040-6620 2000
Andhra Pradesh	1Life - 78930-78930; 100 GGH-Kakinada - 98499-03870.

Care of severe mental illness during pandemic

A strategy based on the principles of triage can be employed to classify patients into different groups

- (a) Those who need access to medications only
- (b) Who need a consultation to continue management on an outpatient basis
- (c) Who need management in a hospital facility

(a) Those who need access to medications only

A considerable proportion of patients with severe mental illness may not be able to afford the medications and may require support from the government services to access the medications. The community services in the form of the district mental health program (DMHP) can be effectively utilized to provide home delivery of the medications to the individuals.



(b) Who need a consultation to continue management on an outpatient basis

Telemedicine and Teleconsultation can be effectively utilized to provide continued care to those who need out-patient based consultations and treatment. this would minimize the potential cross infection in a hospital setting and would be protective to both the patients and health care workers.



(c) Who need management in a hospital facility

- The social and economic stress of the pandemic in addition to the potential disruption of routine activities could increase the chance of relapse.
- Around 30% of patients with severe mental illness end up in relapse.
- This small proportion of patients may need a visit to the emergency room.
- The emergency rooms would need structural reorganizations to achieve social distancing.
- All patients need to be screened using a screening tool and those suspected of the infection or having the infection need to be triaged.
- A minority of patients who have a significant risk of harm to self or others may need electroconvulsive therapy.

CONCLUSION

- It is clear that the covid-19 pandemic has led to a vigorous and multifaceted response from psychiatrists and allied professionals, and that mental health is clearly being taken into consideration at multiple levels in the general population, among healthcare workers, and in vulnerable populations.
- Further, there is a need to develop mental health interventions which are time-limited, culturally sensitive, and can be taught to healthcare workers and volunteers. Once developed, such interventions should be tested, so that information regarding effective therapeutic strategies can be widely disseminated among those working in this field.

THANK YOU