Mental health concerns in outpatients during COVID-19 pandemic: Comparison between psychiatric and general hospital clinics in an Indian population

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ABSTRACT

We intended to compare mental health concerns in patients attending a general hospital clinic with that of patients attending a psychiatric clinic during the coronavirus disease 2019 (COVID-19) pandemic. We specially wished to know about the perceived stress, worries, possibility of anxiety and depression, and the quality of life (QOL) of the patients. In a cross-sectional study, we used two screening questions for depression, Generalised Anxiety Disorder-2 (GAD-2) scale for anxiety, Perceived Stress Scale (PSS) for stress, nature and degree of worries in a 0–10 scale, and QOL in a 1–10 scale. Majority (75.5 percent) of outpatients had moderate to high level of stress, 76.5 percent were screen positive for depression, and 42 percent for anxiety. Psychiatric patients had significantly higher perceived stress, level of worry, and lower QOL to those with physical illness and were screen positive for depression (99 percent v 54 percent) and anxiety (68 percent v 16 percent), respectively. Patients with major physical illnesses had significantly higher stress levels and anxiety compared with those without. Fear of getting the infection, loss of job, and financial issues were the major worries along with social stigma. The results highlighted the need for screening mental health concerns in general hospital and psychiatric outpatients during the COVID-19 pandemic and facilitate appropriate interventions.

Key words: anxiety, COVID-19, depression, outpatient, physical illness, psychiatry, psychological stress

INTRODUCTION

Mental health impact of coronavirus disease 2019 (COVID-19) pandemic has been pervasive, affecting almost all sections of the population. There are many studies on the psychological stress, anxiety, depression, and post-traumatic stress in general populations, COVID-19 patients, and health workers including doctors. Studies involving general population report large proportions having stress symptoms, anxiety and depression, and lower psychological well-being. The reported figures during COVID-19 pandemic are higher than the usual prevalence in general population.

An online survey conducted in the United Kingdom found that 31.6 percent participants had moderate to severe depression and 26 percent had moderate to severe anxiety. Another online survey involving multiple countries reported moderate to severe anxiety in 21.2 percent, depression in 15 percent, and probable post-traumatic stress disorder (PTSD) in 34.1 percent. A study in Denmark reported that the psychological well-being of general public decreased...
during COVID-19\textsuperscript{7} and it was negatively correlated with anxiety and depression. It is also well reported that health professionals and family members of patients admitted to hospital had increased anxiety and depression,\textsuperscript{8} eg, 22.9 percent general practitioners in Italy had moderate to severe depressive symptoms.\textsuperscript{8}

It is probable that patients attending the outpatient departments (OPD) during the pandemic would be experiencing increased stress. A study in a medical college OPD in Kathmandu reported that 36.5 percent had mental health problems based on General Health Questionnaire-12; 67.6 percent were stressed following the lockdown, with a mean stress of 2.9 in a scale ranging from 1 to 7.\textsuperscript{9} There is limited information about the mental health concerns and support needs of patients attending OPD; especially from low- and middle-income countries (LMIC), where the healthcare infrastructure was struggling to deal with the COVID-19 situation. In addition, there are hardly any comparative studies about the impact on mentally ill patients with that on patients attending general hospital OPD for physical illnesses. OPD attendance is most often the first contact of the patients with health services and provides an opportunity for assessment and intervention.

We intended to compare mental health concerns in patients attending a general hospital OPD with that of patients attending a psychiatric OPD during the COVID-19 pandemic. We specially wished to screen for anxiety and depression and explore about the perceived stress, worries, and QOL of the patients. It was expected that the results may help to evaluate the mental health-related issues in the people attending OPDs, which may reflect on the service and support needs of patients.

**METHODS**

Consecutive consenting patients who were attending a general hospital OPD for physical illnesses, specially set up during COVID-19 pandemic (physical health group, PH), and those attending a psychiatric OPD (mental health group, MH) in a medical college set up were recruited during the months of June and July, 2020. We recruited 100 patients from each of the two clinical settings (PH and MH).

Demographic details, residence in COVID-19 risk zones (red = sizeable number of cases, orange = only a few cases, and green = no confirmed cases at all or in the previous 21 days) based on identification COVID-19 cases in the neighbourhood and determined by authorities, and COVID-19 test status were collected. Information on COVID-19 symptoms, both core (fever, new onset cough, loss of taste, and loss of smell) and associated symptoms (chest tightness, muscle aches and pain, fatigue/tiredness, difficulty in breathing, or any other related symptoms), in the previous 1 month was collected. We checked for self-reported illnesses such as high blood pressure, diabetes, increased weight or obesity, asthma, and heart disease, which were considered as risk factors for COVID-19-related complications, along with substance use and any other illnesses. It was ascertained whether they were taking any regular daily medications.

We used two screening questions for depression with yes or no answers suggested by National Institute for Health and Care Excellence (NICE); a positive answer to either question would suggest the need for evaluation for depression.\textsuperscript{10} These two screening questions have sensitivity and specificity of 97 percent and 67 percent, respectively.\textsuperscript{11}

Anxiety was screened using Generalised Anxiety Disorder (GAD-2) scale; a score of 3 points is the preferred cutoff for identifying possible cases in which further diagnostic evaluation is warranted. Using a cutoff of 3 the GAD-2 has a sensitivity of 86 percent and specificity of 83 percent for diagnosis generalized anxiety disorder. GAD-2 has been used as a valid screening tool for anxiety disorders.\textsuperscript{12}

We used Perceived Stress Scale (PSS) to assess the stress in last 1 month.\textsuperscript{13} Total PSS score suggest low (0–13), moderate (14–26), and high (27–40) stress levels. Level of worry in the last 1 month was assessed using a scale of 0–10, where 0 is no worries and 10 is extremely severe worry. Reasons of most pressing reasons for worry were asked through open-ended questions and there were options up to three responses, from which the themes were derived. QOL in the last month was also checked in a scale of 1–10 (1 being worst and 10 is the best).
Ethics

The project was approved by the institutional ethics committee (IEC/2020/291). Voluntariness, confidentiality, anonymity of data, and the option to opt out anytime were stressed. Written informed consent was obtained. There was psychological support available in the form of counselling. Written material on stress management and psychological support was prepared in the local language and provided as an information leaflet. Further help including referral and support was available in the Mental Health Institute for all who would need.

Statistics

Primary outcome variables were being screen positive for depression and anxiety, levels of perceived stress, worry, and QOL, which were compared between patients attending the general hospital and psychiatric clinics. We compared these outcomes between those with or without major physical illnesses and genders. Data were entered in excel and checked for accuracy by the researchers. Data were analysed by SPSS version 25. We used chi-square test for categorical variables and t-test for comparing means. Measure of significance was maintained at standard 0.05 level.

RESULTS

The sample (n = 200) had a mean age of 33.7 ± 11.3 years (range: 18–60 years) and was consisted of mostly male (62 percent) patients. The socioeconomic strata of attendees were below poverty line or low (18.5 percent), lower middle (64.5 percent), upper middle (16.0 percent), and upper (1 percent). Most of them came from red zone (77.5 percent) and 9 percent from orange, suggestive of the degree of COVID-19 infection in the neighbourhood. Only 5 percent of sample was COVID-19 test positive, 10 percent negative, and majority 85 percent did not have a test by the time of recruitment. We checked for symptoms the patients had in the previous month before the attendance in OPD. The reported figures for corona-related symptoms were fever (21 percent), cough (23.5 percent), loss of taste (3.5 percent), and loss of smell (1.5 percent). Associated symptoms such as chest tightness (20 percent), muscle ache and pains (24.5 percent), fatigue/tiredness (23 percent), breathing difficulty (23 percent), and other symptoms (13 percent) were also reported.

Proportions of patients reporting having various conditions were hypertension (7.5 percent), diabetes (3.0 percent), obesity (1 percent), asthma (3 percent), heart diseases (1.5 percent), substance use (19 percent), and other illnesses (14 percent). These were not different in the two groups of patients studied (PH and MH). In the psychiatric patients, more common primary diagnoses were depression (24 percent), adjustment disorder (21 percent), dissociative disorder (12 percent), somatization disorder (11 percent), generalized anxiety disorder (9 percent), and obsessive-compulsive disorder (9 percent). Almost one in five (21.5 percent) were taking medications daily for their previously existing illnesses. More than half (58 percent) said that they needed help related to COVID-19 situation.

Stress, anxiety, and depression

Score of PSS for the whole sample ranged from 4 to 34, mean 19.9 ± 7.1 (SD), which was distributed as low (24.5 percent), moderate (54.5 percent), and high (21.0 percent) levels of stress. Majority (75.5 percent) reported feeling depressed and 63.5 percent reported little interest. Considering both the screening questions, 76.5 percent were screen positive for depression, suggestive of the requirement of further evaluation. While 14 percent had only one of the depression-screening questions positive, 62.5 percent had both. There were 81 percent who reported feeling nervous in the previous 2 weeks (40 percent, 21.5 percent, and 19.5 percent); similarly, 68.5 percent were not able to control worry (33.0 percent, 15.5 percent, and 20 percent) on several, more than half, or nearly every day, respectively. Based on both questions GAD-2, 42 percent were screen positive having score 3 or more.

Being screen positive for both anxiety and depression was common; in the whole sample, 41.5 percent were positive for both anxiety and depression, 40 percent for either depression or anxiety, while 23 percent had none (p < 0.001). Persons with both
anxiety and depression had significantly higher score on worries, stress score, and lower QOL compared to those with only one or none of them.

Considering COVID-19 test result, anxiety and depression proportions were 80 percent and 90 percent for positive result, 55 percent and 80 percent for negative, and 38.2 percent and 75.3 percent for those not tested, respectively, and the difference was significant (p < 0.05) for anxiety. High, moderate, and low risk zones based on COVID-19 infection had comparable anxiety and depression possibilities. There were no differences related to anxiety and depression in people with reported substance use.

Comparison between MH and PH

Mean age and the distribution of gender, occupation, socioeconomic status, habitat, and residence area based on COVID-19 risk zone of the patient groups attending MH and PH were comparable. However, more people in MH had been COVID-19 positive than the PH (9 percent v 1 percent, p < 0.05); although fever (27 percent v 15 percent, p < 0.05) and cough (30 percent v 17 percent, p < 0.05) were reported in significantly more proportions of the PH compared with MH, respectively. In contrast, symptoms such as chest tightness, muscle aches and pains, and fatigues/tiredness were noted significantly more in the MH. A significantly higher proportion (75 percent) of MH patients reported symptoms related to COVID-19, compared to 60 percent of PH (p < 0.05). There was no difference about the associated major physical illnesses (hypertension, diabetes, obesity, asthma, and heart disease) in the two groups (PH 13.0 percent v MH 15 percent). Substance use was reported in 23 percent of PH compared to 15 percent of MH group (not significant). Daily medication intake was more in MH (29.0 percent) compared with PH (14 percent) (p < 0.05).

Depressed feeling was reported in almost all in MH Group (99 percent v 52 percent in PH group; p < 0.001); the figures for little interest was 92 percent in MH v 35 percent in PH group (p < 0.001). In both the anxiety questions, responses suggesting more frequent experiences were significantly (p < 0.001) higher in MH group compared to PH groups. PH and MH groups were significantly different on levels of perceived stress (15.2 ± 5.3 v 24.7 ± 5.3, p < 0.001), anxiety (1.5 ± 1.5 v 3.8 ± 1.9, p < 0.001), worry (4.3 ± 2.5 v 7.1 ± 1.8, p < 0.001), and QOL (6.1± 2.1 v 4.5 ± 1.7, p < 0.001). Categorically, the screen positive cases for anxiety and depression and the level of perceived stress are given in Table 1. When asked about the need for any help, only 16 percent in the PH group answered affirmatively compared to all in MH (p < 0.001).

Gender differences

There were no differences between the genders in the mean age (male 34.1 ± 11.5 v female 33.2 ± 11.0 years), socioeconomic status, residence, COVID-19 risk zone, COVID-19 status, COVID-19 core or associated symptoms as studied, major physical illnesses, daily medication intake, except that the substance use was significantly more in male (26.6 percent) v female (6.6 percent) (p < 0.001). The perceived stress categories, anxiety and depression, requiring further

<table>
<thead>
<tr>
<th></th>
<th>PH</th>
<th>MH</th>
<th>Total</th>
<th></th>
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<tr>
<td></td>
<td>n</td>
<td>percent</td>
<td>n</td>
<td>percent</td>
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<td>Anxiety*</td>
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<td>16.0</td>
<td>68</td>
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<td>54.0</td>
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*Screen positive.
evaluation in two genders were comparable. There was no difference in proportions feeling depressed, having little interest, feeling nervous, except that more female patients reported difficulty in controlling worry (p < 0.05). Female patients (6.34 ± 2.2) had significantly increased level of worry compared to males (5.3 ± 2.7, p < 0.01) and they also had higher stress scores (female 21.6 ± 6.9 v 18.9 ± 7.0, p < 0.01). However, the anxiety scores of GAD-2 were comparable as well as the QOL in both genders. More than half needed help; the proportions in both genders were comparable.

Major physical illness

We checked for the perceived stress scores of people with any (hypertension, diabetes, obesity, asthma, and heart disease) or no major physical illnesses, which were considered as risk factor for COVID-19-related complications. Higher stress levels based on PSS were associated with those having these conditions (Table 2). The mean PSS score of patients with major physical illnesses (22.4 ± 6.5) was higher than those without them (19.5 ± 7.1, p = 0.05, approached significance). However, there were no significant differences in the level of worry (6.3 ± 1.95 v 5.6 ± 2.6) or QOL (4.6 ± 1.9 v 5.4 ± 2.1) of these groups with or without major physical illnesses, respectively.

Major causes of worry

Overall, the fear of getting COVID-19 infection, financial crisis, physical symptoms, loss of job, work problems, social stigma, and health of family were major worries (Table 3). There was a slight difference in the two groups in relation to the ranking of these worries, especially financial problems, physical symptoms, exposure to COVID-19-positive case, and loss of job.

DISCUSSION

This study reported perceived stress, nature of worry and worry level, proportions of patients who were screen positive for anxiety and depression, and QOL of people attending a general hospital OPD for COVID-19 in comparison with those attending psychiatric OPD in a medical college in an LMIC during COVID-19 pandemic.

Perceived stress

Perceived stress during the height of COVID-19 pandemic was at moderate or high level for most of the attendees at OPD; however, this was significantly higher for the mentally ill patients compared to patients attending in general hospital OPD. The figures are higher than that reported for general population¹ and lower than the admitted COVID-19 patients.² It has been reported that in mentally ill patients the stress levels have been high during the pandemic.¹⁴

Persons with major physical illnesses had higher perceived stress; there were higher proportions in moderate and high category of perceived stress. A telephone survey of patients with asthma and chronic obstructive pulmonary disease reported high stress in one in 10 and depression risk in around one in three.¹⁵ It is known that these groups constituted as vulnerable for COVID-19-related admissions and complications, which could have contributed to the stress.

<table>
<thead>
<tr>
<th>Major physical illness</th>
<th>None</th>
<th>percent</th>
<th>Any</th>
<th>percent</th>
<th>p</th>
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<tr>
<td>Anxiety*</td>
<td>67</td>
<td>39.0</td>
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<td>Perceived stress</td>
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<tr>
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<td>17</td>
<td>60.7</td>
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</tr>
<tr>
<td>High</td>
<td>33</td>
<td>19.2</td>
<td>9</td>
<td>32.1</td>
<td></td>
</tr>
</tbody>
</table>

*Screen positive.
Nature and degree of worries

Degree of worry was significantly more in MH and female patients. While fear of getting the coronavirus infection either themselves or family was a major worry in both groups, psychiatric patients were most worried with the physical symptoms while the PH group were worried about the exposure to a COVID-19-positive case. Increased worry and fear of contamination in mentally ill patients compared to controls have been reported.\(^\text{14}\) Interestingly, a telephonic survey of clinically stable patients with severe mental illness in South India found that three-fourth were not worried about getting COVID-19.\(^\text{16}\) It is possible they were stable and away from the hospital setting.

Considering the stress perception and worries, it appears that additional specific supports are needed for patients with mental illness during pandemic. Job-related problems and financial crises were prominently reported by the studied sample. It is well known that economic impact of the pandemic has been massive for both individuals and countries.\(^\text{17}\) As a secondary stress this can contribute to the stress and mental health of the affected individuals.

It was interesting to note that social stigma related to COVID-19 was reported by many as a concern. Stigma has been reported in connection with COVID-19 patients and their family members, even for health professionals, being avoided or ostracized.\(^\text{18}\) It can be a contributor to the overall burden, and may impact upon accessing services by the patients.

It needs to be highlighted that considering the nature of the worries reported, their impact may continue beyond the control of viral pandemic, especially the economic hardships. However, most worries may be addressed through multipronged and multi-source support. Appropriate information from reliable sources regarding coronavirus infection and prevention and support related to jobs and finances will help the most. Targeted public education through various means may decrease the stigma and their effectiveness needs to be explored. Some of the individuals will need anxiety or stress management interventions, and considering the mass of affected people, online internet-based intervention may be considered.

Anxiety and depression

Most studies have reported increased anxiety and depression in general population, COVID-19 survivors, and health workers.\(^\text{19-21}\) This study results suggested that considerable proportions of outpatients both in psychiatry and general hospital clinics were screen positive for anxiety and depression,
highlighting the need for further evaluations. This is especially important for patients attending general hospital OPDs, as these may get missed.

In comparison of the two groups, MH patients were considerably more affected having increased anxiety and depression symptoms during the pandemic. Symptomatic exacerbation of mental illness during stressful period is a possible explanation. A study of psychiatric outpatients over phone reported increase of stress, anxiety, fear, and general psychopathology during COVID-19-related lockdown.22

In the studied population, considerably more patients in both groups had depression rather than anxiety. It is quite possible that the secondary stresses related to COVID-19 on the jobs and financial situations have contributed to this. However, possibility of comorbidity is high and almost all patients with depression reported anxiety.

Significantly more proportion of individuals with major physical illnesses was positive for anxiety, which corresponds to the finding that they had more stress. However, the depression was comparable in those with or without a major physical illness. A study of outpatients with lymphoma reported around one-third had anxiety and depression during COVID-19 pandemic.23 It is possible that people with physical illnesses reported to make them more vulnerable for COVID-19 complications were more anxious.

Quality of life

In the studied population, mentally ill patients had a significantly lower QOL compared to PH during the pandemic. Persons with both anxiety and depression had significantly lower QOL as well, whereas, it was comparable in patients with or without major physical illnesses and between genders. It is well known that illnesses have negative impact on QOL, and as this study results suggested, it appears that mental illnesses had significantly more influence on the QOL than the physical illnesses. QOL is also influenced by other factors beyond health, especially, the associated worries and stressors. There is a need to study the interventions that may improve QOL during the challenging times of a pandemic affecting life in multiple fronts.

**STRENGTH AND LIMITATIONS**

The study bridges the gap of information about the mental health concerns in patients attending OPDs from an LMIC. It provided insights about the reasons of worries, highlighting the secondary stresses, which could be contributing to the mental health burden. There are a few limitations. Being a study using screening instruments, it may not be able to suggest the actual prevalence without a further clinical assessment, although the proportion of patients requiring further assessments is clear. While the results could be generalised to outpatient attendees in hospitals, a larger sample size from multiple sites from primary care could be more reflective.

**CONCLUSION**

There is considerable amount of stress, anxiety, and depression in the patients attending outpatients both in psychiatric and general hospital clinics during COVID-19 pandemic, requiring further evaluation and possibly, intervention. The anxiety, depression, and stress were reported significantly in more proportions by the patients with mental illness than those with physical illness. The study highlighted the nature of worries; some of the common ones centred around coronavirus infection, work, financial problem, and stigma. Adequate interventions for these secondary stresses may help ameliorating mental health impact. Clinical implication of the findings suggest that it may be appropriate to screen people attending general OPDs of hospitals and offer appropriate help, which may be in the form of further evaluation and intervention. Methods such as information sharing, counselling, online resources on stress management, and self-help guides on management of anxiety and depression may be considered. Future studies should periodically determine the mental health burden as the pandemic progresses for any trend and to guide intervention measures and their effectiveness.

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**Special Issue on COVID-19 and Mental Health**

*Journal of Emergency Management*

Vol. 20, No. 9


