



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

'MENTAL HEALTH' A CHALLENGE DURING COVID-19 OUTBREAK: A REVIEW

^{1*} Harshitha. V, ² Siji David, ³ Chaithanya .K.J, ⁴ Abhishek.U.N

^{1*} 4th year Pharm D, Dept. of Pharmacy Practice, Sri Adichunchanagiri College of Pharmacy, Mandya, Karnataka, India.

² 4th year Pharm D, Dept. of Pharmacy Practice, Sri Adichunchanagiri College of Pharmacy, Mandya, Karnataka, India.

³ 4th year Pharm D, Dept. of Pharmacy Practice, Mallige College of Pharmacy, Bangalore, Karnataka, India.

⁴ 4th year Pharm D, Dept. of Pharmacy Practice, Sri Adichunchanagiri College of Pharmacy, Mandya, Karnataka, India.

ABSTRACT

In addition to the serious physical and medical effects on individuals, the COVID-19 pandemic is likely to have a short and long term psycho- social consequences. It has induced many psychiatric individual and collective problems such as stress, PTSD, depression, anxiety, schizophrenia, psychosis, OCD, bipolar disorder, insomnia, fear, suicidal thoughts etc. There was a significant increase of psychological distress and symptoms of mental illness and worsening of quality of sleep in the general population. Understanding them helps clinicians to evaluate the issue when called upon also to manage stress faced by frontline medical staff. The study showed that level of depression, anxiety, stress differ in accordance with gender, age, education and professional status across the globe. For successful fighting with present and future pandemics we have to learn more about psychiatric and psychological aspects of COVID-19 from the perspective of public and global mental health. Our article aims to present a review on all the possible impacts of COVID 19 on mental health.

KEY WORDS

Anxiety, Covid 19, Depression, Insomnia, Pandemic, Stress

1) INTRODUCTION

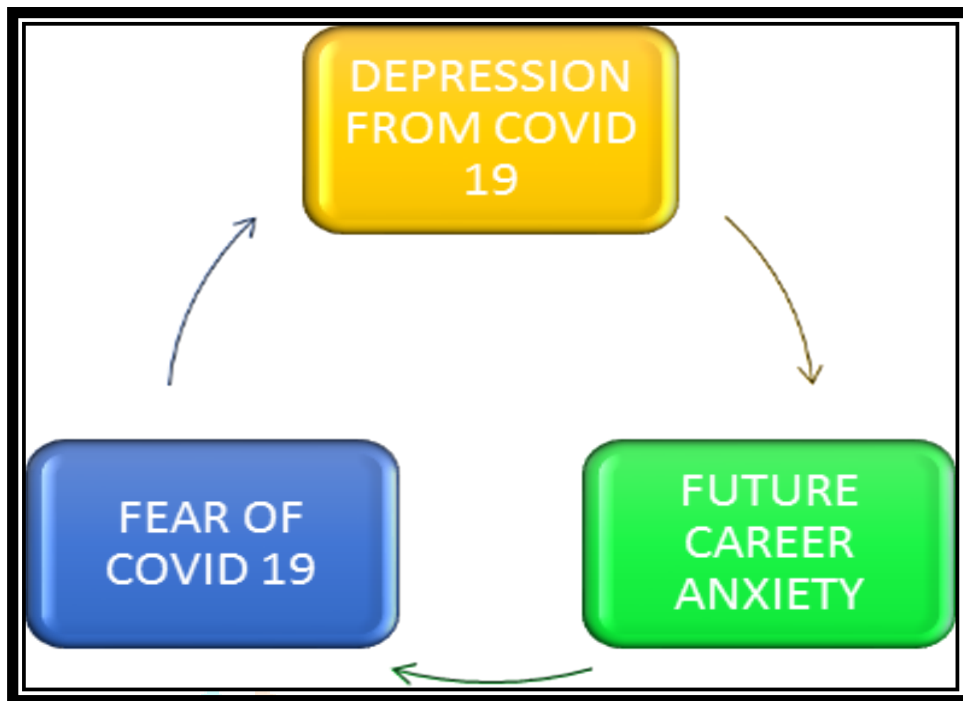
Pandemics are massive-scale epidemics afflicting millions of people across several countries, sometimes spreading throughout the globe. On 11 March 2020, the WHO declared COVID-19 as a universal pandemic [1]. Pandemic is a word which is originated from Greek word Pandemos. There are two parts of the word Pandemos wherein pan means all and demos means population. So the word pandemic reflects an epidemic which not affects a specific community only rather than affects nearly all of the people and is not contaminated in any particular region rather than spreads all through the communities by crossing the international boundaries [2]. On 11th January China reported its first COVID-19 related death of a 61-year-old man, exposed to the seafood market. Over a period of few weeks, the infection spread across the globe in rapid pace [3]. Although there has been substantial focus to measures to recognize people with the coronavirus infection, identifying the mental health care needs of people effected by this pandemic have been relatively neglected [4]. Alarming news reports about the economic and human costs add heightened stress at the same time as social distancing measures decrease opportunities for exercise, sunlight exposure, participation in meaningful activities and social engagement. Job loss and financial uncertainty add more strain, potentially increasing anxiety as well as mood symptoms again, in a population which is vulnerable [5]. COVID-19 will reshape the world. We are not aware when the crisis will end. But we will make certain that by the time it does, our world will look very different. Frustrations, How different will rely on the choices we make today [6].

Josep Borrell

The adage that no man is an island espouses the basic idea that human beings do badly when isolated from others and they need to be part of a community to thrive [7]. Conspiracy theories, fake claims, misinformation (mainly exclaiming coronavirus as Unbreakable, Unstoppable, and Unbeatable) are only exacerbating the mental composure of general public. There was an observed neuropsychiatric association between SARS (severe acute respiratory syndrome) and mental health issues with severe psychiatric comorbidities like depression, panic attacks, anxiety attacks, psychomotor excitement, suicidal deaths, delirium and psychotic symptoms. For instance, during travel restrictions and postponement and cancelation of religious, sports, cultural and entertainment events, people in quarantine may experience anger, loneliness, boredom and anxiety, stress and symptoms of cough, fever, myalgia and fatigue may raise emotional distress and fear of contracting COVID-19. While scientists, clinicians, local and international health organizations and authorities, epidemiologists and virologists are working on many unanswered questions of this novel pandemic, general public, global media and opinion-makers are reacting to this uncertainty based on a limited unconfirmed knowledge [8]. The effects of outbreak extend beyond the biological and medical manifestations, and their wide-ranging psycho-social effects can be felt by all of society, with possible serious psychological and psychiatric outcomes [9]. Purpose of this study was to fill a void in the mental health response to this growing public health crisis by developing and evaluating a brief mental health screener that can be used to reliably identify cases of dysfunctional anxiety and symptom severity associated with the coronavirus [4].

2) DEPRESSION

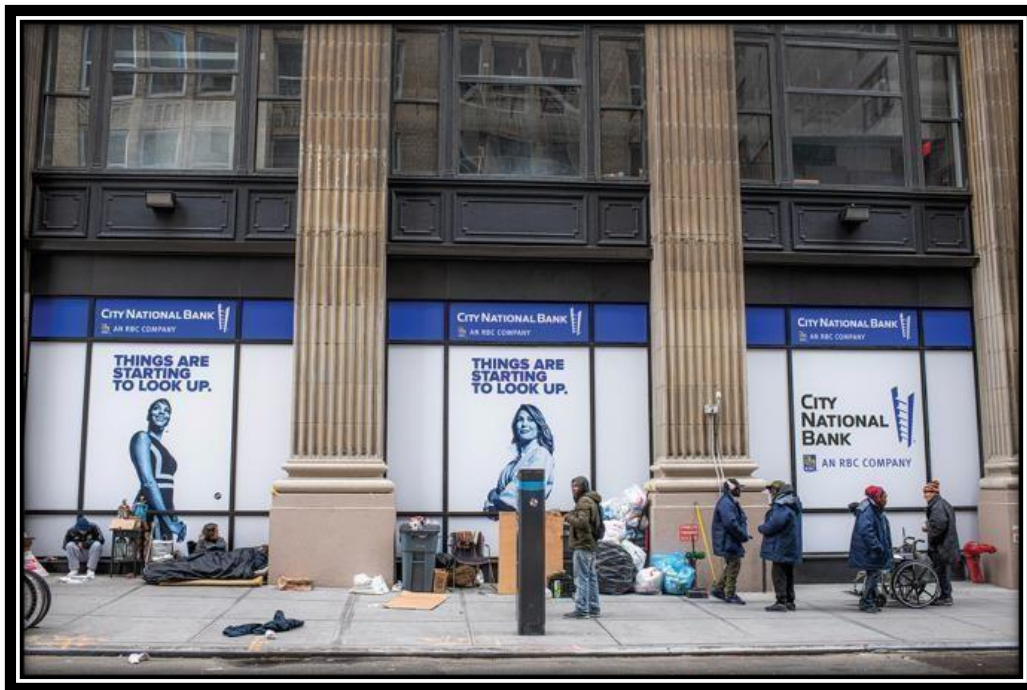
Like any other pandemic cases, society tend to fear their life in the initial position and then the fear of their belongings also arises. As the fear develops, that finally turns to depression and both fear and depression relate to various types of anxiety. All forms of emotional state (i.e., phobia, anger, anxiety, depression, PTSD, psychosis, boredom, etc.) of humans can be associated with the prominent theories of emotion [1]. Adolescents, a vulnerable society, have been carrying on their college academics online and doing everyday activities indoors after the outbreak of COVID-19. This life-style change and phobia of being infected may give rise to depressive and anxious disorders [10]. Depression and anxiety, are playing a prominent role in the study about emotion. Many psychologists trust that the incidence of depression is deep rooted on the basic concepts of human emotion. It is a psychological disorder which consists of a consistent feeling of sadness and loss of interest.



"Figure1" depression from covid 19 mediates the association between 'fear of covid19' pandemic and future work career anxiety [1].

Rapid increase in job loss and the uncertain future job market grow depression with the future workforces' mind as the pandemic may last longer and consumes up the world's economy faster than expected [1]. The depression test score of medical staff at the time of non-pandemic period was 4.933 ± 2.154 , among which 7 were suffering from depression. Certainly, the depression score of medical staff during the pandemic was greater than that of medical staff during the non pandemic ($t=4.531, P<0.001$) [11].

'People are worried not by things, but by the view through which they accept them' is the philosophical statement of the active, directional, uniform and time-framed approach to limit, avoid, respond, and manage the plethora of psychological, functional, emotional, responsive and social and even the activity of bio-psycho-socio-spiritual area at the cost of COVID-19. Mental health facilities and specialized psychiatric management teams including psycho therapists, psychiatrists and care givers should be advanced to look into mental health problems in the general society [8]. In people who are suffering the unexpected and painful loss of loved ones from the present outbreak, not getting closure can lead to anger and trauma. In infected people and those who are quarantined, they may develop feeling of guilt, shame or stigma. Researchers have observed high prevalence of mental stress in person who have a longer duration of isolation, and it is also associated with higher stress development that is correlated with depressive symptoms [12]. This calls finally for kindness as the driving force behind reflection on health, and our pondering on how we go about informing the decisions we make to cope up with a novel threat like COVID-19. Kindness goes above empathy. It does not inspire our action because we too may be infected. Kindness motivates action since the situation we see are, not worthy of the way we would love to live in. Martin Luther King Jr always said about kindness, enjoining us to look that kindness at the end motivates not to "Throw money to an unprivileged" but to "see that the complex which produces them requires different organization". Kindness makes us to reflect on how we have structured the place we sleep in, and to ask how we can change it better, not because we may suffer but because people are suffering and that is not how the earth should be [13].



“Figure 2” hossein fatemi/ panos pictures [13].

Anorexia and compulsive shopping are mostly less prevalent in Indian society, yet increasingly being observed in other countries. COVID19 pandemic and its psychological relationship actually made one apparently cruel cycle which begins with ,depression, stress, more free time with least costing internet services giving rise to addictions which in turn results in instability, irritation, panic attacks and stress only to hold steadily the beginners and orderly ignition of this cruel cycle with gradual after effects [14].A number of the steps that have been recommended to reduce the increase of COVID-19, such as home quarantine, lockdowns and isolation, can potentially break both habitual sequence of sleep and awakenings as well as the number and quality of outside gatherings. This could have a harmful effect on the risk of both psychotic and depressive recurrence [15].Without surprise, physical exercise showed some protective effect for mental health during this world public health emergency [10].

3) SUICIDAL THOUGHTS

Lack of command over gossips and misleading and fake news fuels the fear of COVID-19 in a much larger scale, which was not seen earlier. As a result, people are becoming panic, stressful, and stigmatized, and this unsure situation leads many of them towards suicide [1]. Patients infected with novel, deadly virus may experience fear for the wellbeing of friends and family. Emotions may be provoked by pyrexia, dyspnea and fatigue also the side effects of treatments such as hydroxychloroquine and steroid administration. Suicide attempts has been recorded by these hospitalized patients [16]. As the COVID-19 pandemic increased, scientists began observing a potential for an unusually increased susceptibility to worst mental health conditions, leading to both suicide ideation and attempts [17]. According to WHO each suicide in a society is result of more than 20 suicide attempts [18]. Excessive sensitivity to the COVID- 19 has enhanced risk to individual safety as the pandemic continues to vary people’s everyday lives. People are phobic of COVID-19 and its evil effect on families and loved one, but such fear has become intertwined with the added load of increasing unemployment, restricted supplies of household stock, long queue at provision houses, and less access to public and health-related facilities [17].Statistics from the financial crisis reported that increase in suicides preceded the actual rise in unemployment [18]. Together, these create a new level of intensified risk that, for people who are already swaying back and forth on the edge of financial disaster, may be so strong that they decide acting on their pain, ill fate, and loss of hope with lethal self- harm [17]. The facilities should be easily obtainable through safe communication mediums. Consistent screening for depression and suicidality should be commenced for both patients and healthcare professional. Special guidance should be provided to those with pre existing psychiatric disorders [16].There is good evidence to doubt that this burden may fall non-uniformly across the population. There is reason to consider that geriatric people, the long time ill patients, the socially and physically separated, and persons with high everyday

Subjection to an magnified health risk like the virus are at greater risk for suicidal thoughts and completion than those that are not in these high risk groups. Any endeavor at trying to untwine all of the confounding elements that could be influencing suicidality normally, and more prominently among a representative pandemic survivors, presents a challenge [17]. The challenge of this pandemic might lead to a chance to advance the area of suicide prevention and thus save many lives. All these suicide prevention efforts should be combined into the gross reaction initiative for dealing with COVID 19 crisis [18].

4) ANXIETY

Anxiety is a state of inability to predict, control, or obtain desired results in some upcoming personally salient situation [1]. Increased psychiatric complaints, like anxiety is common among the general public in COVID-19 affected area [19]. COVID-19 has led to lots of misinformation that led to anxiety [20]. The sudden increase in confirmed cases lead to anxiety to frontline medical staff [11]. Anxiety caused by pandemic trigger various disorders and increased experiential avoidance increase the condition [9]. Patients infected with COVID-19 will feel anger, anxiety [16]. Anxiety symptoms negatively affect the sleep quality and also found that female gender, having suggestive COVID-19 symptoms, may have poor quality of life with higher rate of anxiety [21]. During the outbreak, the surgical medical staff suffered risk of self-infection, psychological pressure and these will affect the working status of them [11]. Effect of social isolation on feelings of loneliness may led young people to feel less efficient in overcoming the problem and also anxiety, in addition to provoking a worsening in quality of sleep, increased cortisol levels, reduced melatonin synthesis, with changes in the biological rhythms [21]. Fear of unknown leads to higher anxiety level in both healthy people and those with pre-existing mental health problems [22]. Anxiety not only affect the attention, understanding and decision-making capacity of medical workers, which hinder the fight against COVID-19 [23]. People experiences severe anxiety about their personal health, health of their beloved persons and also about their future which is another cause for exacerbate various psychological problems. Studies show that there is significant difference among educational qualification status in regard to anxiety [2]. People with pre-existing health anxiety would be more vulnerable during pandemics and also stress due to the excessive internet use positively related to health anxiety [24]. Anxiety in society may affect every individual that is individuals who are isolated may experience distress in form of anxiety [3]. It is found that cyberchondria and health anxiety are combined, virus anxiety is strongest [24]. Studies found that severe anxiety among businessman due to pandemic which forces them to a great uncertainty and crisis. There is variation of anxiety according to profession [2]. In this digitalized world, interventions to reduce health anxiety and promote adaptive emotion regulation methods in the form of online tools should be promoted to reduce anxiety during virus pandemics [24].

5) OBSESSIVE COMPULSIVE DISORDER (OCD)

The fear of COVID-19 has positive and significant effect on OCD. Anxiety due to COVID-19 may trigger the OCD symptoms, and it may worsen washing and hoarding behaviors in particular. High emotional reactivity makes the effect of COVID-19 fear on OCD evident. Experimental avoidance that transforms the negative mood caused by the fear of COVID-19 into the symptoms of OCD. This may affect the treatment practice [9]. There is increased number of OCD patients in the recent months due to the fear of contagion and of loved ones falling ill or feelings of loneliness when quarantined from others [7]. Increased loneliness and reduced social interactions are risk factors for mental disorders. The major symptoms include insomnia, distress, and panic because of financial concerns, frustration and boredom. Along with the social distancing, another important way to prevent infection is good hygiene that is wash hand frequently. This may have negative impact on people with OCD causing a worsening of symptoms. Among the wide variety type of obsessions and compulsions, fear of dirt, feeling of being contaminated and excessive washing are the most common ones affecting 50% of patients. Patients with OCD try to resist these thoughts and urges to wash themselves, but they often fail to do so. More frequent cleaning habits may lead to contamination-related obsessions and compulsive actions. Studies shown that there is increase in obsession and compulsion severity after the beginning of the pandemic. One reason might be the limited access to mental health centers. So, we should educate all patients to ask help from mental health professionals and should provide alternative methods like online consultations in this situation [25]. The burden of OCD is worrisome. Even before COVID-19 struck the world, it had a lifetime prevalence of 2-3percent. WHO reported that increase of 2 patients with OC symptoms in out-patient departments all across countries like China, US, UK [26]. Importance of relapse prevention strategies should be implemented at the end of the cognitive

therapy [25]. With increasing the number of countries affected with passing days of isolation, managing mental disorders has been a necessity to maintain the quality of life [26].

6) PHOBIA

In this infectious disease outbreak, the mounting fear among the individual is a common phenomenon. Individuals may feel fear regardless of exposure and other factors. Since fear of becoming infected is higher from greater risk of increased exposure [12]. Fear is a defense mechanism an individual shows against dangerous situations and basic reactions necessary to survive these threatening situations. Fear may lead to various psychological disorders and however long term secondary consequences might be caused due to fear. In addition to this, fear may also trigger the symptoms of other health problems [9]. There is more fear due to high infectivity, severe morbidity and mortality and changing knowledge about the new virus [27]. When fear deepens, it may lead to depression and both fear and depression may lead to anxiety [1]. Appetite loss is a sign of fear because it reflects the biological process of blood leaving the digestive tract into areas of the body that mobilize the person to deal with imminent threat [4]. Fear about getting jobs somehow form career-related anxiety into the mind of current and future workforce [1]. The negative social behavior will often driven by fear and distorted perceptions of risk [22].

Human emotion is a complex set of processes, where fear plays a great role. Due to the outbreak of any global phenomenon the regular expectation comes down and may lead to fear. These pandemic situation cause great fear to those minds who are planning their great future [1]. Fear is a breeding ground for hatred and stigma and it affect the behaviour of people in the community [3]. Barlow identified fear as the alarm system of human psychology and fear is mostly concentrated with future emotions. Also, anxiety increases the fear. Fear of COVID-19 has a direct impact on future workforce career anxiety. Mental health and physical health are seriously affected by the fear [1]. This situation can be overcome by adopting various counselling programmes and other health related programmes like Yoga.

7) STRESS/POST TRAUMATIC STRESS DISORDER/DISTRESS

Although most of the global attention has been immensely concentrated on the treatment and management of the respiratory and cardiovascular complications of the disease, a huge proportion of COVID-19 patients are experiencing psychological problems and stress, whose prevention and intervention practices have lagged behind [16,17,28]. In Italy, rule for lockdown due to prevailing pandemic health emergency began on 10th of March and partially ended on May 3rd, 2020. There was a tremendous increase of psychological distress and clinical presentation of mental illness, and deterioration of quality of sleep in the general population. Previous studies identified that acute infectious disease, like SARS, can cause stress, and posttraumatic stress disorder both in survivors and non-infected people. Another study displayed that PTSD symptoms were reported by 7% of Wuhan residents after the COVID-19 outbreak, in particular by females [21,10,29]. Care providers must be informed of functional neurological symptom disorders after stressful community events particularly in persons with prior psychiatric diagnoses [23]. Provide the patient with full empathetic attention; avoid taking notes during the sessions. Therapeutic alliance could have specific potency in a time of crisis [18]. During the 2003 SARS-CoV outbreak in Taiwan, many of the medical officials in the emergency department and in the psychiatric ward had post-traumatic stress disorder (PTSD) [23,2]. Emergency department staff had comparatively more severe PTSD symptoms than staff in the psychiatric ward [23,22]. The major differences between this two groups were the feeling of interpersonal isolation and the phobia that they would transmit the virus to their loved ones. The prevalence in the general population of PTSD varied from 4% to 41%, the prevalence of major depression increased by 7% after these situations. There are few factors that increase the risk of developing these conditions in the occurrence of these situations that are: female sex, lower socioeconomic status, interpersonal conflicts, frequent social media use and lower resilience and social support. Places, those who reported receiving conflicting information about the lockdown had greater acute stress. This study emphasizes the importance of releasing substantive updates at regular intervals during a crisis event and monitoring social media for rumors to limit rumor exposure and distress. About the possible response to these situations, psychological therapies could have large or moderate effects in reducing PTSD [23]. Another researchers (Fiorillo & Gorwood, 2020) showed that, social dishonor and discrimination towards the people who are infected by the COVID-19 pandemic and their family members is responsible for mental stress among the peoples who are not infected by the pandemic yet now [2]. They are always tensed about their infection and losing of social dignity and peoples behavior towards them [2,5]. A study performed on a university lockdown in the United States after a shooter situation exhibited that, those subjects receiving

conflicting information about the lockdown reported much higher levels of acute stress. In this study the researchers emphasis on the importance of disclosing substantive official news on a regular basis and checking the information provided in social media to avoid false information to minimize mental stress [2,22]. Youngsters get a huge amount of information from social media that can essentially increase stress. Also population with higher education showed to possess more distress ,may be because of high self-awareness of their health [30].Distressed group may take refuge in narcotic substances which are addictive and cheap to allay their negative emotions [14,31].

Stress Level In General People Due To Covid 19 Infections Living In Dhaka and Myemensingh City

“Table 1” stress level of respondents according to age

Age Category	Scale Value(Sv) Stress
Less than 30 years	13.25
31-40	21.75
41-50	20.25
More than 50	27.00

“Table 2” stress level in accordance to professional status [2].

Professional Category	Scale Value(Sv) Stress
Scientist	20.75
Doctor/Health staff	30.50
Administrator	20.25
Defense person	29.75
Teacher	22.25
Engineer	20.25
Businessman	32.75
Students	14.25

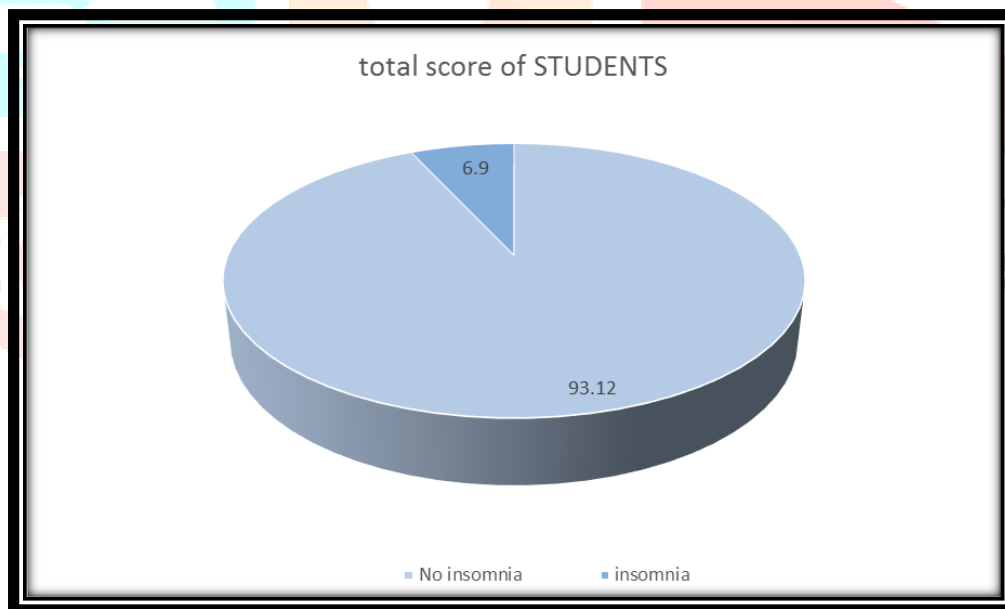
How Relevant Is This To My Practice?

Rapid increase in confirmed cases brought immense stress to frontline medical staff. Measures to limit damage like that of protective equipment and movement restriction measures affected and caused considerable stress [27]. CBT(cognitive behavioral therapy) helps in overcoming maladaptive coping behaviors like avoidance ,antagonistic confrontation and self-blame by increasing their capacity to manage stress [12,31,32]. It is essential to identify staff who suffer from psychological distress or work exhaustion so that timely intervention can be provided and should be encouraged to report their mental state without any fear of blame [12].

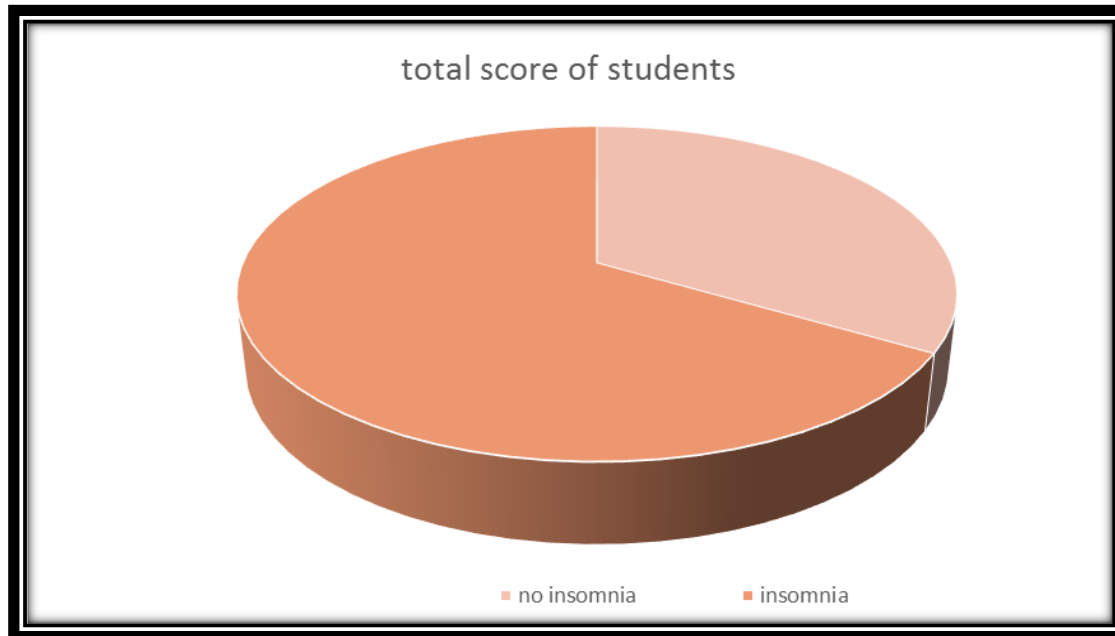
8) INSOMNIA

Traumatic events such as those caused by COVID-19 outbreak can negatively impact sleep quality leading to insomnia [21]. Social isolation associated with quarantine can lead to many mental health sequelae even in healthy people. The major symptoms include irritability and insomnia [25,15]. For instance, in a recent, large survey of people highly susceptible to the coronavirus infection (i.e., Chinese medical workers), the prevalence rate of insomnia was at 36.1% [4].When Google Trends™ was searched for the following keywords: suicide, depression, anxiety and insomnia among 24 countries, they got a positive correlation between RSV [relative search volume] for insomnia and the number of COVID- 19 cases and deaths in some countries. some findings show that proximal effects of the COVID-19 pandemic manifest in less online information seeking for contents related to depression and suicide, and more online activity in seeking for contents associated with insomnia (low-to-moderate strength of correlations) [33].

Most of the medical staffs treating COVID-19 patients, usually working in internal medicine wards and ICUs, have only basic training in providing mental health care. A massive proportion of the workers themselves develop symptoms of insomnia and distress [16, 34, 35,31].A recent review on sleep problems during home confinement due to COVID-19 outbreak by European CBT-I Academy focused the attention on sleep and insomnia [21]. Impact of insomnia is shown by ISI [Insomnia severity index]



“Chart 1” percentage of isi score before covid 19 [21].
No Insomnia: 93.12%, Insomnia : 6.9%



“Chart 2” percentage of ISI score during COVID-19 [21].

NO INSOMNIA: 83.7% INSOMNIA: 16.3 %

Study showed increase in the level of insomnia in students during COVID-19 pandemic [21].

9) SCHIZOPHRENIA AND PSYCHOSIS

Psychosis is one mental health condition that needs specific focus. For one, the relation between influenza infection and psychosis has been identified since the Spanish Flu pandemic in the eighteenth century and subsequent acute psychoses of influenza have been observed during several pandemics. Another effect of COVID-19 pandemic is on the nature and composition of pathology of psychotic patients. The medium and long term social effects of COVID-19 may impact psychotic patient in disproportionate manner. Loneliness, separation, violence, deteriorating physical health, may all especially affect patients of psychosis given their vulnerability to social determinants of health. Use of high dose of steroids to modulate the inflammatory response further more complicates the interaction between psychosis and COVID-19. Psychotic symptoms are triggered by steroids. Psychosis in patients with COVID-19, present a major challenge and potential infection control risk to medical teams [36].

Although the global prevalence of schizophrenia is 0.4%, it becomes a massive burden to families and society. These patients also have high mortality rates and comorbid medical conditions. If they are more susceptible to SARS-CoV2 infection, have worse clinical outcomes once contaminated, or have psychotic relapses in the context of the COVID-19 pandemic, there will be an extra burden to a system that is already pressed to the limit.

Overall, most schizophrenia patients would fit at least one known risk group for COVID-19 and, if admitted to a hospital, should be considered at increased risk of worse clinical outcomes.

Schizophrenia patients known to have higher difficulty following adequate hygiene practices than the general population. Schizophrenia patients are at higher risk of infection and worse outcomes, particularly if affected by clinical comorbidities. They are also vulnerable to worsening psychiatric manifestations and relapse due to fear of the disease, stress, and the boredom along with compulsory isolation. Therefore, health professionals and families should provide extra attention and support to prevent COVID-19 infection among individuals with schizophrenia and should identify both respiratory and psychiatric symptoms as soon as possible [37].

Source of funding: None.

Conflict of interest: None.

10) CONCLUSION

Present focus on the transmission of COVID-19 infection all over the globe may probably distract public attention from psychosocial consequences of the outbreak in the affected individuals and in the general population [22]. It is important to plan for the inevitability of loneliness and its sequel as populations physically and socially isolate and to develop ways to intervene. Digital technologies can bridge social distance, even while physical distancing measures are in place. Normal structures where people accumulate, whether places of worship, or gyms, and yoga studios, can conduct online services on a schedule similar to what was in place prior to social distancing. Some offices are creating virtual workspace where people can work and connect over video connections, so they are not virtually alone. Employers should ensure that each employee receives daily outreach during the work week, through a supervisor, just to ensure social contact. Many observers note that out reach that involves voice and/or video is superior to text messaging. Extra efforts should be made to ensure connections with people who are typically marginalized and isolated, including the elderly, undocumented immigrants, homeless persons, orphans and those with mental illness. Social media can also be used to encourage people to connect and direct individuals to trusted resources for mental health support. These platforms can also enhance check-in functions to provide regular contact with people as well as to allow individuals to share information about their well-being and resource needs. Even with all of these steps, there will still be population that are lonely and isolated. This shows the necessity for remote approaches for outreach and screening for loneliness and associated mental health conditions so that social support can be provided. Developing and implementing routines, particularly for kids who are out of school, ensuring that they have access to regular programmed work. Online substitutes for daily routines, as mentioned above, can be very helpful, but not all children have access to technologies that enable remote connectivity.

Approaches for ensuring structure, continuity of learning, and socialization to limit the effect of short – and long-term sheltering in place [38]. Surely this moment calls for careful reflection and a reinvestment in compassion as a foundational approach to health. Providing attention to compassion in this way is not sentimental. It is pointing out a tangible good, without which health for all is nearly impossible. In a sense, COVID-19 has shown us that a healthy person and a healthy world are the same. And healthy people and a healthy world are both strengthened immeasurably by having compassion at the heart of health [13]. We can hope that leaders across the countries realize that both economic and emotional depression need to be addressed. No remedies for either should be promoted without sufficient evaluation of their risks and benefits [39].

11) REFERENCE

1. Mahmud MS, Talukder MU, Rahman SM. Does 'Fear of COVID-19' trigger future career anxiety? An empirical investigation considering depression from COVID-19 as a mediator. *The International Journal of Social Psychiatry*. 2020 Jul 2.
2. Khaled SM, Akhter M. THE OUTBREAK OF NOVEL CORONAVIRUS DISEASE (COVID-19) PANDEMIC: CONSEQUENCES ON PUBLIC MENTAL HEALTH. *Journal of Brain Sciences*. 2020;3(1):1-5.
3. Roy D, Tripathy S, Kar SK, Sharma N, Verma SK, Kaushal V. Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian Journal of Psychiatry*. 2020 Apr 8:102083.
4. Lee SA. Coronavirus Anxiety Scale: A brief mental health screener for COVID-19 related anxiety. *Death studies*. 2020 Jul 2;44(7):393-401.
5. Stefana A, Youngstrom EA, Jun C, Hinshaw S, Maxwell V, Michalak E, Vieta E. The COVID- 19 pandemic is a crisis and opportunity for bipolar disorder. *Bipolar Disorders*. 2020 Jun 8.
6. Jakovljevic M, Bjedov S, Jaksic N, Jakovljevic I. COVID-19 pandemia and public and global mental health from the perspective of global health security. *Psychiatria Danubina*. 2020 Apr 16;32(1):6-14.
7. Ng QX, Chee KT, De Deyn ML, Chua Z. Staying connected during the COVID-19 pandemic. *International Journal of Social Psychiatry*. 2020 May 8:0020764020926562.
8. Mukhtar S. Psychological health during the coronavirus disease 2019 pandemic outbreak. *International Journal of Social Psychiatry*. 2020 May 21:0020764020925835.

9. Seçer İ, Ulaş S. An Investigation of the Effect of COVID-19 on OCD in Youth in the Context of Emotional Reactivity, Experiential Avoidance, Depression and Anxiety. *International Journal of Mental Health and Addiction*. 2020 Jun 13:1-4.
10. Chen F, Zheng D, Liu J, Gong Y, Guan Z, Lou D. Depression and anxiety among adolescents during COVID-19: A cross-sectional study. *Brain, Behavior, and Immunity*. 2020 May 25.
11. Xu J, Xu QH, Wang CM, Wang J. Psychological status of surgical staff during the COVID-19 outbreak. *Psychiatry research*. 2020 Apr 11:112955.
12. Ho CS, Chee C, Ho R. Mental health strategies to combat the psychological impact of coronavirus disease 2019 (COVID-19) beyond paranoia and panic. *Ann Acad Med Singapore*. 2020 Mar 1;49(3):1-6.
13. Galea S. Compassion in a time of COVID-19. *The Lancet*. 2020 May 22.
14. Dubey MJ, Ghosh R, Chatterjee S, Biswas P, Chatterjee S, Dubey S. COVID-19 and addiction. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*. 2020 Jun 9.
15. Rajkumar RP. Bipolar disorder, COVID- 19, and the risk of relapse. *Bipolar Disorders*. 2020 Jun 8.
16. Epstein D, Andrawis W, Lipsky AM, Ziad HA, Matan M. Anxiety and Suicidality in a Hospitalized Patient with COVID-19 Infection. *European journal of case reports in internal medicine*. 2020;7(5).
17. Fitzpatrick KM, Harris C, Drawve G. How bad is it? Suicidality in the middle of the COVID- 19 pandemic. *Suicide and Life- Threatening Behavior*. 2020 Jun 26.
18. Kawohl W, Nordt C. COVID-19, unemployment, and suicide. *The Lancet Psychiatry*. 2020 May 1;7(5):389-90.
19. Eisma MC, Boelen PA, Lenferink LI. Prolonged grief disorder following the Coronavirus (COVID-19) pandemic. *Psychiatry Research*. 2020 Jun;288:113031.
20. Banerjee D. Psychological preparedness for the COVID-19 pandemic, perspectives from India. *Psychiatry Research*. 2020 Jun;288:112999.
21. Marelli S, Castelnuovo A, Somma A, Castronovo V, Mombelli S, Bottoni D, Leitner C, Fossati A, Ferini-Strambi L. Impact of COVID-19 lockdown on sleep quality in university students and administration staff. *Journal of Neurology*. 2020 Jul 11:1-8.
22. Torales J, O'Higgins M, Castaldelli-Maia JM, Ventriglio A. The outbreak of COVID-19 coronavirus and its impact on global mental health. *International Journal of Social Psychiatry*. 2020 Mar 31:0020764020915212.
23. Torales J, O'Higgins M, Rios-González CM, Barrios I, García-Franco O, Castaldelli-Maia JM, Ventriglio A. Considerations on the mental health impact of the novel coronavirus outbreak (COVID-19).
24. Jungmann SM, Witthöft M. Health anxiety, cyberchondria, and coping in the current COVID-19 pandemic: Which factors are related to coronavirus anxiety?. *Journal of Anxiety Disorders*. 2020 May 20:102239.
25. Davide P, Andrea P, Martina O, Andrea E, Davide D, Mario A. The impact of the COVID-19 pandemic on patients with OCD: effects of contamination symptoms and remission state before the quarantine in a preliminary naturalistic study. *Psychiatry Research*. 2020 Jun 9:113213.
26. Banerjee D. The other side of COVID-19: Impact on obsessive compulsive disorder (OCD) and hoarding. *Psychiatry research*. 2020 Apr 11.
27. MY H. Mental health and psychosocial support during healthcare emergencies—COVID-19 pandemic. *Singapore Med J*. 2020;61(7):357-62.
28. Vahia IV, Blazer DG, Smith GS, Karp JF, Steffens DC, Forester BP, Tampi R, Agronin M, Jeste DV, Reynolds III CF. COVID-19, mental health and aging: A need for new knowledge to bridge science and service. *The American Journal of Geriatric Psychiatry*. 2020 Jul 1.

29. Zhang Y, Ma ZF. Impact of the COVID-19 pandemic on mental health and quality of life among local residents in Liaoning Province, China: A cross-sectional study. *International journal of environmental research and public health*. 2020 Jan;17(7):2381.
30. Qiu J, Shen B, Zhao M, Wang Z, Xie B, Xu Y. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. *General psychiatry*. 2020;33(2).
31. Hayer L, Singh M, Correll CU. Adapting to the impact of COVID-19 on mental health: an international perspective. *Journal of Psychiatry & Neuroscience: JPN*. 2020 Jul 1;45(4):229-33.
32. El Haj M, Altintas E, Chapelet G, Kapogiannis D, Gallouj K. High depression and anxiety in people with Alzheimer's disease living in retirement homes during the covid-19 crisis. *Psychiatry Research*. 2020 Sep 1;291:113294.
33. Misiak B, Szczeński D, Kaczanowicz L, Rymaszewska J. The COVID-19 outbreak and Google searches: Is it really the time to worry about global mental health?. *Brain, Behavior, and Immunity*. 2020 Apr 29.
34. Chen Y, Zhou H, Zhou Y, Zhou F. Prevalence of self-reported depression and anxiety among pediatric medical staff members during the COVID-19 outbreak in Guiyang, China. *Psychiatry research*. 2020 Jun;288:113005.
35. Chrisman AK. Debate:# Together despite the distance. *Child and adolescent mental health*. 2020 Sep;25(3):180-1.
36. Brown E, Gray R, Monaco SL, O'Donoghue B, Nelson B, Thompson A, Francey S, McGorry P. The potential impact of COVID-19 on psychosis: A rapid review of contemporary epidemic and pandemic research. *Schizophrenia research*. 2020 May 6.
37. Fonseca L, Diniz E, Mendonca G, Malinowski F, Mari J, Gadelha A. Schizophrenia and COVID-19: risks and recommendations. *Brazilian Journal of Psychiatry*. 2020 Jun;42(3):236-8.
38. Galea S, Merchant RM, Lurie N. The mental health consequences of COVID-19 and physical distancing: The need for prevention and early intervention. *JAMA internal medicine*. 2020 Jun 1;180(6):817-8.
39. Shader RI. COVID-19 and Depression. *Clinical Therapeutics*. 2020 Apr 27.