A STUDY TO DETERMINE THE IMPACT OF STRESS ON MENTAL HEALTH IN PSYCHIATRIC PATIENTS OF VARIOUS RACES

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Abstract

People suffering from severe mental illness (SMI) have a significant negative impact on their communities as compared to the normal population. There are a variety of factors that contribute to the majority of this excess mortality. It is reported in this paper on a study that was conducted to explore the impact on mental health among psychiatric patients all over the world. We were able to determine the prevalence rates as well as the factors that contributed to the elevated morbidity and mortality rates. There is evidence that increased risk for the majority of physical diseases is caused by a combination of lifestyle variables as well as treatment-specific risk factors. There is also adequate data to imply that people with SMI are less likely than the general population to obtain normal levels of care for the majority of illnesses than the general population. The current period of Covid 19 demonstrates the enormous amount of mental stress experienced by health practitioners all across the world. A range of mental health disorders are caused by the pandemic, which is particularly widespread among psychiatric patients due to the unusual nature of the outbreak. Psychiatric patients are frequently affected by anxiety, depression, burnout, insomnia, and other stress-related diseases, according to the American Academy of Family Physicians (Freudenberger, H). It is the purpose of this study, as well as other low-resource countries, to draw attention to the mental health aspects of the pandemic among psychiatric patients.

Keywords: Psychiatric Patients, Pandemic, Mental Health Disorders, Anxiety, Depression, Burnout

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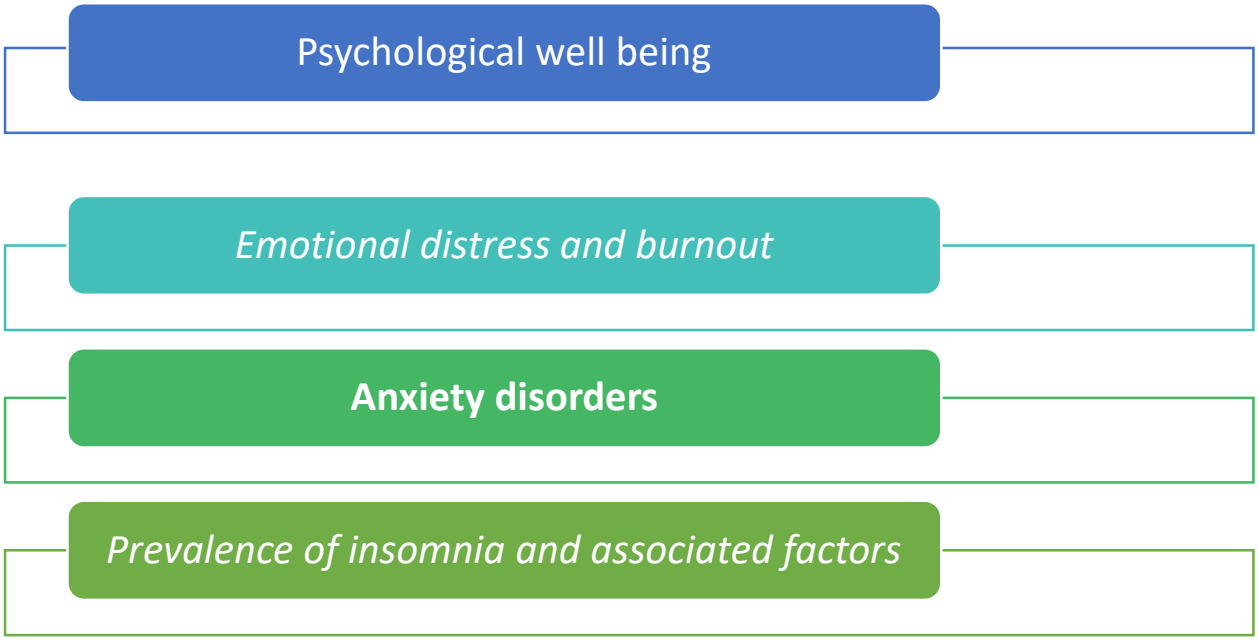
1. Introduction

An unprecedented COVID-19 pandemic for the twenty-first-century population is causing widespread panic throughout the world's healthcare system, threatening the entire world's economy. According to Cheng and Chan (2008), a *pandemic* is defined as "an epidemic that occurs worldwide, or over a vast area, transcends international boundaries, and typically impacts a huge number of individuals. Nonetheless, this is not the first time that a pandemic throughout history has challenged humanity. Over the previous century, several pandemics have emerged and been dealt with, including the "Spanish flu, severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS), Ebola, swine flu, and other viruses." Current research reveals that the pandemic produces significant mental health difficulties in

both infected and non-infected people (insomnia, anxiety, depression, stress-related illnesses, including post-traumatic stress disorder (PTSD)), regardless of whether they are infected or not. Psychiatric patients are at heightened risk of developing mental health problems due to working in such a unique circumstance, which is generally beyond their skills and the possibility of getting the virus. A significant prevalence of mental health disorders (such as burnout, sleeplessness, anxiety, depression, sickness anxiety) has been reported in the literature among psychiatric patients, linked to several socio-psychosocial variables. Despite this, the mental health needs of psychiatric patients and other patients are routinely disregarded. It is usually considered that because such tragedies are dealt with regularly by these people, they will be able to deal with them effectively and efficiently. A new pandemic infection virus, COVID-19, has been added to the list of pandemics that can cause infection (Rajkumar,2020). Patients' mental health issues, particularly those related to quarantine/isolation or social distancing, are increasingly recognized, and efforts are being made to mitigate their psychological impact. Despite this, literature on the psychological impact of pandemics (including COVID-19) on psychiatric patients is lacking (Xiang Y-T,2019).

The purpose of this paper is to look into the available literature on the mental health aspects of the patients, discuss some of the contentious issues, and provide future directions, particularly in the Indian context, that can be applied to other developing countries with limited healthcare resources, as well.



The prevalence of mental health problems among psychiatric patients. It has been reported in the literature that a considerable proportion of psychiatric patients during the pandemic have mental health problems disorders. There are several of them, as follows:

Emotional distress and burnout

Stress and burnout are becoming increasingly widespread in today's world, especially for those who work in a stressful environment. The intrinsic aspects of the hospital psychiatric patients are at exceptionally high risk. The prevalence of mental health problems among psychiatric patients of stress and burnout, both of which can have a significant influence on both physical and mental health (McMahon, 2016). Because of this, the goal of this study was to investigate work-related stressors that potentially predict burnout in psychiatric patients in order to acquire a better understanding of these individuals' mental well-being. Based on these findings, interventions to assist these professionals in coping with stress and burnout can be developed and put into practice. It is demonstrated that one facet of

burnout, namely physical exhaustion, was prevalent. A higher level of work stress was connected with increased levels of physical depletion, a characteristic of burnout (Kang, 2020). Working from home and feeling stressed were the most significant predictors of physical tiredness in this study. Work stress was found to predict one of the dimensions of burnout, namely cognitive weariness, with higher levels of stress associated with higher levels of cognitive fatigue. Working too much and being stressed out by the work-home interface were the two most common types of occupational stress that were significant predictors of cognitive fatigue. Increased levels of cognitive fatigue were associated with increased stress levels in those who reported higher levels of cognitive fatigue.

Anxiety disorders

Anxiety has been found among psychiatric patients, with a significant number of males in India. There are differences in the severity of anxiety at varying levels of severity (Mishra, 2016). In order to determine the risk variables, we merged all levels of anxiety into a single variable (anxiety vs. no anxiety) based on the small number of respondents who reported moderate or severe anxiety. The presence of suspected or confirmed COVID-19 infections was associated with considerably higher levels of anxiety when compared to when the subjects had no prior contact with or exposure to the virus. Psychiatric patients who were concerned about the higher risk of COVID-19 infection were shown to be much more anxious than those who were not concerned about the increased risk. When comparing poor sleep results to better sleep outcomes, the duration and quality of sleep are highly correlated, with the latter being significantly connected with higher anxiety rates.

Additionally, reduced hunger and less diet regularity were substantially associated with greater levels of anxiety. In the same setting, shorter exercise durations and lower exercise intensities were also related to considerably higher levels of anxiety in the participants. Finally, persons in poor physical condition (also known as "sub-health") were shown to be substantially more likely to experience anxiety than those in good physical condition.

The prevalence of insomnia and associated factors

Following the Insomnia Severity Index, more than 70 percent patients reported light insomnia, a small number of psychiatric patients reported moderate insomnia, and a very small number of Psychiatric patients reported severe insomnia (Huang J, 2020). A single variable (insomnia or no insomnia) was created for the goal of detecting the connected risk variables, which was accomplished by grouping all degrees of insomnia into a single variable (insomnia or no insomnia). Interestingly, married persons were more likely than unmarried people to suffer from sleeplessness, a finding that surprised researchers. An increase in the chance of insomnia was also caused by other factors such as poor or inadequate sleep length and quality; poor or inadequate appetite; irregular food; insufficient or inadequate exercise; and physical problems. As a result of all of the aforementioned causes, there were statistically significant differences in the mean severity of insomnia.

2. Psychological factors

According to research, psychiatric patients' personalities are a key predictor of developing mental health issues during a pandemic crisis. Some studies have found that those with anxious-avoidant personality traits, fear of scrutiny, and avoiding coping mechanisms are more likely to experience mental health stress. Several other research backed this up. " The emotional exhaustion, tension, worry, despair, and post-traumatic stress disorder (PTSD) are higher in mental patients". Toughness, on the other hand, directly promotes positive mental health during an outbreak and indirectly aids psychiatric patients by reducing stress. Having a positive attitude toward work and improved organizational functioning is connected with vigour (described as having high levels of energy, mental resilience, stamina, and persistence when obstacles emerge) among people during the SARS outbreak (Guan Z, 2007). According to the findings, problem-focused coping mechanisms among psychiatric patients minimized mental stress and alleviated fear, resulting in a reduction in mental health problems throughout the pandemic.

3. The Influence of Socio-Environmental Elements

The socio-environment is the immediate physical and cultural context in which people live, and it is comprised of the people themselves. The most important social-environmental components in this study are all of the surrounding elements, communication systems, physical amenities, as well as the attitudes and beliefs held by the inhabitants of various locations. In this study, we looked at socioeconomic and environmental aspects.

4. Data Source and Research Methodology

The study used a multistage sampling approach was used. In stage 1150 hospitals were ultimately chosen based on regional variations, a prior research partnership with the principal investigator, and the willingness of the site investigators to participate. The sampling technique in second process included the identification of levels within each hospital. In later process, one-third of the health-focused classes were chosen at random from each level. Psychiatric patients enrolled in such facilities were recruited as study participants in last process.

Dimensions

Dependent Variable

Mental Health Status

The 12-item Health Questionnaire was used to assess participants' mental health (CHQ). It includes questions about "somatic problems, so as headaches, palpitations, sleeplessness, and other questions about interpersonal connections, confidence. This questionnaire's items were scored on a four-point scale. The responses "not at all" and "as usual" were recorded as 0, while "rather than usual" and "far more than usual" were recoded as 1. To assess the severity of mental problems, the total score was computed. According to traditional practice, a cut-off score of 3 or higher indicated a mental illness. The performance of the receiver operating characteristic curve was used to classify this cut-off score, with the final clinical diagnosis serving as the gold standard in determining a mental condition.

5. Independent Variables

Socio demographic Characteristics

Some socio demographic features were reported and included such as: age, gender, parental occupation, and monthly expenditure.

6. Data Analysis

For statistical analysis, the survey data were entered into an Excel database and then imported into SPSS (22.0). On the basis of socio demographic data, descriptive statistics were calculated. They were all categorical. We used unconditional logistic regression to assess correlations between independent and dependent variables. Unadjusted and adjusted models were built to study and corroborate these links. The nested hierarchical multilevel modelling method was chosen over a single-level regression method. We avoided ecological and atomistic errors by modelling random variation at the person and hospital levels. Many models were developed for this study.

The Null Model, a two-level (individual and institutional) model with random intercepts, was used to account for mental disorder heterogeneity across 50 hospitals. These four additional models for examining the impact of variables on mental diseases were created by adding fixed main effects to the original model. A model of emotional distress, weariness, and anxiety stress was built first (Model 1). Model 1 The second model included anxiety, insomnia, and stress. Model 3 included research on sleepiness and stress. The final model included three types of stress (Model 4). (M4) Models 1–4 accounted for key confounding factors on mental illnesses. Using the models, we investigated the relative influence of stress on mental diseases.

7. Outcome

The poll was completed by 11,954 respondents from 50 different hospitals across India, with a legitimate response rate of 97.50 percent. 15.80 percent were under the age of 20, 63.60 percent were between the ages of 20 and 25, and 20.50 percent were 25 or older. Male made up 35.60 percent of the study sample, while female made up 64.40 percent. The majority of participants (93.30 percent) and around 80% of the parents worked in operations or commercial work—

almost four-fifths of the people earn between Rs 1, 0000 and Rs 1, 9990 every month. Moreover, half of the participants were admitted to hospitals in Central India, and 35.9 percent were classified as high level (see Table 1). The total prevalence of mental disorders in this sample of hospital patients was 22.80 percent (95.00 percent CI: 22.00–23.50 percent). The prevalence of mental disorders is shown in Table 1 by socio demographic variables. Mental illnesses were more common in older individuals than in younger patients. Female patients had a higher prevalence of mental problems (24.50 percent) than male patients (19.60 percent). Medical patients had a higher prevalence of mental disorders (23.2 percent) than non-medical patients (19.80 percent).

In terms of psychological factors, the unadjusted models revealed that emotional distress, burnout, anxiety disorders, and the prevalence of sleeplessness and the linked component stress were all positively associated with mental disorders. Logistic regression on many levels Table 2's Model 1 revealed that both emotional distress burnout and anxiety disorders were connected with mental problems. However, after the prevalence of sleeplessness and associated factor stress were considered in Models 2 and 3, anxiety disorders and emotional distress burnouts had low relevance for predicting mental diseases. The prevalence of sleeplessness and associated factor stress was more significant than anxiety disorders and emotional distress burnout. The adjusted full model (Model 4) revealed that patients who reported higher levels of emotional distress, burnout, insomnia, and associated factor stress were 1.43 and 2.55 times more likely to have a mental disorder, respectively, than those who reported lower levels of stress, but life stress was not significantly associated with mental disorders. Models 2–4, which incorporated the prevalence of insomnia and associated factor stress, had lower fixed parameters than Model 1.

This revealed that the prevalence of insomnia and the associated factor stress could account for the increased diversity in mental health problems and that it was also a significant risk factor for mental illnesses.

Group	*N*	*Percentage of sample*	*Prevalence (95% CI)*	*Unadjusted OR*
Socio demographic factors Age (years)				
Age (years) <20	*1,894*	*15.8*	*20.70 (18.90-22.60)*	*1.00*
20-25	*2392*	*20.0*	*20.90(19.20-22.50)*	*1.01(0.87-1.17)*
25-30	*2762*	*23.10*	*23.30(21.7-24.8)*	*1.16(1.01-1.27)*
30-35	*2450*	*20.50*	*22.30(20.6-24.0)*	*1.10(0.95-1.27)***
35-40	*2456*	*20.50*	*26.10(24.4-27.8*	*1.35(1.17-1.56)***
GENDER				
Female	*7701*	*64.4*	*24.5(23.5-27.8)*	*1.33(1.17-1.56)***
Male	*4253*	*35.6*	*19.6(18.4-20.8)*	*1.00*
Category				
PSYCHIATRIC PATIENTS	*10507*	*87.9*	*23.2(22.4-24.0*	*1.22(1.06-1.40)***
OTHERS	*1447*	*12.1*	*19.8(17.8-21.9)*	*1.00*
Monthly expenditure				

<10000	*1299*	*10.90*	*22.6(20.30-24.80)*	*1.00*
10000-14990	*6165*	*51.60*	*24.30(23.20-25.30)*	*1.10(0.95-1.270*
15000-19990	*3506*	*29.30*	*20.50(19.1-21.90)*	*0.89(0.76-1.03)*
20000 and above	*984*	*8.20*	*21.5(18.90-24.10)%CI)*	*0.94(0.77-1.15)*

Father's occupation

commercial work	*9457*	*79.10*	*22.90(22.0-23.70)*	*1.00*
Staff and administration	*1741*	*14.60*	*21.90(20.0-23.90)*	*0.95(0.84-1.07)*
Professionals	*756*	*6.30*	*23.10(20.1-26.20)*	*1.02(0.85-1.21)*

Mother's occupation

commercial work	*9600*	*80.30*	*23.10(22.20-23.90)*	*1.00*
Staff and administration	*148*	*12.9*	*21.30(19.20-23.4)*	*0.94(0.79-1.12)*
Professionals	*806*	*6.70*	*22.0(19.10-24.90)*	*0.94(0.79-1.12)*

Psychological factors

Group	*N*	*Percentage of Sample*	*Prevalence*	*Unadjusted OR*
Emotional distress and burnout				
Low score	*9636*	*80.60*	*20.0(19.20-20.80)*	*1.00*
High score	*2318*	*19.40*	*34.20(32.30-36.20)*	*2.08(1.88-2.30)***
Anxiety disorders				
low score	*10960*	*91.20*	*21.60(20.90-22.40)*	*1.00*
High score	*1048*	*8.80*	*34.50(31.60-37.40)*	*1.91(1.67-2.19)***
Prevalence of insomnia and associated factors				
Low score	*9614*	*80.40*	*19.20(18.40-20.0)*	*1.00*
High score	*2340*	*19.60*	*37.60(35.60-39.50)*	*2.54(2.30-2.80)***

*p<0.05;**p<0.001.

TABLE 2: Results of multilevel analysis on mental disorders by different types of stress.#

Group	*Null model*	*Model 1*	*Model 2*	*Model 3*	*Model 4*
Emotional distress and burnout					
Low score		*1.00*		*1.00*	*1.00*
High score		*1.91(1.61-2.26)***		*1.46(1.17-1.82)***	*1.43(1.17-1.74)***
Anxiety disorders					
Low score		*1.00*	*1.00*		*1.00*
High score		*1.61(1.12-2.23)***	*1.34(0.83-2.15)*		*1.22(0.78-1.92)*
Prevalence of insomnia and associated factors					
Low score	*4.2075***	*3.947***			
High score					
Fixed parameters	*4.2075***	*3.947***	*3.6162***	*2.20(2.06-3.37)***	*2.55(1.94-3.35)***
Random Parameters between Psychiatric patients hospitals	*0.1758***	*0.1360***	*0.1462***	*0.1433***	*0.1450***

**p<0.01.# Emotional anguish, fatigue, and anxiety tension were all included in Model 1. Model 2 included anxiety stress, as well as the prevalence of sleeplessness and associated stress. Model 3 incorporated emotional anguish, burnout, the prevalence of insomnia, and the stress connected with it. Three types of stress were incorporated in the final model (Model 4). From Model 1 to Model 4, the socio demographic and contextual variables stated in Table 1 were all controlled.

8. Conclusion

This study adds to the body of knowledge by finding a link between insomnia and mental health issues in college-aged people. In this student sample, sleepiness and stress are more closely associated to mental problems than emotional distress, burnout, and anxiety stress. It adds to the research linking stress to mental health issues. The findings matched those of a previous study on sleeplessness and the link between stress and physical illness. This study's empirical findings backed up the deleterious impact of insomnia and stress on perceived mental health. There are several possible factors for the predominance of insomnia and stress. Sleeplessness and stress are more common when an event or circumstance is ambiguous, inconsistent, or unpredictable. Sleeplessness and accompanying tension occur when a person cannot assign precise values to items or events or predict outcomes due to a lack of sufficient clues. Stress can arise from a lack of knowledge or resources about one's position or plans.

People in India are going through significantly more substantial societal transformation than in the past. Aside from strong economic growth, considerable social anomie, growing wealth disparity, and class consolidation are all causing

problems (Yang et al., 2017b). As a result, many people suffer from insomnia and stress. In one study, 43.00 percent of city dwellers reported moderate or severe stress owing to insomnia and stress. An intervention study for chronic disease patients indicated that an uncertainty management project can significantly improve emotional and mental wellbeing. These findings imply that future study should focus on sleeplessness, stress management, and mental health therapies.

The current study sought to raise awareness of the pandemic's psychosocial impact on psychiatric patients (Lazarus,1993). Burnout, anxiety, depression, stress-related diseases, and other conditions are very common among psychiatric patients. Biological, psychological, and economical factors all have a role. Misinformation, lack of protective equipment, stigma, and job-related stress are all significant risk factors for developing mental health problems in psychiatric patients. More over one-fifth of the hospitals reported mental issues, showing that mental health is an urgent issue that requires immediate attention. It was revealed that some sociodemographic and hospital characteristics correlated with total mental disease prevalence. We believe this is the first multi-hospital study in India to show these relationships. Disparities in educational and economic resources may be an issue. Poor study conditions can impact one's mental health.

Finally, occupational stress had an independent influence on emotional exhaustion, as previously mentioned. Interpersonal interactions at work, job overload, the work-home interface, coordinating training activities, and dealing with patients were all predictors of emotional exhaustion in psychiatric patients. Unlike the majority of predictors, greater levels of patient stress were associated with reduced unpleasant emotions of fatigue (Lai, 2019). Contrary to the findings of most other studies, working with patients was found to be a protective factor against emotional exhaustion and hence stress in this study.

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