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ORIGINAL ARTICLE

Medicine Science International Medical Journal

Medicine Science 2021;10(4):1221-6

Comparison of mental disorders seen at the end of the first wave of the Covid 19 pandemic with sociodemographic data

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Received 20 April 2021; Accepted 17 May 2021
Available online 26.09.2021 with doi: 10.5455/medscience.2021.04.129

Abstract

Pandemics not only threaten the physical health of individuals, but can also have both acute and long-term effects on mental health. In terms of public health, physically separating people is an effective strategy to prevent the spread of infectious diseases. Although social isolation is necessary to maintain physical health, such interventions can be socially, psychologically, and economically devastating. Our study was conducted prospectively with 136 patients admitted to the psychiatry outpatient clinic for the first time or had never applied for the last year. The patients were examined and diagnosed by the psychiatrist at the polyclinic, and the sociodemographic data form and SCL 90 R forms were applied. There was a statistically significant difference in terms of the patient's current diagnosis according to the reason of presentation (p= 0.010). The percentage of anxiety symptoms was also higher in patients who applied for covid -19. In addition, in terms of sociodemographic data, no significant difference was found between those who applied for covid 19 or did not apply for this reason. Our study investigated the psychological and sociodemographic effects of the first peak, which was the initial stage of the epidemic situation developing with the infectious disease. It was observed that people developed anxiety at first in epidemic. Observing the effects of other stages of epidemic situations on mental health is important in terms of determining the measures to be taken and the interventions to be made.

Keywords: Pandemics, first peak, mental health, Covid-19

Introduction

An epidemic occurring worldwide, or over a very wide area, crossing international boundaries is called a pandemic. The World Health Organization (WHO) reported on January 30, 2020 that a virus called SARS-CoV-2 (COVID-19) caused acute respiratory syndrome and became a public health concern observed at an alarming level across the world. COVID-19 was declared as a pandemic by WHO on March 11, 2020 [1].

Pandemics not only threaten the physical health of individuals but can also have both acute and long-term effects on mental health [2]. In terms of public health, physically separating people is an effective strategy to prevent the spread of infectious diseases [3]. Although social isolation is necessary to maintain physical health, such interventions can be socially, psychologically, and economically devastating. After the occurrence of the first COVID-19 case in Turkey, health and safety measures were taken and it was decided on interruption of education in all schools and universities. Due to the spread of the epidemic within the country and its worsening consequences, all domestic and international flights were suspended, scientific, cultural and social activities were postponed, employees in public institutions and organizations were either given administrative permission or were given the opportunity to carry out flexible working hours (remote working and rotational working), and intercity travels were subject to governorship permission. Moreover, a curfew was declared for individuals both over the age of 65 and under the age of 20, as well as for all people living in metropolitan areas at certain intervals [4]. Brooks et al., demonstrated that the feeling of confinement, loss of usual routine, and reduced social and physical contact with others caused distress, frustration, and feeling of isolation from others in social isolation [5]. Increasing anxiety, fear and stress were observed in individuals, especially with the outbreak of the epidemic and the increased clinical cases [6]. Feelings such as fear, unhappiness, hopelessness, and despair resulted from the suspense and the epidemic lead to an intense burden. All these negative emotions also affect the sleep quality of individuals [7].

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Tragic consequences such as not to perform cultural and religious rituals and inability to bid loved ones farewell in this period cause the mourning process to be delayed or not completed [8]. It is predicted that the psychological effects of the epidemic will be long-term. In previous studies, it was shown that infectious diseases such as severe acute respiratory failure syndrome (SARS) could increase anxiety, depression and stress [9]. Recent studies on the psychological and social effects of COVID-19 caused by the new coronavirus have revealed that the disease causes radical changes in living conditions of many societies, which is associated with negative psychological outcomes [10]. In a study conducted by Huang et al., during the COVID-19 epidemic, symptoms related to anxiety in one third of the participants and depression and sleep problems in one fifth were demonstrated [11]. Wang et al., suggested that 16.5% of the participants had moderate to severe depression symptoms, and 28.8% had moderate to severe anxiety symptoms. In the same study, it was found that women were more affected by the psychological outcomes of the epidemic compared to men. It was also determined that the data obtained from measures of stress, anxiety and depression was statistically significant [12].

In the present study, we aimed to identify mental disorders due to the COVID-19 pandemic using sociodemographic data in people admitted to the psychiatry clinic for the first time or who did not apply to the psychiatric clinic for one year during the first peak of the first wave of the pandemic.

Materials and Methods

Our study was conducted prospectively with 136 patients admitted to the psychiatry outpatient clinic for the first time or had never applied for the last year. 3 patients were excluded because of illiteracy. The patients were examined and diagnosed by the psychiatrist at the polyclinic, and the sociodemographic data form and SCL 90 R forms were applied.

In the sociodemographic data form, the demographic data and psychiatric disease history of the patients, whether the patients or their relatives had COVID- 19, and whether they were affected socially, mentally and physically by the pandemic were questioned. Accordingly, it was investigated whether COVID-19 impairs the mental health of people in any way (directly causing illness, due to negative effects on social, economic, family or academic life, etc.) in those who have not had a psychiatric application for a year or applied to the psychiatry outpatient clinic for the first time.

SCL-90-R is a self-report scale filled in by the patients themselves. It includes psychiatric symptoms. Individuals are asked to score these between 0 and 4 according to their degree of presence [13, 14].

SCL-90-R, developed by Derogatis et al. [15] is used to identify level of psychiatric symptoms and the areas where they have proliferated. Studies conducted with various patient groups revealed its validity. Besides this assessment, SCL-90-R manifests itself in the GSI (Global Symptom Index), PST (Positive Symptom Total), and PSDI (Positive Symptom Distress Index]. Any GSI score lower than 1.00 reveals that symptoms are not at a psychopathological level, whereas any GSI score higher than 1.00 indicates the presence of a psychopathological condition [16].

All patients over the age of 18, literate and able to understand and fill the scales were included in the study. Ethical approval was obtained from Bursa City hospital ethics committee with protocol number 2019-KAEK-140, 2020-2 / 5.

Statistical analysis

In our study, we used R-2.15.3 for statistical analysis. In order to report the study data, minimum, maximum, mean, standard deviation, median, first quarter, third quarter, frequency and percentage were used. The compatibility of quantitative data to normal distribution was evaluated by Shapiro-Wilk test and graphical analysis. Independent groups t -test was performed for the evaluation of variables exhibiting normal distribution between two groups. Mann-Whitney U test was applied for the evaluation of variables that did not show normal distribution between two groups. In comparison of qualitative variables, Pearson chi-square test, Fisher's exact test and Fisher-Freeman-Halton exact test were used. Statistical significance was accepted as $p < 0.05$.

Results

A total of 136 patients, 66.9% (n = 91) female and 33.1% (n = 45) male, were included in the study. The average age of the patients was 35.71 ± 13.41. Training time was 10.60 ± 3.73 on average. 58.8% of the patients were married (n = 80) and 52.2% (n = 71) of those were employed or retired. 49.3% of the patients (n = 67) had never been admitted to a psychiatry clinic before, and the remaining had never applied for the last year. 24.3% (n = 33) of all applicants stated that they applied because of the COVID-19, and 75.7% (n = 103) of them applied for other reasons. Sociodemographic data about the patients are shown in the Table 1.

Depending on whether the reason for admission to the hospital due to COVID-19, age, education levels and number of children, gender, marital status, employment status, presence of recent psychiatric diagnosis, isolation quarantine history, quarantine restriction history due to age, COVID-19 diagnosis or suspicion, COVID-19 diagnosis or suspicion in relatives, loss of occupation, loss of income, marital problems due to COVID-19, having problems with children due to COVID-19, loss of loved ones due to COVID-19, interrupted academic life due to the COVID-19, pressure at work, alcohol or substance abuse, the COVID-19 epidemic will affect the future financially and morally. There was no statistically significant difference in terms of percentages of psychiatric pathology in SCL-90-R ($p > 0.05$).

It was revealed that the percentage of psychiatric presentation was lower in those affected by COVID-19 ($p = 0.022$). There was a statistically significant difference in terms of the patient's current diagnosis according to the reason for admission ($p = 0.010$). The percentage of anxiety symptoms was also higher in patients affected by COVID-19. It was found that the rate of those who thought that their mental health was affected by the COVID-19 outbreak was higher in those whose reason for admission was COVID-19 ($p < 0.001$). It was determined that the percentage of those thinking that they obeyed the epidemic rules was higher in those with COVID-19 ($p = 0.043$). The characteristics of the patients, according to whether the reason for the admission to the hospital was COVID –19 or not are shown in Table 2.

Table 1. Sociodemographic data about the patients

	Min-Max	Avg ± ss
Age	18-81	35.71±13.41
Duration of education (years)	1-19	10.60±3.73
Number of children	0-4	1.18±1.17
Female	91	66.9
Male	45	33.1
Married	80	58.8
Single	44	32.4
Divorced	12	8.8
Employed	56	41.2
Unemployed	20	14.7
Retired	15	11.0
Student, housewife	45	33.1
Those with a psychiatric admission history	69	50.7
Anxiety disorders	57	82.6
Mood disorders	4	5.8
Substance or alcohol use disorders	3	4.3
Obsessive Compulsive Disorder	1	1.4
Others	4	5.8
Anxiety disorders	106	77.9
Mood disorders	10	7.4
Psychotic disorders	1	0.7
Alcohol substance use disorders	7	5.1
Obsessive Compulsive Disorder	2	1.5
Others	10	7.4
The reason of admission is not COVID-19	103	75.7
The reason of admission is COVID-19	33	24.3
Those with a history of isolation quarantine	14	10.3
Those with a history of isolation due to age	11	8.1
COVID-19 diagnosed / suspected	21	15.4
COVID-19 diagnosed / suspected relatives	24	17.6
Loss of occupation	7	5.1
Those with loss of income	45	33.1
Those with marital problems due to COVID-19 (n = 81)	12	14.8
Those who have problems with children due to COVID-19 (n = 80)	15	18.8
Those with interrupted academic life (n = 22)	18	81.8
Those whose relatives died due to COVID	4	2.9
Those under pressure at work (n = 56)	8	14.3
Those abuse substance or alcohol	8	5.9
Those who think their mental health is affected by COVID-19	61	44.9
Those who think the epidemic will affect their future financially and morally	93	68.4
Those who think they obey the rules of the epidemic	117	86.0
Those exhibiting mental pathology in SCL-90-R	100	73.5

Table 2. Comparisons according to reason for admission

	Reason for admission		p
	COVID 19 (n=103) Avg ± sd	**Others (n=33) Avg ± sd**	
Age	36.88±13.21	32.03±13.60	[a]0.070
Duration of education (years)	10.35±3.87	11.36±3.16	[a]0.135
Number of children	1 (0. 2)	1 (0. 2)	[b]0.701
	n (%)	**n (%)**	
Gender			[c]0.696
Female	68 (66)	23 (69.7)	
Male	35 (34)	10 (30.3)	
Marital status			[c]0.813
Married	60 (58.3)	20 (60.6)	
Single	33 (32)	11 (33.3)	
Divorced	10 (9.7)	2 (6.1)	
Employment status			[d]0.435
Employed	45 (43.7)	11 (33.3)	
Unemployed	16 (15.5)	4 (12.1)	
Retired	12 (11.7)	3 (9.1)	
Student, housewife	30 (29.1)	15 (45.5)	
History of psychiatric admission			[c]0.022*
Present	58 (56.3)	11 (33.3)	
Absent	45 (43.7)	22 (66.7)	
History of psychiatric diagnosis			[c]0.057
Absent	45 (43.7)	22 (66.7)	
Anxiety disorders	47 (45.6)	10 (30.3)	
Others	11 (10.7)	1 (3)	
The current diagnosis of the patient			[d]0.010*
Anxiety disorders	74 (71.8)	32 (97)	
Mood disorders	10 (9.7)	0 (0)	
Alcohol substance use disorders	6 (5.8)	1 (3)	
Others	13 (12.6)	0 (0)	
History of isolation quarantine			[c]0.999
No	92 (89.3)	30 (90.9)	
Yes	11 (10.7)	3 (9.1)	
History of restriction due to age			[c]0.461
No	96 (93.2)	29 (87.9)	
Yes	7 (6.8)	4 (12.1)	
COVID-19 diagnosis or suspicion			[c]0.958
No COVID-19 diagnosis or suspicion	87 (84.5)	28 (84.8)	
COVID-19 diagnosis or suspicion	16 (15.5)	5 (15.2)	
COVID-19 diagnosis or suspicion in relatives			[c]0.537
No	86 (83.5)	26 (78.8)	
Yes	17 (16.5)	7 (21.2)	
Loss of occupation			[c]0.677
No	98 (95.1)	31 (93.9)	
Yes	5 (4.9)	2 (6.1)	
Loss of income			[c]0.973
No	69 (67)	22 (66.7)	
Yes	34 (33)	11 (33.3)	
Marital problem due to COVID-19			[c]0.478
No	53 (86.9)	16 (80)	

Yes	8 (13.1)	4 (20)	
Problems with kids due to COVID-19			[c]0.185
No	51 (85)	14 (70)	
Yes	9 (15)	6 (30)	
Affecting academic life			[c]0.616
Not affected	3 (23.1)	1 (11.1)	
Affected	10 (76.9)	8 (88.9)	
Loss of loved ones due to COVID-19			[c]0.248
No	101 (98.1)	31 (93.9)	
Yes	2 (1.9)	2 (6.1)	
Pressure at work			[c]0.649
Present	39 (86.7)	9 (81.8)	
Absent	6 (13.3)	2 (18.2)	
Alcohol / substance use			[c]0.679
No	96 (93.2)	32 (97)	
Yes / increased	7 (6.8)	1 (3)	
Has your mental health been affected by COVID-19?			[c]<0.001**
Affected	37 (35.9)	24 (72.7)	
Not affected	66 (64.1)	9 (27.3)	
Will the COVID-19 outbreak affect your future financially and morally?			[c]0.390
Yes	35 (34)	8 (24.2)	
No	68 (66)	25 (75.8)	
Do you think you obey the rules of the epidemic?			[c]0.043*
Yes	85 (82.5)	32 (97)	
No	18 (17.5)	1 (3)	
SCL-90-R			[c]0.139
Significant	79 (76.7)	21 (63.6)	
Non-significant	24 (23.3)	12 (36.4)	

Discussion

The COVID-19 outbreak reached the third peak of its first wave in April 2021. Our study was conducted at the first peak. Depending on whether the reason for the admission of the patients was COVID-19 or not; age, level of education, number of children, gender, marital status, employment status, presence of recent psychiatric diagnosis, history of isolation quarantine, history of quarantine restriction due to age, presence of COVID-19 diagnosis or suspicion, presence of COVID-19 diagnosis or suspicion in their relatives, loss of occupation, loss of income, having marital problems due to COVID-19, having problems with children due to COVID-19, interrupted academic life, loss of loved ones due to COVID-19, pressure at work, alcohol or substance abuse, thinking that the COVID-19 epidemic will affect their future financially and mentally, and mental pathology in SCL-90-R may explain why there was no statistically significant difference in the study results.

The fact that our study was conducted at the beginning of the COVID-19 epidemic and that people did not experience all the effects of the epidemic socially and economically may explain that our parameters are similar to the pre-epidemic situation.

We consider that there are differences between the COVID-19 outbreak and SARS and MERS outbreaks in terms of their mental effects. The lethality effect similar to acute trauma in SARS and MERS outbreaks should not be disregarded. Mortality rates in SARS and MERS were reported be 40%. Moreover, the risk of contracting these diseases and staying in quarantine can lead to more devastating psychological effects [17-19]. The studies examined the uncertainty life events. It was observed that uncertainty itself did not cause any mental pathology. However, during the COVID-19 pandemic, non-routine uncertainty caused anxiety in individuals [20]. During the epidemic, people primarily developed anxiety disorders, mood and sleep disorders [11]. Safety-seeking behaviours, infection prevention behaviour, misinterpretation of physiological symptoms, and anxiety symptoms such as grabbing symptoms are expected results in people exposed to epidemic and sanctions applied during the epidemic [21]. We observed similar results in our study.

Patients admitted to the clinic due to COVID-19 had made fewer psychiatric applications before. The significantly higher past applications can be attributed to the fact that the past mental illnesses were effective in the concept of resilience. The concept of resilience is defined as being able to make positive developments despite social difficulties. It was put forward as a protective factor by Rutter [22,23]. Resilience studies suggest models such as the match or mismatch model, ecological model and adaptive plasticity. According to these models, individuals experienced moderate psychosocial stress before can become more resistant to exposure to stress in their future lives [24-27].

Those admitted due to COVID-19 thought that their mental health

was more affected, but those applying outpatient clinics due to other reasons stated that they were less affected. The data was statistically significant. People with high anxiety sensitivity may be more affected by the COVID-19 epidemic. Anxiety sensitivity is described as an extreme fear that sensations and symptoms related to anxiety have harmful physical and / or social consequences [28]. In addition, it is considered that the current psychiatric conditions of patients who are not affected by COVID-19 may cause resilience.

As a result, studies on examining mental health conditions affected by epidemics are limited. COVID-19 has lasted for more than a year and has started to show its socioeconomic, academic, health effects. Our study investigated the psychological and sociodemographic effects of the first peak, which was the initial stage of the epidemic situation developing with the infectious disease. It was observed that people developed anxiety at first in epidemic. However, further studies with large participant numbers should be carried out. It was also demonstrated that social or family life did not deteriorate in the early stages of the epidemic.

Observing the effects of other stages of epidemic situations on mental health is important in terms of determining the measures to be taken and the interventions to be made. Establishing a study similar to our knowledge in the field of acute trauma in pandemic can be valuable in terms of managing outbreaks of possible infectious diseases in the future.

Conflict of interests
The authors declare that they have no competing interests.

Financial Disclosure
All authors declare no financial support.

Ethical approval
Ethical approval was obtained from Bursa City hospital ethics committee with protocol number 2019-KAEK-140, 2020-2 / 5.

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