

Effect of the pandemic on the need for and use of psychiatric services among various diagnostic groups of psychiatric outpatients

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Abstract

Aim: Both general medical and mental health services were disrupted during the pandemic. It is unclear how these disruptions played out for people with various mental health diagnoses. We compared change in mental health status and use of mental health services between four psychiatric groups: schizophrenia spectrum disorders, bipolar disorder, unipolar depression, and anxiety/obsessive-compulsive disorder (OCD). **Method:** Using a semi-structured interview, 492 psychiatric outpatients who had used psychiatric services of a university hospital before the pandemic were assessed on the phone during the pandemic. **Results:** About half of the sample reported a perceived need for contact with mental health services during the pandemic, half of whom actually used services. Need for contact was much lower in the schizophrenia group than other diagnostic groups, whereas actual use of services was lower in the unipolar depression and anxiety/OCD groups. **Conclusions:** Patients with severe mental disorders, such as schizophrenia or bipolar disorders, may not have been more disadvantaged than those with anxiety/depression spectrum disorders during the pandemic. The pandemic response structure of mental health services should be modified to fit the needs of anxiety/depression spectrum patients.

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Running title: Effect of the pandemic on psychiatric outpatients

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ABSTRACT

Aim : Both general medical and mental health services were disrupted during the pandemic. It is unclear how these disruptions played out for people with various mental health diagnoses. We compared change in mental health status and use of mental health services between four psychiatric groups: schizophrenia spectrum disorders, bipolar disorder, unipolar depression, and anxiety/obsessive-compulsive disorder (OCD). **Method :** Using a semi-structured interview, 492 psychiatric outpatients who had used psychiatric services of a university hospital before the pandemic were assessed on the phone during the pandemic. **Results :** About half of the sample reported a perceived need for contact with mental health services during the pandemic, half of whom actually used services. Need for contact was much lower in the schizophrenia group than other diagnostic groups, whereas actual use of services was lower in the unipolar depression and anxiety/OCD groups. **Conclusions :** Patients with severe mental disorders, such as schizophrenia or bipolar disorders, may not have been more disadvantaged than those with anxiety/depression spectrum disorders during the pandemic. The pandemic response structure of mental health services should be modified to fit the needs of anxiety/depression spectrum patients.

KEYWORDS : services use, COVID-19, pandemic, outpatient, mental health

INTRODUCTION

COVID-19 and mental health

The COVID-19 pandemic has led to the death of more than 6 million people worldwide (WHO, 2019). There has been a psychological toll as well, with a global increase in the prevalence of mental health problems in the general population (Georgieva et al., 2021, Mortier et al., 2021, Zhang et al., 2022). Although some studies found no effect of the pandemic on psychotic symptom levels (Pinkham et al., 2020), distress (Grossman-Giron et al., 2022), or OCD symptoms (Moreira-de-Oliveira et al., 2022), most have shown a general worsening in anxiety and depression levels (Gobbi et al., 2020, Lewis et al., 2022, Quittkat et al., 2020); distress (Van Rheenen et al., 2020); obsessive-compulsive disorder (OCD) symptoms (Benatti et al., 2020, Tükel et al., 2022); psychotic symptoms and suicidal ideation (Muruganandam et al., 2020, Strauss et al., 2022, Szmulewicz et al., 2021) in people with pre-existing mental disorders. This may be due to direct effects of the pandemic including increased risk of acquiring COVID-19 or having a worse prognosis once infected (De Hert et al., 2022), which can be attributed to reduced risk-awareness and non-compliance with preventive measures (Chevance et al., 2020, Wang et al., 2021), or to having additional medical comorbidities known to be associated with worse prognosis (Wang et al., 2021, Tzur Bitan et al., 2021). Reduced access to services due to lockdowns also likely contributed to symptom worsening; as well indirect effects of the pandemic (lockdowns and other mandates, high uncertainty, etc.) on mental patients may have been more severe compared to the general population (Solé et al., 2021).

Use of mental health services during the pandemic

Mental health services are globally less developed compared to general medical services and have additional access barriers (Thornicroft & Tansella, 2013). These include stigma related to having a mental health condition and associated utilization of mental health services (Chevance et al., 2020), as well as unavailability of or low priority given to such services (Öngür et al., 2020). Emerging evidence indicates that acute COVID-19-related medical concerns and lockdown measures led to delays in patients' seeking psychiatric care, as has been reported for patients with other problems, such as cardiac and neurologic conditions Öngür et al., 2020). Studies showed decreased rates of admissions/hospitalizations and emergency room (ER) visits (Szmulewicz et al., 2021, Busch et al., 2022, Rømer et al., 2021), significant rates of missed appointments (Muruganandam et al., 2020, Kertzschner et al., 2022, Seo et al., 2021) and discontinuation of medications (Muruganandam et al., 2020, Gupta et al., 2022) for psychiatric patients. Several studies have examined

if mental health services use differ in relation to specific groups of mental disorders. Some found increased rates of services use for patients with psychosis (Deren et al., 2023) and eating disorder (Akgül et al., 2023) or general mental health outpatient visits (Yang et al., 2020). In a retrospective chart review of psychiatric outpatients, there was a decrease in use of mental health services for patients with schizophrenia, depression, and anxiety disorders during a three-month period within the pandemic, with the greatest reduction for those with anxiety disorders (Seo et al., 2021). Mental health-related hospitalizations and emergency department visits declined immediately after the onset of the pandemic, again with the largest decline for hospitalization for those with anxiety disorders (Saunders et al., 2021). In another study, psychiatric emergency department visits were reduced for most psychiatric diagnosis subgroups except for patients with schizophrenia (Hamlin et al., 2022). Conflicting results could be due to different samples or to differential availability of telemedicine.

Aims of the current study

Our primary aim was to compare different diagnostic groups in terms of worsening of mental symptoms and use of mental health services during the pandemic. We hypothesized that there would be a general decrease in the use of mental health services for all diagnostic groups; and that patients with severe mental disorders (typically considered to be conditions such as schizophrenia or bipolar disorder) would be more negatively affected than others (i.e., they would report higher rates of “worsening of symptoms”, would rate their current mental health as worse than others) and would report higher need for and lower use of mental health services during the pandemic than other patients.

METHOD

The setting

Our outpatient clinic is located at the city center and receives around 80-100 outpatient visits a day. Most of these patients are seen at the general psychiatry outpatient clinic by 7 or 8 third and fourth-year psychiatry residents, with oversight by the faculty consultants in charge. Reasons for use of outpatient services are multiple. In addition to new admissions and follow-up visits, there are those sent from courts or from prisons to be assessed for a forensic report, those who come for a medication refill only, and those who come for testing, including blood tests, projective and neurocognitive tests. There are also several specialty outpatient services, such as geriatric psychiatry, gender dysphoria clinic, drug dependence clinic, and forensic psychiatry admissions, all of which operate on certain days of the week.

The sample

The appointments at our psychiatry outpatient clinic were reduced when COVID-19 measures were implemented and most patients who called the clinic were advised not to come unless there was an urgent problem. The number of all monthly contacts (private appointments, blood tests, NPT and other psychological assessments, forensic cases, etc.), which had been relatively stable over time (1700-1800 before the pandemic), dropped abruptly to 1200 in March and to 320 in April 2020 (Figure 1). The drop in patient volume was similar across the four major diagnostic groups (telemedicine contacts were not assessed).

Figure 1. Volume of all psychiatry outpatient visits (N=1786) by diagnosis before and during the pandemic

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image1.emf available at <https://authorea.com/users/725182/articles/708585-effect-of-the-pandemic-on-the-need-for-and-use-of-psychiatric-services-among-various-diagnostic-groups-of-psychiatric-outpatients>

Our target population was all general psychiatry outpatients between 18-65 years old (N=943) who were seen by psychiatry residents of Hacettepe Psychiatry outpatient department within the month of December 2019. Out of the eligible 943 patients included, 361 could not be reached despite three attempts, and 90 refused. We ended up with 492 completed interviews. A further 68 people were excluded (see below) because they did not belong to any of the four major diagnostic groups that we wanted to study. The analyses therefore were based on 424 patients. All patients that were included had International Classification of

Diseases 10th Revision (ICD-10) diagnoses, which was grouped into four broad categories: 1. bipolar disorder (BPD), 2. major depressive disorder (unipolar depression-MDD), 3. anxiety disorders and OCD (ANX/OCD), 4. schizophrenia and other psychotic disorders (SCZ). A hierarchy of severity was applied for grouping comorbid conditions (i.e., schizophrenia and depression was grouped under schizophrenia, bipolar and OCD was grouped under bipolar, and major depression and generalized anxiety disorder under major depression). Sixty-eight people, with primary diagnoses of alcohol-drug related disorders, somatization, attention deficit hyperactivity disorder, autism spectrum disorder, eating disorders, and sexual dysfunction were not included in the analyses, since these groups were very heterogeneous, with few people in each group.

Measures

Our main instrument was a semi-structured interview, which included items on demographics, use of general and mental health services, COVID-19 experience, worsening of symptoms, emergence of new symptoms, and severity of illness (patient's global impression-PGI and clinician's global impression-CGI) (Guy, 1976). Clinical data from the patient records (primary and secondary ICD-10 diagnoses, clinic visit data, illness duration) were also extracted. At the time of data collection, there were no established measures in Turkish to assess COVID-19 related anxiety; therefore, we developed an 8-item scale with 4-choice Likert response set to assess that. A general question "How much anxiety/distress did the following cause during the pandemic?" was followed by eight specific questions, such as: "acquiring the virus", "passing it on to my close ones", etc. coded as "none, a little, moderately, very much". The internal consistency (alpha) of the 8 items was .83.

Procedure

Twelve 3rd and 4th-year psychiatry residents, trained as interviewers and data abstracters, contacted all eligible patients and coded the responses on the online questionnaire. As was required by the ethics board, the interviewer recorded the respondent's verbal consent; written consents were taken from 15 patients who did not want to give recorded consent. Up to three calls at different times were required before classifying them as "non-contact". For those who answered the phone, the interviewer described the study using a standard text and invited the respondent to participate in the study. Information time of calls, and result of calls were recorded on an online excel sheet. During the six months of data collection (October 2020-March 2021) 492 interviews were completed. The study PI held regular Zoom meetings with the interviewers to give feedback and provide supervision on any problems that occurred.

Variable selection/transformations

The two main outcome variables were: perceived need for contacting mental health services ("*did you feel the need to contact mental health services during the pandemic?*") and actual use of (any) mental health services ("*did you use any mental health services during the pandemic?*"). Several independent variables were chosen as predictors of use and need for contacting services. Respondents were asked to rate symptom severity during the pandemic as "no change, got better, got worse, fluctuating"; this variable was recoded as 1=got worse, 0=all others ("worsening of symptoms" variable). A seven-point assessment of Patient's Global Impression (PGI) was asked of the respondent (1=no symptoms of illness, 7=worst days of my illness) and the response coded; the Clinician's Global Impression (CGI) was coded by the interviewer (psychiatry resident) based on their impression during the interview (1=no illness, 7= most severe illness).

Statistical analyses

The four diagnostic groups were compared in terms of our selected predictor and outcome variables (worsening of clinical symptoms, emergence of additional symptoms during the pandemic, subjective need for contacting mental health services, actual use of services) using Chi-square or ANOVA. Independent predictors of need for contact with mental health services and of actual use were investigated using logistic regression analyses.

RESULTS

Comparison of the diagnostic groups

Table 1 shows that there were significant differences between SCZ group and the other groups on several measures: the SCZ group diverged from others in terms of male-female ratio being close to unity, and lower percentage of married cases. The SCZ group reported much lower need for psychiatric services than other groups. Among those who reported a need, however, actual use of services was highest among SCZ patients, followed by BPD, and least for ANX/OCD and MDD. The reasons put forward for the need for contact, as well as the reasons for non-contact, did not differ between diagnostic groups (data not reported). Although the SCZ group had much longer duration of illness than other diagnostic groups, their scores on the PGI (self-assessment of illness severity) as well as their COVID-19-related anxiety were significantly lower than those in the other groups. Most of the patients (N=65, 73%) in the SCZ group had been hospitalized before, compared to only 6.5% (N=6) in ANX/OCD, 12.1% (N=21) in MDD and 42.6% (N=29) in BPD groups, $p=.000$. Diagnostic groups also differed in terms of a positive COVID-19 test: BPD group had the lowest (only 1 patient out of 68), and MDD group had the highest rate (14.9%) of a positive COVID-19 test.

The percentage reporting worsening of symptoms and emergence of new symptoms did not differ between the four diagnostic groups. Among those who reported emergence of new symptoms, new symptoms (sleep problems, OCD symptoms, etc..) did not relate to diagnostic group. Percentage of patients with an accessible doctor/psychologist was similar between diagnostic groups.

Predictors of need and use of services

Independent predictors of need for contact with mental health services and actual use were examined using binary logistic regression. Fourteen independent variables were entered into the equation: sex (male=1, female=2), age (18-65), education (1=primary school, 4=university), employment (0=not employed or working from home, 1=employed and goes to work), marital status (0=not married, 1= married), location (0=from Ankara, 1=from outside Ankara), past hospitalization (0=no, 1=yes), accessible doctor/psychologist (0=no, 1=yes), worsening of symptoms (0=no, 1=yes), additional symptoms (0=no, 1=yes), had been PCR positive (0=no, 1=yes), PGI (1-7), COVID-19 Anxiety Score (0-24), and diagnostic group (0=SCZ, 1=BPD, 2=MDD, 3=ANX/OCD); the SCZ group was chosen as the reference group.

Table 2 shows the predictors of need for mental health services (Column 1), and actual use of services (Column 2). The predictors of the need for contact with mental health services were PGI score (self-reported severity of own symptoms), accessibility of a doctor/psychologist, and belonging to BPD, MDD, or ANX/OCD groups (higher need compared to the SCZ group). None of the demographic variables or COVID-19-related variables were predictive of the need for contact.

The same set of predictor variables were regressed onto actual use of mental health services. The predictors of actual use (Column 2) were: accessibility of a doctor/psychologist and belonging to MDD or ANX/OCD groups (lower services use compared to the SCZ group).

DISCUSSION

Our results are in line with previous chart-reviews showing a general decrease in use of mental health services during the pandemic. Our study was not limited to chart review, however, and to the best of our knowledge, it is the first to assess mental health services use of psychiatric outpatients during the pandemic, using a clinician-administered interview. Contrary to our expectations, we found that the SCZ group reported the lowest need for help during the pandemic. Interestingly, though ANX/OCD and MDD patients reported a higher need for help compared to the SCZ group, fewer of them used services. The need for contact in the BPD group was also higher than that in the SCZ group, but the BPD group did not differ from the SCZ group in terms of actual use of services. Taken together, these findings suggest that patients with a severe mental disorder, such as schizophrenia or bipolar disorder, seem not to be at a disadvantage in terms of worsening of symptoms, getting appointments or contacting the clinic during the pandemic. It is interesting that patients with severe mental disorders report lower disruption during the pandemic, a finding also reported by other studies (Gupta et al., 2022, Pinkham et al., 2020). Especially the SCZ group reported much lower need for contact and lower PGI scores, suggesting less worsening of clinical status.

Why is everything so favorable for the SCZ group? Is it because they have low insight and cannot judge their status in a realistic way? Or do we have a biased sample? Or did they not need so much help after all? Our design cannot answer these questions, though it is possible that our mental health care system is more suited to the needs of SCZ or BPD patients and not to those of the MDD and the ANX/OCD patients. SCZ and BPD patients had much longer duration of illness than the others, so they were likely more stable in their medications and symptoms. It is also possible that patients with severe mental disorders may be more resilient to some effects (i.e., isolation) of the pandemic (Pinkham et al., 2020).

Though the sample size was small to conduct multivariate analyses within each diagnostic group, preliminary analyses suggest that living outside of Ankara and having been previously hospitalized are important predictors of use of services in the MDD group, whereas having an accessible psychiatrist/psychologist is the sole predictor of services use among the ANX/OCD group only (analyses not reported). Our findings, if consolidated by future research, may help us reshape our services to better fit the needs of all types of diagnostic groups during pandemics. The current structure of our service provision may be sufficient to serve people with severe mental disorders, but we may be neglecting the large group of anxiety/depression spectrum patients. Combined with the fact that the ANX/OCD and the MDD groups had higher scores on COVID-19 anxiety, a finding also reported by Seo et al. (2021), managing COVID-19-related fears among these groups may be the first step to improve help-seeking during the pandemic.

Strengths and limitations

Most of the existing studies that compare services use across diagnostic groups rely on chart reviews, which cannot show contacts with multiple health services. Studies of patients who had appointments during the pandemic are limited, since they exclude those who avoid hospitals out of fear of COVID-19. To avoid those limitations, we selected a sample who contacted our clinic before the pandemic (when no pandemic awareness existed) and assessed them about one year later. We used official ICD-10 diagnoses of the patients enrolled in the study, which are more reliable than self-reports of patients on their diagnoses.

Collecting self-report data using online questionnaires is valuable when the sample is the general population. When the target is mental health patients, however, interviews have clear advantages over self-reported data. Some patients may not give reliable information because of their psychopathology (fears, lack of trust, delusions, etc.); clinician's judgment may be superior to self-reported data in such cases. On the other hand, interviews are time-consuming and costly, since they require specialist/clinician time. Our advantage was that we were able to recruit most of our experienced residents as interviewers. Nevertheless, having 12 interviewers would necessarily increase inter-rater variability, the effect of which we did not analyze. Our sample, on the other hand, was large enough to conduct essential statistical analyses.

Although we used the official ICD-10 codes in the patient charts, we were not able to include all psychiatric diagnoses; and we needed to regroup diagnoses for ease of analysis. We also had to use judgement (a hierarchy) in grouping comorbid cases, which may have resulted in bias (probably a type II bias). The differences observed between the four diagnostic groups would probably be more pronounced, had we compared non-comorbid (i.e., pure) diagnostic groups. We had to drop 68 patients that belonged to the "other diagnosis" category, since this group included 26 drug dependence cases, and several other diagnoses, which were too small to be meaningfully analyzed. Our assessments of psychiatric symptom worsening, COVID-19 related anxiety, PGI or CGI did not specify exact time periods; rather our questions were worded as "during the pandemic...", which referred to the past 10-12 months.

Conclusion

This study showed that patients in the anxiety/depression spectrum are having more trouble accessing a doctor/psychologist when they need one. The organization of mental health services during the pandemic is probably sufficient for those with severe mental disorders, but may be lacking in serving less severe patient groups. Future studies should ideally include an assessment of patients' personal preferences on this topic. It may not be possible or feasible to provide an accessible doctor for every patient; but apparently that may be the key to success, at least for anxiety/depression/OCD spectrum patients who constitute the majority

of all mental patients.

Table 1. Sociodemographic variables of the sample by diagnostic group

	BPD N (%)	MDD N (%)	ANX/OCD N (%)
Percent female**	49 (72.1)	136 (78.2)	64 (68.8)
Percent married**	34 (50.0)	97 (55.7)	51 (54.8)
Currently employed & goes to work (excludes those working at home)	19 (27.9)	54 (31.2)	24 (25.8)
University graduate**	34 (50.0)	60 (34.5)	31 (33.3)
Percent worsened during pandemic	13 (19.1)	37 (21.3)	14 (15.1)
Percent with additional symptoms	14 (20.9)	26 (15.0)	12 (13.2)
Subjective need for contacting mental health services **	36 (52.9)	89 (51.1)	58 (62.4)
Actual use of mental health services **	22 (61.1)	32 (36.0)	23 (39.7)
	M (SD)	M (SD)	M (SD)
Age**	44.69 (11.7)	44.53 (13.2)	40.70 (13.6)
Duration of illness (years) **	13.34 (7.7)	8.69 (8.7)	9.93 (7.7)
Clinician's Global Impression (CGI)	3.12 (1.4)	3.17 (1.4)	3.33 (1.4)
Patient's Global Impression (PGI) **	3.18 (1.6)	3.51 (1.6)	3.84 (1.6)
Covid Anxiety Scale **	10.84 (6.1)	12.55 (5.4)	11.82 (5.4)
Total N (%)	68 (13.8)	174 (35.4)	93 (18.9)

** $p < .01$

Table 2. Predictors of subjective need for and use of mental health services

	Subjective need	Subjective need	Subjective need	Actual use	Actual use	Actual use
	Exp (B)	CI-lower	Upper	Exp (B)	CI-lower	upper
Gender (female)	.663	.372	1.182	.781	.357	1.710
Age	1.011	.988	1.035	1.012	.981	1.043
Education	1.086	.847	1.392	.999	.711	1.405
Employed/goes to work	.754	.420	1.354	.726	.328	1.607
Married	.901	.502	1.617	.985	.443	2.189
Location	.757	.328	1.748	2.450	.748	8.021
Hospitalization	1.545	.776	3.075	2.042	.837	4.982
Available therapist/doctor	2.007*	1.010	3.989	6.899**	2.942	16.18
Worsened during pandemic	1.811	.882	3.720	.563	.256	1.238
Additional symptoms	1.897	.883	4.077	1.623	.699	3.768
PCR positive	.874	.373	2.045	.575	.155	2.129
Patient's Global Impression (PGI)	2.041**	1.696	2.457	1.060	.834	1.347
Covid Anxiety Scale	1.008	.964	1.053	.990	.930	1.053
Diagnostic groups (ref: SCZ)						
BPD	5.748**	2.300	14.367	.339	.068	1.689
MDD	5.438**	2.235	13.229	.168*	.036	.789
ANX/OCD	7.909**	3.006	20.811	.175*	.036	.854
	-	-	-			

$p < .05$, ** $p < .01$

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