

Impact of COVID-19 Pandemic on Substance Use

COVID-19 Pandemisinin Madde Kullanımı Üzerindeki Etkisi

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Abstract

Objective: As the pandemic spreads worldwide, individuals are exposed to factors such as social isolation, economic uncertainty, and general stress, which has increased the risk of substance use and addiction. Studies show that the SARS-CoV-2 (COVID-19) pandemic has increased substance use disorders. The aim of this study is to examine the impact of the COVID-19 pandemic on substance use disorders.

Method: The study was planned as a retrospective study. This study was based on March 11, 2020, the date when the COVID-19 case was first seen in Turkey, for 4 years, including two years before the pandemic and two years during the pandemic process, between 11.03.2018 and 11.03.2022. 1743 cases referred to the psychiatric outpatient clinic within the scope of probation were included.

Results: While substance use was detected in 834 people in the pre-COVID-19 pandemic period (March 2018-March 2020), substance use was detected in 909 people during the COVID-19 pandemic period (March 2020-March 2022). A significant increase in substance use was detected in female gender during the pandemic period. A statistically significant increase was observed in methamphetamine, opioid, cocaine and multiple substance use during the pandemic period compared to the pre-pandemic period.

Conclusion: The data of our study show substance use rates in Turkey before and during the pandemic. The study will be useful to understand the impact of COVID-19 on drug use frequencies in Türkiye.

Keywords: Addiction, COVID-19, pandemic, probation, substance use disorder

Öz

Amaç: Pandeminin dünya çapında yayılmasıyla birlikte bireylerin sosyal izolasyon, ekonomik belirsizlik ve genel stres gibi faktörlere maruz kalması, madde kullanımı ve bağımlılık riskini artırdı. Yapılan çalışmalar SARS-CoV-2 (COVID-19) salgınının madde kullanım bozukluğunu arttırdığını göstermektedir. Bu çalışmanın amacı, COVID-19 pandemisinin madde kullanım bozukluğu üzerindeki etkisini incelemektir.

Yöntem: Çalışma geriye dönük bir çalışma olarak planlandı. Bu çalışmaya Türkiye’de COVID-19 vakasının ilk görüldüğü tarih olan 11 Mart 2020 tarihi referans alınarak pandemi öncesi iki yıl ve pandemi sürecindeki iki yıllık süre olmak üzere 4 yıl boyunca 11.03.2018-11.03.2022 tarihleri arasında Ruh Sağlığı ve Hastalıkları Polikliniği’nde denetimli serbestlik (DS) kapsamında yönlendirilen 1743 olgu dahil edilmiştir.

Bulgular: COVID-19 pandemi öncesi dönemde (Mart 2018-Mart 2020) 834 kişide madde kullanımı saptanırken COVID-19 pandemi süreci döneminde (Mart 2020-Mart 2022) ise 909 kişide madde kullanımı saptanmıştır. Pandemi döneminde kadın cinsiyette madde kullanımında anlamlı bir artış saptanmıştır. Pandemi döneminde metamfetamin, opioid, kokain ve çoklu madde kullanımında pandemi öncesine göre istatistiksel olarak anlamlı artış görüldü.

Sonuç: Çalışmamızın verileri, Türkiye’de pandemiden önce ve pandemi döneminde madde kullanım oranlarını göstermektedir. Çalışma, COVID-19’un Türkiye’deki uyuşturucu kullanım sıklıkları üzerindeki etkisini anlamak için faydalı olacaktır.

Anahtar kelimeler: Bağımlılık, COVID-19, pandemi, denetimli serbestlik, madde kullanım bozukluğu

Introduction

On March 11, 2020, the World Health Organization (WHO) officially declared the novel coronavirus disease SARS-CoV-2 (COVID-19) as a pandemic, considering its rapid spread and impact worldwide (1). COVID-19 had indeed caused over 776 million confirmed cases worldwide and resulted in nearly 7 million deaths (2). During this period, countries, regions, states, cities and towns around the world have implemented various legal regulations, rules and guidelines to control the spread of the virus and prevent it from harming human health. The pandemic has therefore had very different effects on a large population. The COVID-19 pandemic has had a significant impact on the lives of people around the world, including increasing mental health issues (3). During the pandemic period, society's restrictions and changing living conditions can affect individuals' mental health in various ways. Mental health problems during this period can lead to negative psychological reactions such as anxiety, depression, post-traumatic stress disorder, self-harm and suicide (4). These factors are likely to influence other health-related behaviors and may also produce a change in consumption of alcohol and other substances. Previous studies have reported that addictive substances are often associated with stress, psychological distress, and social isolation. It has been shown that an increase in the level of stress and anxiety will increase the motivation to use substances as a way of coping, especially in social disasters and pandemics (5).

It has been suggested that increased anxiety and fear associated with COVID-19 may influence substance use increase and initiation (6). People with substance use disorders, particularly those who use drugs that adversely affect the respiratory system such as opioids, benzodiazepines and methamphetamines, may be particularly vulnerable to the adverse respiratory effects of COVID-19 (7). The fact that substance use disorders can adversely affect the course of COVID-19 and that pandemic conditions increase addictive behavior lead clinicians and psychiatrists to research on this subject. When the literature is examined, it has been determined that the subject of how individuals diagnosed with substance use disorder are affected by COVID-19 has not been adequately examined. Studies show that the COVID-19 pandemic increases substance use disorder (6). At the same time, it has been determined that substance use disorder adversely affects the clinical results of COVID-19 during the pandemic period (8). We believe that the pandemic has a negative impact on substance use. This study examines the impact of the COVID-19 pandemic on substance use disorder. In addition, our study aims to make a meaningful and scientifically valuable contribution to the impact of the COVID-19 pandemic on substance use and addiction. We hope that this study will lead to the development of effective policies and intervention strategies for public health and safety.

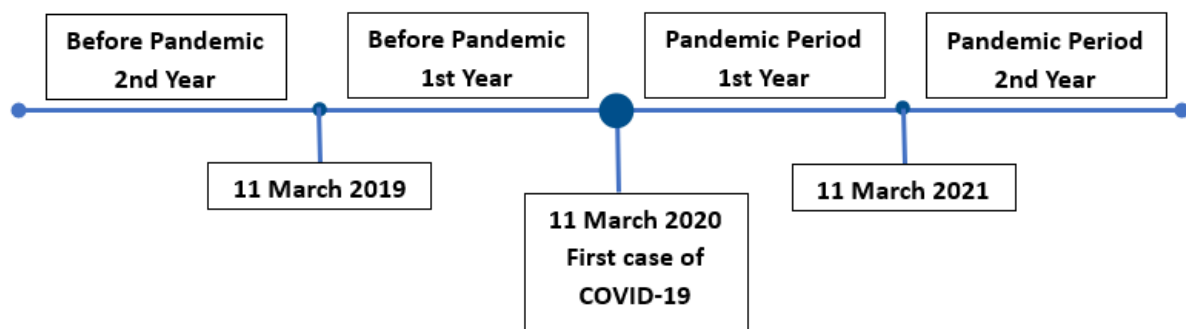


Figure 1. Periods of the study according to the course of the pandemic

Method

Sample and Procedure

The study was planned as a retrospective study. This study was carried out between 11.03.2018-11.03.2022 for 4 years, two years before the pandemic and two years during the pandemic process, taking

as reference the date of 11 March 2020, the first date of the COVID-19 case in Turkey. The study was divided into two groups, before and after the pandemic, and these two groups were compared. 1743 cases referred to the psychiatry outpatient clinic of the Recep Tayyip Erdogan University Faculty of Medicine within the scope of probation (PR) were included. All probation data records were included in the study.

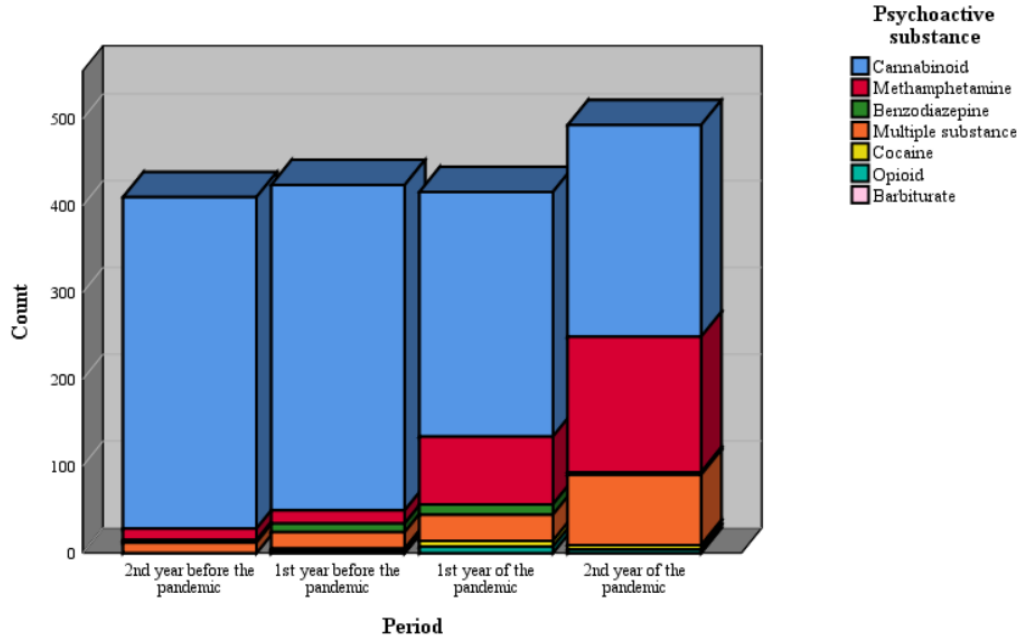


Figure 2. Number of cases using substances by period and substances used

Probation Procedure

Psychiatric examinations of the PR application were first made by a specialist physician, and the evaluation of psychoactive substances in the urine was followed up in three and six-week intervals. Out of 1743 cases who were followed up with a three-week program at the first stage, 1104 cases in which no positive psychoactive substance was detected in the analysis of urine samples taken at 15-day intervals were discharged from the probation unit without the need for the next six-week period. 637 patients who were treated were included in the next six-week program. During this period, 368 cases in which no positive psychoactive substance was detected in the urine analysis samples were evaluated as compatible with the treatment, while the remaining 269 cases were determined as non-compliant and were referred to the nearest Alcohol and Substance Addiction Treatment Center.

Ethics committee approval of the study was obtained with the decision of the Non-Interventional Clinical Research Ethics Committee of Recep Tayyip Erdogan University, dated 21.02.2022 and numbered 2022/37, and institutional permission was also obtained for the study. All practices in this study were made in accordance with the ethical standards of the institutional and/or national research committee and the 1964 Declaration of Helsinki and its later revisions or comparable ethical standards. Written informed consent was obtained from the participants.

Statistical Analysis

The analysis was conducted using IBM SPSS (Statistics Package Program for Social Sciences) version 24.0 (IBM Corporation, Armonk, NY, USA). Continuous variables were presented as mean \pm standard deviation, median, maximum, and minimum, while categorical data were expressed as numbers and percentages. In the intergroup analysis of continuous variables, normality assessments were carried out using the Kolmogorov–Smirnov test. For comparing data that did not follow a normal distribution between two groups,

the Mann–Whitney U-test was employed. The Chi-square test was used to compare categorical data. A statistical significance level of $p < 0.05$ was considered.

Table 1. Comparison of sociodemographic and before/during pandemic data

Variable	Pre-Pandemic		During Pandemic		Total		X ²	P
	n	%	n	%	n	%		
Gender								
Female	11	1.3	31	3.4	42	2.4	8,09	<0,01
Male	823	98.7	878	96.6	1701	97.6		
Age (Year) (mean \pm SD)	34.49 \pm 9.78		36.15 \pm 10.28		35.35 \pm 10.07		<0.00	
Age range								
<18	2	0.2	4	0.4	6	0.3	20,8 9	<0,00
18-35	529	63.4	479	52.7	1008	57.8		
36-50	240	28.8	343	37.7	583	33.4		
51-65	53	6.4	70	7.7	123	7.1		
>65	10	1.2	13	1.4	23	1.3		
Marital status								
Married	285	34.2	358	39.4	643	36.9	6,73	<0,05
Single	509	61	499	54.9	1008	57.8		
Separated	40	4.8	52	5.7	92	5.3		
Psychiatric diagnoses								
Undiagnosed	671	80.5	657	72.5	1328	76.3	20,3 8	<0,01
Depressive disorder	73	8.8	122	13.5	195	11.2		
Anxiety disorders	47	5.6	75	8.3	122	7		
Psychotic disorders	11	1.3	10	1.1	21	1.2		
Bipolar disorder	8	1	10	1.1	18	1		
Substance use disorder	18	2.2	28	3.1	46	2.6		
PTSD	2	0.2	3	0.3	5	0.3		
Adjustment disorder	4	0.5	1	0.1	5	0.3		
Psychoactive substance								
Cannabinoid	757	90.8	526	57.9	1283	73.6	260, 4	<0,00
Methamphetamine	28	3.4	234	25.7	262	15		
Cocaine	2	0.2	12	1.3	14	0.8		
Opioid	2	0.2	11	1.2	13	0.4		
Benzodiazepine	13	1.6	15	1.7	28	1.6		
Barbiturate	1	0.1	0	0	1	0.1		
Multiple substance	31	3.7	111	12.2	142	8.1		
Total	834	47.8	909	52.2	1743	100		

Results

The probation data between the two-year period of the pandemic, March 2020-March 2022, and the two-year period before the pandemic, March 2018-March 2020, were compared. In the results of the study, substance use was detected in 834 people in the pre-COVID-19 pandemic period, while substance use was detected in 909 people during the COVID-19 pandemic period. A statistically significant increase was found in substance use during the pandemic period. Considering the distribution by gender, 1.3% of those who used substance use in the pre-pandemic period were women and 98.7% were men, while 3.4% of those

who used substance use during the pandemic were women and 96.6% were men. Considering the general average age of the participants, it was determined as 35.35 ± 10.07 . While the mean age of those with substance use in the pre-pandemic period was 34.49 ± 9.78 , the mean age of those with substance use during the pandemic period was 36.15 ± 10.28 .

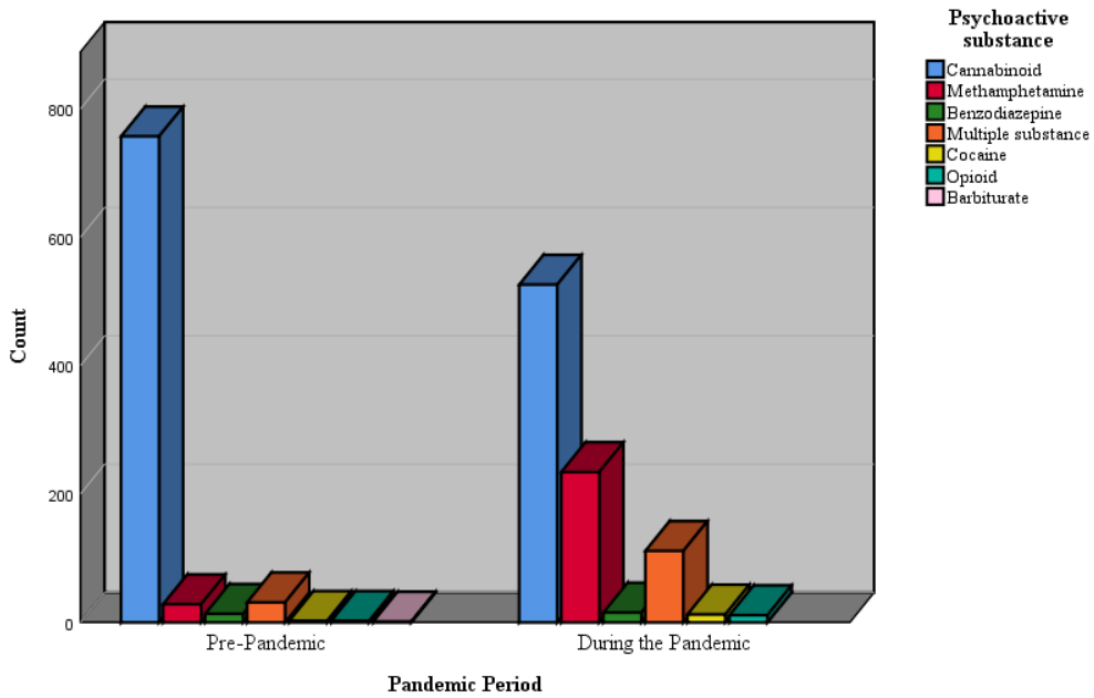


Figure 3. Number of cases using substances by periods of the pandemic

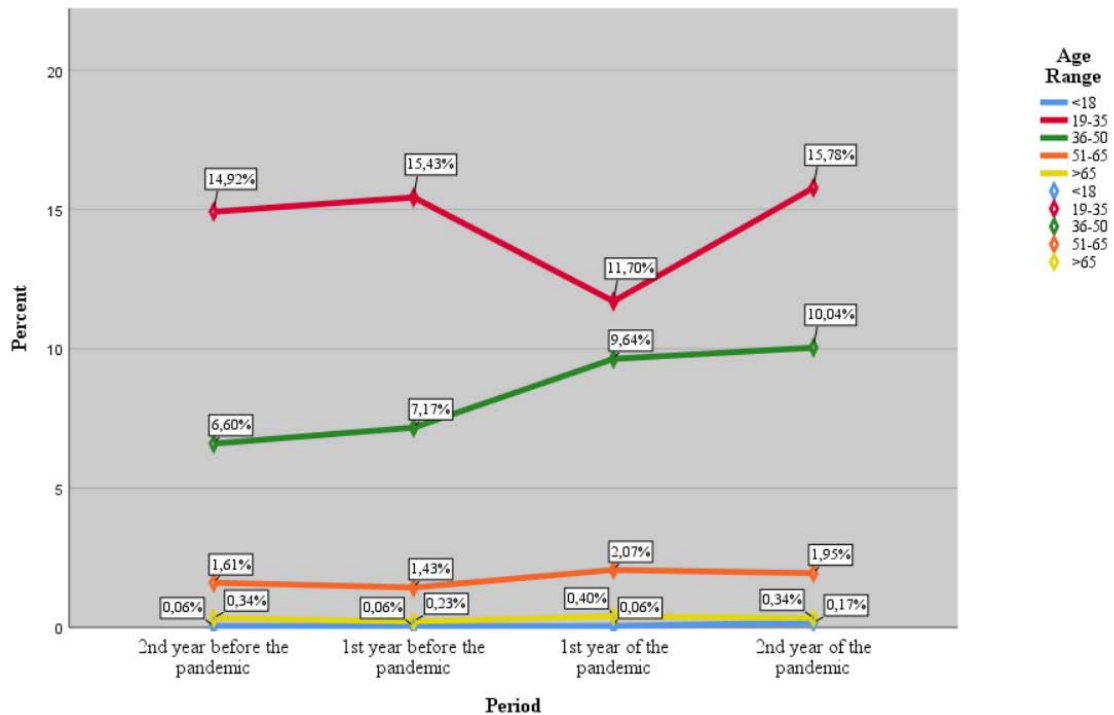


Figure 4. Percentage of cases using substances by age range

Table 2. Comparison of the sociodemographic characteristics of participants

Variable	1st Year of the Pandemic		2nd Year of the Pandemic		Total		X ²	P
	n	%	n	%	n	%		
Gender								
Female	6	1.4	25	5.1	31	3.4	9,01	<0,00
Male	410	98.6	468	94.9	878	96.6		
Age (Year) (mean ± SD)	36.83±10.59		35.57±9.98		36.15±10.28		<0.00	
Age range								
<18	1	0.2	3	0.6	4	0.4	5,31	0,25
18-35	204	49	275	55.8	479	52.7		
36-50	168	40.4	175	35.5	343	37.7		
51-65	36	8.7	34	6.9	70	7.7		
>65	7	1.7	6	1.2	13	1.4		
Marital status								
Married	163	39.2	195	39.6	358	39.4	0,01	0,99
Single	229	55	270	54.8	499	54.9		
Separated	24	5.8	28	5.7	52	5.7		
Psychiatric diagnoses								
Undiagnosed	284	68.4	373	76	657	72.5	26,26	<0,00
Depressive disorder	51	8.8	71	14.5	122	13.5		
Anxiety disorders	52	12.5	23	4.1	75	8.3		
Psychotic disorders	8	1.9	2	0.4	10	1.1		
Bipolar disorder	6	1.4	4	0.8	10	1.1		
Substance use disorder	12	2.9	16	3.3	28	3.1		
PTSD	2	0.5	1	0.2	3	0.3		
Adjustment disorder	0	0	1	0.2	1	0.1		
Psychoactive substance								
Cannabinoid	282	67.8	244	49.5	526	57.9	52,58	<0,00
Methamphetamine	78	18.8	156	31.6	234	25.7		
Cocaine	7	1.7	5	1	12	1.3		
Opioid	7	1.7	4	0.8	11	1.2		
Benzodiazepine	12	2.9	3	0.6	15	1.7		
Barbiturate	0	0	0	0	0	0		
Multiple substance	30	7.2	81	16.4	111	12.2		
Total	416	45.8	493	54.2	909	100		

When evaluated according to age ranges, a decrease was found in substance use in the young age (18-35 years old) group during the pandemic period, while an increase in substance use was found in the adult age (36-50 years old) group. The percentage of substance use by age range is shown in Figure 4. When evaluated according to marital status, it was determined that most of the people with substance use were single. In addition, substance use creates a significant difference according to marital status ($p < 0.05$). When evaluated according to the presence of psychiatric diagnosis, there is a significant difference before and during the pandemic. In addition, there was a significant increase in the diagnosis of depressive disorder and anxiety disorder in those with substance use during the pandemic compared to the pre-pandemic period ($p < 0.01$). In the comparison of psychiatric diagnoses between the 1st and 2nd years of the pandemic, an

increase was found in depressive disorder and a decrease in anxiety disorder. Sociodemographic characteristics of the cases are given in Table 1 and Table 2.

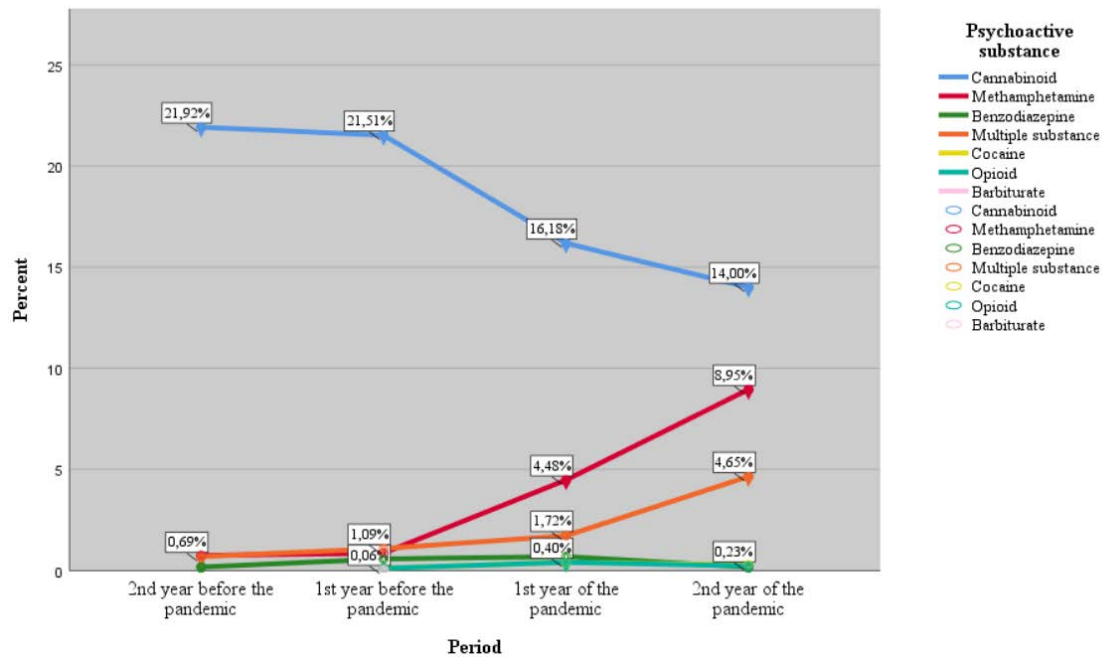


Figure 5. Percentage of cases using substances by periods

The most significant difference between the genders between the two periods was found in the female gender. While 26.2% of female patients with substance use were detected in the pre-pandemic period, 73.8% were detected during the pandemic period. There was a significant increase in substance use in females during the pandemic period. In the comparison of psychoactive substances used in the pre-pandemic period and the pandemic period, cannabis use was 90.8% in the pre-pandemic period, 57.9% in the pandemic period, while methamphetamine use was 3.4% in the pre-pandemic period and 25.7% in the pandemic period. While the use of opioids was 0.2% in the pre-pandemic period, it was 1.2% during the pandemic period. While cocaine use was 0.2% in the pre-pandemic period, it was 1.3% during the pandemic period. While the use of multiple substances was 3.7% in the period before the pandemic, it was determined as 12.2% during the pandemic period. During the pandemic period, methamphetamine, opioid, cocaine and multiple substance use increased statistically significantly compared to the pre-pandemic period. Sociodemographic characteristics of the cases are given in Table 1 and Table 2. The count of people with substance use by period, according to the substances they used, is shown in Figure 2 and 3. Percentages of substance use by periods are shown in Figure 5.

Discussion

The results of our study revealed an increase in substance use during the pandemic period. There are studies in the literature to support our data (9). The COVID-19 pandemic has introduced numerous stressors, including social isolation, unemployment, disruptions to daily routines, and significant efforts to safeguard against the virus. During this period of heightened stress and potential trauma, certain individuals may turn to substance use as a means of coping with these challenging (10). One of the most important results of our study is the increase in substance use in the female gender and adult age group during the pandemic period. There are some studies showing an increase in substance use among women during the pandemic period (11,12). A study of Canadian pregnant women found that cannabis and tobacco use increased in relation to the stress of COVID-19, and the increase in this substance use was more frequent in participants who were stressed about financial struggles, job loss, or receiving poor antenatal care (11). Pandemic conditions are

thought to cause certain stressors and challenges affecting women. Women can often carry more burdens with family responsibilities and household chores, face economic hardships such as unemployment or loss of income, and have limited access to support services (13). These factors may cause women to turn to substance use or increase their current use. In a study by Devoto et al. (12), it was found that substance use increased in women during the pandemic period, and this was associated with low self-efficacy and intimate partner violence. Again, studies have shown that women face more stress and anxiety due to the spread of COVID-19 and the ensuing social distance policies (14). Women's childcare difficulties have also been linked to using substances to cope with stress during the pandemic (15).

In most of the studies in the literature, an increase in the frequency of substance use was found in the young age group during the pandemic period (16,17). In some studies, it is stated that there is an increase in substance use in the adult age group. Substance use may increase among people experiencing difficulties such as social isolation, anxiety, depression, and stress during the pandemic. People may turn to substance use to provide relief or escape during difficult times. One reason for this may be related to the psychological effects of the pandemic and higher levels of stress, anxiety and depression among the individuals involved. During the pandemic period, entertainment venues, bars and nightclubs were closed, concerts and festivals were canceled due to quarantine rules. Movements and social interactions of people, especially in the younger age group, were restricted. It can be thought that it supports the reduction of substance use in the young age group, considering that it is often difficult to access stimulants and access to illegal drugs. Economic problems, mental problems and social isolation can be stated as the reasons for the increase in substance use in the adult age group. The onset of the pandemic, new addictive behaviors; it is expected to exacerbate many risk factors for the maintenance, worsening and relapse of existing ones (18).

On the other hand, another result of our study is that the use of methamphetamine, cocaine, opioid and multiple substances increased during the pandemic period. The greatest increase was found in methamphetamine use. Turkish Presidency of Fight Against Narcotic Crimes announced that it has seized the largest amount of methamphetamine in the history of Turkey. The fact that methamphetamine is easier to find on the black market than other drugs may have increased the frequency of abuse. In addition, the limitation in the accessibility of the items that individuals use more easily, which they use more easily, may have caused changes in the items they prefer (19). Smith et al. (20) reported that an increase in stress and depressive symptoms was correlated with a rise in the consumption of various substances during the COVID-19 pandemic. Young-Wolff et al. (21) observed a 25% increase in prenatal cannabis use in California during the pandemic, although they did not report a statistically significant increase in usage rates before and during the pandemic. A study involving pregnant women in Canada revealed an uptick in both cannabis and tobacco usage linked to COVID-19-induced stress. Notably, substance use was more prevalent among participants experiencing stress related to financial difficulties, job loss, or inadequate antenatal care (11). In a study conducted with high school students in the Montréal region, it was found that cannabis use increased during the pandemic period (22).

Methamphetamine is a synthetic stimulant in the class of amphetamine-type stimulants with a high addictive potential. After cannabis and opioids, amphetamine-type stimulants are the most used drugs worldwide. Methamphetamine, which was first encountered in a seizure originating from Iran in Istanbul in 2009 in our country, was seen on the streets of all 81 provinces in 2019 (19). It is thought that the biggest threat of the coming period will be this item. The amount of methamphetamine seizures seized in 2021 increased by 32.8% compared to the previous year (19). METH users, along with other drug addicts, are among the most vulnerable groups in society, with less access to healthcare, weaker immunity and multiple risk factors such as poorer health, respiratory problems, metabolic problems or heart disease (23). The methamphetamine user community faces significant stigmatization and marginalization, often remaining concealed within larger populations. Identifying this at-risk group within the broader population can be exceptionally challenging, potentially pushing them to the brink of life-threatening situations. Factors such as homelessness, limited access to healthcare, compromised immune systems, underlying medical conditions, and impaired decision-making abilities can all contribute to elevated mortality rates among drug users, including those who use METH. The mortality rate among drug users, including methamphetamine users, is 3% to 5% higher

compared to non-drug users (23). In a study conducted in Australia, it was determined that the use of methamphetamine increased during the pandemic period, and the increase in the frequency of use was used to reduce boredom, to enjoy and to alleviate loneliness, as a result of social distance, to combat depression and anxiety (24). In another study conducted in Los Angeles, an increase in methamphetamine use was found during the pandemic period (25). In contrast, large-scale studies show that those with substance use disorders are increasingly susceptible to SARS-CoV-2 infection (26,27). Chronic conditions such as lung disease, heart disease, and HIV are common in people who use methamphetamine, and they have greater needs for additional healthcare. Therefore, the risk of being affected by COVID-19 and a worsening clinical course are likely (28). People with substance use disorders may be at increased risk of overdose due to increased use of methamphetamine to combat quarantine rules, increasing the chance of use alone. Therefore, close monitoring of people with substance use and strategies to reduce the harm of COVID-19 should be developed (29). It was thought that these results may be due to the easing of restrictions in the second period of the pandemic. Contrary to cannabis, methamphetamine also showed a significant increase in the first period of the pandemic and in the later stages of quarantines, and this increase continued steadily. Despite the shortage in supply of other illicit drugs, they are transported illegally in rural mountainous areas where there are no official border crossing points between Turkey and Iran (30). The reasons for the increase in methamphetamine consumption may include finding methamphetamine, which is a stimulant substance, more useful in situations such as "unemployment", "critical financial problems", "personal problems" and "home education" (18). According to the United Nations Office on Drugs and Crime (UNODC), it is estimated that approximately 209 million people around the world have used cannabis in the last year in 2020. According to the Turkey 2022 drug report, while 90579 kg of cannabis was seized in 2019 and 93741 kg in 2020, the amount of cannabis seized in 2021 decreased by 31.6% to 64125 kg. In 2021, the amount of root cannabis capture decreased by 34.2% compared to the previous year. In our study, it was determined that there was a decrease in the rate of cannabis use during the pandemic period. When the literature is examined, it has been determined that there are studies showing both an increase and a decrease in the amount of cannabis use during the pandemic period (31). We can attribute the decrease in cannabis use during the pandemic to health concerns in the community. Many people may want to focus on their overall health and immune system during the pandemic. Avoiding the use of substances such as marijuana may be a choice to lead a healthy life (32). Supporting the results of our study, Öztürk et al. (18), in their study in Turkey, found a decrease in cannabis use during the pandemic period compared to the pre-pandemic period, and an increase in the frequency of methamphetamine use in line with our study. In the same study, an increase in substance use was found in the female gender during the pandemic. In a different way from our study, an increase in the frequency of substance use was found in the 18-24 age group (18). Our data also show a decrease in cannabis use during the pandemic, and this rate did not rise back to pre-pandemic levels in the second year of the pandemic. This decrease can partly be explained by difficulties in accessing cannabis and the significant rise in prices, indicative of local supply shortages (33). The results of our study revealed an increase in the frequency of cocaine use during the pandemic period. Cocaine with a stimulating effect on the central nervous system; It is obtained from the leaves of the plant called *Erythroxylon Coca*, which grows mostly in Colombia, Peru, and Bolivia. Despite the COVID-19 pandemic in 2020, cocaine production and trafficking continued at record levels. With the production of 1982 tons of cocaine in 2020, 1,424 tons of cocaine was seized globally, an increase of 4.5% compared to 2019 (34). In 2020, 214.6 tons of cocaine, the highest amount ever, was seized by EU countries, Turkey and Norway (35). There were 2,961 cocaine incidents in Turkey in 2021. In these events, 4,714 suspects were caught, and 2,841 kg of cocaine was seized. This figure is the highest ever (19). During the pandemic period, some treatment and rehabilitation programs may have been moved to virtual platforms. The inability to participate in face-to-face programs or the ineffectiveness of virtual programs may hinder the treatment processes of the users. Health services and treatment opportunities may be limited in some areas. This can prevent or make it difficult for people with cocaine addiction to access treatment. It has caused uncertainty and anxiety for many people. In times of stress, some people may turn to stimulants such as cocaine. However, others may try to cope with this process in healthier ways. The results of our study revealed an increase in the frequency of opioid use during the pandemic period. Heroin is a semi-synthetic opioid derived

from the opium found naturally in the poppy plant. In 2020, the largest quantities of heroin and morphine were seized in Asia (a 46% increase over the previous year) worldwide. In addition, the amount of seizures in the South West Asian region increased by 60% compared to the previous year. While there were increases in heroin and morphine seizures in South Asia and Oceania, there was a decrease in Europe, Continental America and Africa (36). In 2021, 22,202 kg (61.1% increase compared to the previous year) heroin was seized in 14,924 incidents in Turkey (19).

This present study has several limitations, since our research is limited to a certain geographical region, it may not reflect the results of the whole country or the world. The substance use situation discussed in our study may be in interaction with other factors and may not be limited only to the effect of the pandemic. Another limitation is that the method used in our research is retrospective data analysis, but it has been considered as a necessary method for us to compare with the pre-pandemic. In addition, the data presented in the study may not have a representative sample size and the results may not be suitable for generalization. The strengths of our study are that our study is one of the limited studies in our country investigating the effect of the pandemic on substance use. The important results obtained from our study highlight the more vulnerable groups for substance addiction during the pandemic period and provide ideas for the development of preventive strategic programs for substance addiction in extraordinary situations such as a pandemic that may arise in the future. Research can identify risk factors underlying pandemic-related substance use. This can guide the development of policies and measures to reduce negative impacts affecting societies. Our research can help better manage similar situations by providing information about substance use disorder and its effects on mental health during future epidemics and crises. Understanding the impact of pandemic processes on substance use disorder prevalence and severity can contribute to the development of better policies and interventions for the protection of public health.

In conclusion, COVID-19 pandemic has caused significant impacts in many areas such as economy, tourism, social life, health, education, sports and finance. However, the effects of the epidemic on daily life, health and society are not yet fully understood. Therefore, the impact of measures such as restrictions and curfews implemented to understand the effects of COVID-19 on substance use and substance abuse trends is still unclear. The social and psychological effects of the epidemic (such as government measures, shopping restrictions, curfews, social distance, isolation and quarantine conditions) may possibly affect substance use habits. A study found a significant increase in drug use and an increase in the frequency of drug use among suspected drug users. This increase continues during the pandemic, meaning these people are at risk of developing new addictions and other high-risk health problems. This study reveals drug use trends and patterns among suspected drug users before and during the pandemic in Turkey. These data will help us better understand the effects of COVID-19 on drug use in Turkey. Additionally, comparing these data with substance use data collected during the COVID-19 outbreak in other countries will also provide an important perspective.

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Yazar Katkıları: Tüm yazarlar ICMJE'in bir yazarda bulunmasını önerdiği tüm ölçütleri karşılamışlardır

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