

# Examination of KORDEP (Coronavirus Online Mental Support Program) Data During the COVID-19 Pandemic Period

## COVID-19 Pandemisi Dönemindeki KORDEP (Koronavirüs Online Ruhsal Destek Programı) Verilerinin İncelenmesi

Mustafa Nuray Namlı<sup>1</sup>, Kürşad Nuri Baydili<sup>1</sup>, Başak Ünübol<sup>1</sup>,  
Ahmet Tamer Aker<sup>2</sup>, Rabia Bilici<sup>3</sup>, Ejder Akgün Yıldırım<sup>1</sup>,  
Merih Altıntaş<sup>1</sup>, Pelin Şavlı Emiroğlu<sup>4</sup>

<sup>1</sup>University of Health Sciences, İstanbul

<sup>2</sup>İstanbul Bilgi University, İstanbul

<sup>3</sup>İstanbul Ticaret University, İstanbul

<sup>4</sup>İstinye University, İstanbul

### ABSTRACT

**Objective:** The aim of this study is examination of the application and follow-up processes of the KORDEP (Coronavirus Online Mental Support Program) line, which provides online (phone/video) service for individuals experiencing mental distress during the pandemic.

**Method:** Individuals who called the KORDEP line between May 2020 and August 2021 (n=2433) were included in the study. Only the first calls of individuals who called repeatedly were included in the research and the research was conducted by evaluating the information of 2187 individuals. During the interview, a form consisting of questions that were created by clinicians working in the field and questioned the most common symptoms during depression, anxiety and stress was designed and used as screening questions in risk assessment.

**Results:** A total of 2167 calls were answered and recorded by KORDEP; 92.4% of the callers applied for themselves and 7.6% for their relatives. Of the 1208 (55.2%) individuals who underwent risk assessment, 586 (48.5%) reported sleep disturbances. Individuals over 65 years of age or with a family member with chronic illness had more anxiety symptoms, excessive health concerns, depressive mood, attention difficulties, intolerance, angry behavior and sleep appetite changes than those without. Individuals who were in quarantine or isolation had more anxiety symptoms, excessive health concerns and sleep appetite changes than individuals who were not in quarantine or isolation.

**Conclusion:** Online counseling hotline applications, which have become widespread all over the world with the COVID-19 pandemic, are valuable in terms of providing important opportunities in cases where there is no opportunity to benefit from the usual face-to-face interview service or where there are limitations in access.

**Keywords:** COVID-19, mental health, online support line

### ÖZ

**Amaç:** Mevcut araştırmada pandemi sırasında ruhsal zorlanma yaşayan bireyler için online (telefon/video) hizmet veren KORDEP (Koronavirüs Online Ruhsal Destek Programı) hattının başvuru ve takip süreçlerinin incelenmesi amaçlanmıştır.

**Yöntem:** Araştırmaya; KORDEP hattını Mayıs 2020-Ağustos 2021 tarihleri arasında arayan bireylerin (n=2433) verileri dahil edilmiştir. Mükerrer arayan bireylerin sadece ilk aramaları araştırmaya dahil edilmiş ve 2187 bireyin bilgileri değerlendirilerek araştırma gerçekleştirilmiştir. Görüşme sırasında risk değerlendirmesinde tarama soruları olarak alanda çalışan klinisyenlerce oluşturulmuş, depresyon, anksiyete, stres sürecinde en sık karşılaşılan semptomları sorgulayan sorulardan oluşan bir form tasarlanarak kullanılmıştır.

**Bulgular:** Toplamda 2167 çağrının KORDEP tarafından yanıtlanarak kaydedildiği sistemde; arayanların %92,4'ü kendisi için, %7,6'sı ise yakınları için başvuruda bulunmuşlardır. Risk değerlendirilmesi yapılan 1208 (%55,2) bireyin 586'sı (%48,5) uyku düzeninde bozulmalar olduğunu belirtmişlerdir. 65 yaş üstü veya kronik rahatsızlığı olan ailesi üyesi bulunan bireylerde bulunmayanlara göre daha fazla anksiyete belirtileri, aşırı sağlık kaygıları, depresif duygu durumu, dikkat güçlüğü, tahammülsüzlük, öfkeli davranış ve uyku iştah değişikliği durumları saptanmıştır. Karantina ya da izolasyon sürecinde olan bireylerde karantina ya da izolasyon sürecinde olmayan bireylere göre daha fazla anksiyete belirtileri, aşırı sağlık kaygıları ve uyku iştah değişikliği durumları saptanmıştır.

**Sonuç:** COVID-19 pandemisi ile birlikte tüm dünyada yaygınlaşan online danışma hattı uygulamaları olağan yüz yüze görüşme hizmetinden faydalanma olanağı bulunmayan ya da erişimde kısıtlılıkların olduğu durumlarda önemli imkânlar sunabilmesi açısından kıymetlidir.

**Anahtar sözcükler:** COVID-19, ruh sağlığı, çevrimiçi destek hattı

## Introduction

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On 11 March 2020, the World Health Organization announced that the COVID-19 outbreak has ceased to be regional and has become a 'pandemic' on a global scale. On this date, the first COVID-19 case was announced in Turkey (Ministry of Health 2020). The COVID-19 pandemic process has seriously changed the daily routines of many people around the world, and negative events such as social restrictions, job losses, financial difficulties, feelings of loneliness, anxiety caused by uncertainty, and loss of relatives have significantly affected the mental health of many people (Pietrabissa and Simpson 2020). The psychological effects of the pandemic are more and longer-lasting than the medical effects. Uncertainties in the pandemic process, people's concerns about themselves and their relatives, disruption of routine life to a great extent, and losses caused by social restriction play a role in the magnitude of this effect. Providing social and psychological support during the pandemic reduces the incidence of emotional and psychological disorders in society (Taylor 2022).

It is reported that many people experience insomnia and health anxiety due to the fear of contracting COVID-19 (Torales et al., 2020). In the literature, concerns have been raised about the continuity of care for vulnerable populations with pre-existing mental illness during disasters (Wang et al. 2008, Ohannessian 2015). The COVID-19 pandemic is reported to exacerbate the existing negative processes of patients with serious mental disorders, as it increases health anxiety, reduces activities and social interactions, and significantly disrupts daily routine (Druss 2020, Kozloff et al. 2020). At the same time, there are many international studies indicating that healthcare workers are also mentally affected during epidemics. In the study conducted by Lai et al., it was reported that frontline healthcare workers in Wuhan had more severe levels of anxiety, depressive symptoms, and insomnia and received higher scores on the scales (Lai et al. 2020). In a 2003 study examining the psychological impact on healthcare workers during the SARS epidemic, it was revealed that approximately 10% of the respondents experienced high levels of post-traumatic stress symptoms (Wu et al. 2009).

In the period after the COVID-19 pandemic, the increase in mental health problems may not be treated or diagnosed due to the interruption in mental health services and other difficulties in mental health services (Vadivel et al. 2021). In addition, people may be reluctant to seek help and support from mental health services for fear of contracting COVID-19. Therefore, especially during the pandemic, people may need more help from remote services such as crisis hotlines (Turkington et al., 2020). Therefore, it has become important to develop mental support programs around the world to prevent the psychological effects of the pandemic.

The World Medical Association (WMA) defines telehealth as 'the use of information and communication technology to provide health and health care services and information at large and small distances' (TTB 2021). When the international literature is examined, it is seen that there are examples within the scope of telepsychiatry services during the pandemic period. In China and Australia, support in the field of mental health was provided through various telehealth services (Zhou et al., 2020). Similarly, in Ireland, services have continued to be provided via telephone and e-mail since the start of the lockdown (HSE.ie). In India, in the case of the national helpline established for mental health during the COVID-19 pandemic, it was planned so that a total of 1328 volunteer mental health workers (668 psychiatrists and 660 clinical psychologists) from 25 centers could support callers. This helpline is designed to serve in a 3-stage mechanism. After a preliminary assessment, callers are organized to contact psychiatrists/clinical psychologists according to a standard protocol (Ransing et al. 2020).

In Turkey, there is limited research on the effects of telepsychiatry on individuals with mental disorders, healthcare professionals, children and adolescents, individuals with alcohol and substance abuse, and the general public. Examples of telephonic psychosocial support activities in Turkey during the COVID-19 pandemic include the Ministry of Family And Social Services' Alo 183 line and the Vefa Social Support Group, which was established to meet the needs of households with elderly, chronically ill, and dependent individuals who can be reached through 112, 155 and 156 call centers (Bilge 2020).

With the coordination of the Istanbul Provincial Directorate of Health, the Mental Health Pandemic Commission, after analyzing other practices around the world that provide online or telephone services, planned a functioning scheme for the province of Istanbul, taking into account the existing needs and resources. Then, the Istanbul Coronavirus Online Mental Support Programme (KORDEP) was established with the cooperation of Erenköy and Bakırköy Mental and Neurological Diseases Training and Research Hospitals, training research and state hospitals under the Ministry of Health, universities, mental health professional associations, and many non-governmental organizations. Approximately 700 volunteers/officers took part in KORDEP. This structure includes approximately 65 psychiatry specialists, 15 psychiatry assistants, approximately 400 psychologists working in different institutions, 120 social workers, 60 psychiatric nurses, and 35 people from other

professional groups. When support is requested for children, they are referred to Medeniyet University Child and Adolescent Mental Health and Diseases Unit. There is also an Arabic line for refugees. At the same time, for the social support needs of the callers, integrated work is carried out with the Governorship of Istanbul and Istanbul Provincial Directorate of Family and Social Services, and referrals are made when necessary. KORDEP is an online psychological support program for those who are being treated due to the pandemic, for all healthcare professionals working overtime during the treatment process, and for those who support this struggle by staying at home.

Sharing the findings of an example of an organized online mental support line carried out in cooperation with the Provincial Health Directorate, Public Hospitals, Universities, Associations, and many institutions in our country during the pandemic period constitutes the unique aspect of our study. It is thought that it can contribute to the national and international literature and can be a guide in services that can be designed for similar situations. The study hypothesizes that anxiety and depressive mood symptoms, attention difficulties, intolerance, anger, and sleep appetite change complaints will be high in people who call for mental support. In the current study, it was aimed to examine the application and follow-up processes of the KORDEP line, which provides online (telephone/video) service for individuals experiencing mental distress during the pandemic.

## Method

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### Sample

Individuals who called the KORDEP hotline between May 2020 and August 2021 (n=2433) were included in the study. Only the first calls of repeat callers were included in the study and the research was carried out by evaluating the information of 2187 individuals. The information of the individuals was recorded by obtaining their consent during routine interviews. Those who did not want to share some of their information were respected and the interview was continued and presented as 'unspecified/unwilling to share' in the information columns. Participant information was entered into the database by the interviewers. A form consisting of questions questioning the most common symptoms of depression, anxiety, and stress related to the clinical findings of the participants was designed and used. In this form, variables such as depressed mood, sleep changes, appetite changes, mental and physical symptoms of health anxiety and generalized anxiety, attention/focusing difficulties, anger behavior, chronic mental or physical illness, presence of an elderly person in the family, isolation/quarantine status were questioned in detail and entered into the system. During the online support line, the answers to the questions routinely asked for screening and follow-up purposes, and in the form created for this purpose were recorded in the software system. The present study was carried out by retrospectively analyzing these data. The necessary written permission to conduct the present study with the information in the KORDEP database was obtained from the Istanbul Provincial Health Directorate on 25.07.2024. There were KORDEP calls outside the specified date range, but the suitability of the technical infrastructure and the date range in which full-time service was provided were taken as the basis for recording the data. Approval for the study was obtained from the Erenköy Mental and Neurological Diseases Training and Research Hospital Clinical Research Ethics Committee on 31.10.2024 with the number 64.

### Data Collection Tools

Screening questions were applied during the interview for risk assessment purposes. The form containing these questions was created by clinicians working in the field and questions the most common symptoms of depression, anxiety, and stress. In addition to sociodemographic data, this form asked whether there was anyone living with them (aged 65 and over and/or with chronic diseases), whether there was a healthcare professional working directly with COVID-19 patients, whether there were relatives who were treated/died due to the COVID-19 virus, whether there was a psychiatric diagnosis/medication status, whether there was a COVID-19 diagnosis/isolation status, whether there was a physical illness, and whether there was a sleep change. Whether there has been a change, whether there has been a change in appetite, if so in which direction, whether there are depressive symptoms (weakness, reluctance, withdrawal, unhappiness, not enjoying life, guilt), whether there are anxiety and stress symptoms (flushing, heart palpitations, instability, tremors, dizziness, tightness in the chest, stomach complaints, inability to relax), whether there are health anxiety symptoms due to COVID-19 (taking fever frequently, constantly listening to the feeling of harming your body, thinking that you have breathing difficulties, monitoring your breath, exaggerating the application of hygiene rules, constantly scanning the news about COVID-19, watching related videos, excessive use of social media). In addition to individuals who requested support by calling KORDEP, Psychosocial Support Teams established by the Public

Health Directorate conducted risk assessments by calling all individuals diagnosed with COVID-19 (69181 people) by phone. According to this assessment, the people who were identified as in need of further support were forwarded to the second stage of KORDEP by obtaining their contact information and consent. All calls were subjected to a risk assessment and a first-line interview, and if there is a group A risky situation (being a healthcare worker, staying in isolation and quarantine, elderly and chronically ill people, people with previous COVID-19 disease, people with ongoing psychiatric drug treatment, people with alcohol-substance abuse), the person is directly referred to the second stage, or during the follow-up in Stage 1 (groups B, C, D), people are referred to the second stage if needed.

## **KORDEP**

Its functioning has three stages:

Stage 1, mental health workers from different centers provide services. 0850 3050034 is the phone number where incoming calls are answered. At this stage, psychologists, social workers, psychiatric nurses, and psychological counseling and guidance specialists triage the calls and determine the “Low, Medium, High, and Serious” risk levels of the callers. Psychological First Aid and Psychoeducation support are provided to people at Low, Medium, and High-risk levels. Consents are obtained from people whose “Serious Risk” level is determined and their records are transferred to the second stage. Persons who need further support despite the interventions in the first stage are also taken into consideration and their records are transferred to the second stage.

Stage 2 is carried out by the psychotherapy centers of the University of Health Sciences Istanbul Erenköy and Bakırköy Mental and Neurological Diseases Hospitals. In the second stage, psychologists and psychiatric physicians with psychotherapy training are in charge, and telephone or video interviews are conducted with individuals. Those who need advanced support, such as healthcare workers, those in isolation and quarantine, those with COVID-19, the elderly and those with chronic illnesses, those with alcohol substance use disorder or past psychiatric treatment, are offered services by specialists in their field. Interviews at this stage are structured in terms of content, duration, and frequency of follow-up. Those who need pharmacotherapy, require face-to-face meetings, or need inpatient treatment are transferred to the third stage.

Stage 3 is for those who need face-to-face interviews or pharmacological treatment based on the evaluations made in the previous stages. They are directed to designated psychiatric outpatients within the borders of Istanbul province.

## **Directorate of Public Health Psychosocial Support Services Integrated with KORDEP**

Psychosocial Support Teams (PSTs) established by the Public Health Directorate consist of psychologists, social workers, and child development specialists. PSTs conduct risk assessments by calling all individuals diagnosed with COVID-19. According to this assessment, they provide 'Brief Psychosocial Support' to those they determine as in need. The contact information and approval of those determined to need more support are obtained and forwarded to the second stage of KORDEP.

## **Physical Structure**

The first stage was initially carried out in 4 separate centers (Kadıköy Guidance and Research Center, Erenköy Mental Health and Neurological Diseases Hospital, Bakırköy Prof. Dr. Mazhar Osman Mental Health and Neurological Diseases Hospital, Sultanbeyli Refugees Association). Later, a space consisting of a call center and meeting rooms was designed in Erenköy Mental Health and Neurological Diseases Hospital, but the technological infrastructure was improved and services began to be provided independently of the location.

## **Technological Resources: Call Center**

The system, which is capable of providing 24/7 support, was installed on the mobile devices of KORDEP staff without any location dependency, and calls were directed to the responsible people of the day free of charge. An unlimited number of calls could be answered without any call limitation.

## **Software**

With the software system prepared by the Istanbul Provincial Directorate of Health, information such as socio-demographic and contact information, reason for application, history of contact/illness with COVID-19, and

psychiatric or physical illness status of the people who called the KORDEP are recorded. The information obtained with the software and data security are provided by the Provincial Directorate of Health. The records in the first stage are indicated in the system with subheadings as “triaged applications, those with ongoing follow-up, finalized applications, and applications referred to the second stage”. The records in the second stage were divided into the categories of “health professionals, addiction treatment services, other” and recorded as “pending applications, those under physician follow-up, those under psychologist follow-up, and finalized applications”. The follow-up and monitoring of each individual and the course of the process were detailed in the system.

**Table 1. KORDEP organization chart**

<b>Responsible</b>
· Istanbul Provincial Directorate of Health
<b>Executives</b>
· University of Health Sciences İstanbul Erenköy Mental Health and Neurological Diseases Training and Research Hospital
· University of Health Sciences Bakırköy Prof. Dr. Mazhar Osman Mental Health and Neurological Diseases Training and Research Hospital
· Bilgi University Trauma and Disaster Studies Applied Mental Health Program
<b>Cooperating Organizations</b>
· Public Hospitals (All public hospitals in Istanbul)
· Directorate of Public Health Services (All district health directorates in Istanbul)
<b>Universities</b>
o Biruni University
o Dogus University
o FMV Isik University
o Galatasaray University
o Istanbul Arel University
o Istanbul Bilgi University
o Istanbul Esenyurt University
o Istanbul Gedik University
o Istanbul Commerce University
o Istanbul University Cerrahpaşa Florence Nightingale Faculty of Nursing Mental Health and Psychiatric Nursing
o Istanbul University Child and Adolescent Mental Health and Diseases
o Kadir Has University
o Maltepe University
o Medeniyet University
o Medipol University
o Mimar Sinan Fine Arts University
o Özyeğin University
o University of Health Sciences
o Yıldız Technical University
<b>Mental Health Professional Associations and Other Associations</b>
o Istanbul Branch of the Psychiatric Association of Turkey
o Turkish Psychologists Association
o Turkish Psychological Counseling and Guidance Association

## Social Support

Although KORDEP functions as a mental support hotline, due to the additional social support needs of the callers, it started to work in integration with the Governorship of Istanbul, Ministry of Family and Social Services, Istanbul Provincial Directorate, Vefa Social Support Groups, and many other institutions.

A total of 503 people worked as service providers within KORDEP. The KORDEP call line is available 7 days a week. Callers can receive support for themselves or their relatives. The program uses software created for this work, and referrals between the stages work systematically. The KORDEP mobile user switchboard system has been switched to the KORDEP mobile user switchboard system instead of the system that initially provided service from fixed centers.

A comprehensive training program was prepared for the volunteers/officers in the program and supervision was provided in groups. In addition, one-hour online training and supervision meetings were held regularly at

Erenköy and Bakırköy Mental and Neurological Diseases Hospitals with the participation of 1st and 2nd stage staff. Cases and intervention processes were discussed in detail in these supervision meetings. It was observed that these meetings, which were held with the joint participation of the staff of both stages, contributed to the clarification of cases requiring inter-level referral and increased efficiency in functioning.

### Statistical Analysis

Data were analyzed using the SPSS 25 package program. Percentage and frequency values were presented for categorical variables. The chi-square test was used for comparisons between demographic variables and anxiety, excessive health concerns, depressive feelings, attention difficulties, intolerance-anger, and sleep appetite changes. Type I error rate ( $\alpha$ ) was taken as 0.05 in the study.

### Results

A total of 2167 calls were answered and recorded by KORDEP; 92.4% of the callers applied for themselves and 7.6% for their relatives. Of the clients, 40.6% were male and 59.4% were female. According to marital status, 52.1% of the clients were married, while according to educational level, the highest number of clients had primary education or less (28.6%). Risk assessments were made for 55.2% of callers, 38% had a first counseling interview and 6.7% were referred to an institution. 54.9% of callers were referred to the first stage and 45.1% were referred to the second stage, 69.9% of the individuals lived with their families, 17.7% were determined to need urgent follow-up and 3.2% received first counseling interview (Table 2).

The person calling the line	
For Herself/Himself	2020 (92.4)
For a relative	167 (7.6)
Gender	
Male	887 (40.6)
Female	1300 (59.4)
Marital status	
Unspecified	390 (17.9)
Single	549 (25.1)
Divorced-Widow	108 (4.9)
Married	1140 (52.1)
Education status	
Unspecified	531 (24.3)
Primary and lower education	626 (28.6)
High School	437 (20)
University	560 (25.6)
Postgraduate	33 (1.5)
Service provided (First Stage)	
Consultation interview	832 (38)
Referral to the institution	147 (6.7)
Risk assessment	1208 (55.2)
Referral status	
First Stage interview	1201 (54.9)
Referred to second stage	986 (45.1)
Living status	
Not specified	421 (19.3)
With family	1529 (69.9)
Alone	107 (4.9)
Friend/relative	26 (1.1)
Other	104 (4.8)
Urgent need for follow-up	
Yes	211 (17.7)
No	979 (82.3)
Psychological first aid	
No	38 (3.2)
Yes	1152 (96.8)

Of the 1208 (55.2%) individuals who underwent risk assessment, 586 (48.5%) stated that there were disturbances in sleep patterns. Of the individuals who reported disrupted sleep patterns, 6% reported increased sleep duration, 62.8% reported decreased sleep duration and 31.2% reported disrupted sleep cycle. Among the individuals who underwent risk assessment, 34.9% (n=422) reported changes in appetite (Table 3)..

<b>Table 3. Comparison of symptoms by categories in risk assessment</b>			
<b>Family members over 65 years of age or with chronic diseases</b>			
	No	Yes	p
Anxiety symptoms	450 (48.6)	183 (66.3)	<0.001*
Excessive health concerns	366 (39.6)	129 (46.7)	0.040*
Depressive mood	487 (52.6)	187 (67.8)	<0.001*
Attention difficulties	300 (32.4)	125 (45.3)	<0.001*
Intolerance- anger	298 (32.2)	123 (44.6)	<0.001*
Sleep-appetite changes	497 (53.7)	194 (70.3)	<0.001*
<b>Quarantine isolation process</b>			
	No	Yes	p
Anxiety symptoms	377 (48.3)	256 (60.8)	<0.001*
Excessive health concerns	299 (38.3)	196 (46.6)	0.006*
Depressive mood	424 (54.4)	250 (59.4)	0.107
Attention difficulties	276 (35.4)	149 (35.4)	1.000
Intolerance-anger	283 (36.3)	138 (32.8)	0.250
Sleep appetite changes	414 (53.1)	277 (65.8)	<0.001*
<b>Family member in treatment for COVID-19</b>			
	No	Yes	p
Anxiety symptoms	447 (49.6)	186 (62.6)	<0.001*
Excessive health concerns	343 (38)	152 (51.2)	<0.001*
Depressive mood	473 (52.4)	200 (67.3)	<0.001*
Attention difficulties	312 (34.6)	113 (38)	0.280
Intolerance-anger	311 (34.5)	109 (36.7)	0.486
Sleep appetite changes	484 (53.7)	206 (69.4)	<0.001*
<b>Loss of a relative due to COVID-19</b>			
	No	Yes	p
Anxiety symptoms	568 (51.3)	65 (69.1)	0.001*
Excessive health concerns	451 (40.7)	44 (46.8)	0.299
Depressive mood	603 (54.5)	71 (75.5)	<0.001*
Attention difficulties	377 (34.1)	48 (51.1)	0.001*
Intolerance-anger	374 (33.8)	47 (50)	0.002*
Sleep appetite changes	620 (56)	71 (75.5)	<0.001*
<b>Diagnosis or treatment of COVID-19</b>			
	No	Yes	p
Anxiety symptoms	419 (49.1)	214 (61.5)	<0.001*
Excessive health concerns	333 (39)	162 (46.6)	0.020*
Depressive mood	460 (53.9)	214 (61.5)	0.020*
Attention difficulties	312 (36.6)	113 (32.5)	0.199
Intolerance-anger	304 (35.6)	117 (33.6)	0.506
Sleep appetite changes	465 (54.5)	226 (64.9)	0.001*
<b>Existing chronic illness</b>			
	No	Yes	p
Anxiety symptoms	441 (48.8)	192 (64.6)	<0.001*
Excessive health concerns	347 (38.4)	148 (49.8)	0.001*
Depressive mood	488 (54)	186 (62.6)	0.011*
Attention difficulties	310 (34.3)	115 (38.7)	0.189
Intolerance-anger	290 (32.1)	131 (44.1)	<0.001*
Sleep appetite changes	486 (53.8)	205 (69)	<0.001*

Individuals over 65 years of age or with a family member with a chronic illness had more anxiety symptoms ( $p<0.001$ ), excessive health concerns ( $p=0.040$ ), depressive mood ( $p<0.001$ ), attention difficulties ( $p<0.001$ ), intolerance-anger ( $p<0.001$ ) and sleep-appetite changes ( $p<0.001$ ) than those without. Individuals who were in the quarantine or isolation process had more anxiety symptoms ( $p<0.001$ ), excessive health concerns ( $p=0.006$ ), and sleep appetite changes ( $p<0.001$ ) compared to individuals who were not in the quarantine or isolation process. There was no significant difference in depressive mood ( $p=0.107$ ), attention difficulties ( $p=1.000$ ), or intolerance-anger ( $p=0.250$ ). More anxiety symptoms ( $p<0.001$ ), excessive health concerns ( $p<0.001$ ),

depressive mood ( $p<0.001$ ), and changes in sleep appetite ( $p<0.001$ ) were observed in individuals with family members receiving COVID-19 treatment compared to individuals without family members.

Psychiatric diagnosis or treatment				
	No	Yes	P	
Anxiety symptoms	298 (47.2)	335 (58.8)	<0.001*	
Excessive health concerns	252 (39.9)	243 (42.6)	0.374	
Depressive mood	339 (53.7)	335 (58.8)	0.089	
Attention difficulties	199 (31.5)	226 (39.6)	0.004*	
Intolerance-anger	208 (33)	213 (37.4)	0.124	
Sleep appetite changes	340 (53.9)	351 (61.6)	0.008*	
Marital status				
	Single	Divorced/Widowed	Married	P
Anxiety symptoms	185 (60.9)	42 (53.2)	331 (60.3)	0.449
Excessive health concerns	116 (38.2)	27 (34.2)	275 (50.1)	0.001*
Depressive mood	206 (67.8)	47 (59.5)	361 (65.8)	0.382
Attention difficulties	155 (51)	22 (27.8)	202 (36.8)	<0.001*
Intolerance-anger	137 (45.1)	25 (31.6)	230 (41.9)	0.101
Sleep appetite changes	197 (64.8)	50 (63.3)	364 (66.3)	0.830

Education status						
	Primary and lower education	High School	University	Postgraduate	P	
Anxiety symptoms	170 (58.8)	133 (65.8)	186 (65.3)	12 (66.7)	0.307	
Excessive health concerns	116 (40.1)	99 (49)	143 (50.2)	11 (61.1)	0.039*	
Depressive mood	189 (65.4)	150 (74.3)	199 (69.8)	15 (83.3)	0.102	
Attention difficulties	110 (38.1)	95 (47)	133 (46.7)	12 (66.7)	0.024*	
Intolerance-anger	110 (38.1)	97 (48)	129 (45.3)	8 (44.4)	0.135	
Sleep appetite changes	194 (67.1)	141 (69.8)	196 (68.8)	15 (83.3)	0.520	
Living status						
	Family	Relative/Friend	Alone	Other	P	
Anxiety symptoms	454 (61.3)	11 (61.1)	43 (55.8)	34 (52.3)	0.456	
Excessive health concerns	340 (45.9)	6 (33.3)	29 (37.7)	19 (29.2)	0.032*	
Depressive mood	489 (66)	13 (72.2)	51 (66.2)	40 (61.5)	0.841	
Attention difficulties	309 (41.7)	7 (38.9)	35 (45.5)	20 (30.8)	0.303	
Intolerance-anger	319 (43)	6 (33.3)	30 (39)	23 (35.4)	0.505	
Sleep appetite changes	493 (66.5)	10 (55.6)	53 (68.8)	32 (49.2)	0.027*	
Age						
	<18	18-24	25-44	45-64	≥65	P
Anxiety symptoms	25 (25.5)	71 (64)	304 (56.4)	194 (55.3)	39 (38.2)	<0.001*
Excessive health concerns	25 (25.5)	40 (36)	234 (43.4)	157 (44.7)	39 (38.2)	<0.001*
Depressive mood	37 (37.8)	83 (74.8)	311 (57.7)	203 (57.8)	40 (39.2)	<0.001*
Attention difficulties	29 (29.6)	52 (46.8)	205 (38)	118 (33.6)	21 (20.6)	0.001*
Intolerance-anger	36 (36.7)	49 (44.1)	208 (38.6)	111 (31.6)	17 (16.7)	<0.001*
Sleep appetite changes	31 (31.6)	69 (62.2)	320 (59.4)	220 (62.7)	51 (50)	<0.001*

There were no significant differences in attention difficulties ( $p=0.280$ ) and intolerance-anger ( $p=0.486$ ). Individuals who experienced bereavement due to COVID-19 had more anxiety symptoms ( $p<0.001$ ), depressive mood ( $p<0.001$ ), attention difficulties ( $p=0.001$ ), intolerance-anger ( $p=0.001$ ), and changes in sleep appetite ( $p<0.001$ ) compared to individuals who did not experience bereavement. There was no significant difference between the groups in terms of extreme health concerns ( $p=0.299$ ). Anxiety symptoms ( $p<0.001$ ), excessive health concerns ( $p=0.020$ ), depressive mood ( $p=0.020$ ), and changes in sleep appetite ( $p=0.001$ ) were more common in individuals who received a COVID-19 diagnosis-treatment compared to individuals who did not receive diagnosis-treatment. There was no significant difference in attention difficulties ( $p=0.199$ ) and intolerance-anger ( $p=0.506$ ). Individuals with existing chronic conditions had more anxiety symptoms ( $p<0.001$ ), excessive health concerns ( $p=0.001$ ), depressive mood ( $p=0.011$ ), intolerance-anger ( $p<0.001$ ), and sleep appetite changes ( $p<0.001$ ) than individuals without chronic conditions. There was no significant difference ( $p<0.001$ ) between the groups in terms of attention difficulties (Table 4).



Individuals with psychiatric diagnosis or treatment had more anxiety symptoms ( $p < 0.001$ ), attention difficulties ( $p = 0.004$ ), and sleep appetite changes ( $p = 0.008$ ) than individuals without diagnosis or treatment. There was no significant difference in terms of extreme health concerns ( $p = 0.374$ ), depressive mood ( $p = 0.089$ ), and intolerance-anger ( $p = 0.124$ ). In terms of marital status; excessive health concerns were found mostly in married individuals ( $p = 0.001$ ) and attention difficulties were found mostly in single individuals ( $p < 0.001$ ). No significant difference was found between anxiety symptoms ( $p = 0.449$ ), depressive mood ( $p = 0.382$ ), intolerance- anger ( $p = 0.101$ ) sleep appetite change ( $p = 0.830$ ), and marital status (Table 4).

Extreme health concerns ( $p = 0.039$ ) and attention difficulties ( $p = 0.024$ ) were observed more frequently in participants with postgraduate education than in participants with other levels of education. In terms of anxiety symptoms ( $p = 0.307$ ), depressive mood ( $p = 0.102$ ), intolerance, angry behavior ( $p = 0.135$ ), and sleep appetite changes ( $p = 0.520$ ), it was determined that there was no significant difference between the educational levels. Extreme health concerns ( $p = 0.032$ ) and changes in sleep and appetite ( $p = 0.027$ ) were observed more frequently in individuals living with their families. No significant difference was found for anxiety symptoms ( $p = 0.456$ ), depressive mood ( $p = 0.841$ ), attention difficulties ( $p = 0.303$ ) and intolerance-anger ( $p = 0.505$ ). In terms of age groups; Individuals under 18 and over 65 had fewer anxiety symptoms ( $p < 0.001$ ), individuals under 18 had less extreme health concerns ( $p < 0.001$ ), individuals under 18 and over 65 had less depressive mood ( $p < 0.001$ ), Individuals under 18 years of age and over 65 years of age had fewer attention difficulties ( $p < 0.001$ ), participants aged 65 years and over had less intolerance- anger ( $p < 0.001$ ), and participants under 18 years of age had less sleep-appetite changes ( $p < 0.001$ ) (Table 5).

## Discussion

Telepsychiatry practices can be as effective as face-to-face medical assessment, diagnosis, treatment, and counseling services in mass traumas, crisis and disaster situations, and post-war periods (TPD 2022). Telephone helplines are important institutions established in many countries to protect mental health and provide immediate, anonymous, inexpensive, and accessible support (Brühlhart et al. 2021). Helplines are particularly important in a pandemic, where face-to-face contact carries risks of infection and even the need to stay at home (Brühlhart and Lalive 2020). In the current study, we analyzed the referral data of the KORDEP helpline, which provides online services to individuals experiencing mental distress during the COVID-19 pandemic.

According to the results of our study, 92.4% of the callers among the total of 2167 calls applied on their behalf and 7.6% on behalf of their relatives. Our findings are consistent with the international literature showing that individuals mostly call to get support on their behalf (Ratna 2020; Wang et al. 2020; Scerri et al. 2021). Individuals tend to call to express their concerns rather than the concerns of others. When they are very distressed themselves, their capacity to care for those around them may also be affected in some way. 40.6% of those who applied to the KORDEP helpline were male and 59.4% were female. Similarly, in a study focusing on the COVID-19 crisis, where data from 8 million calls from 19 countries were published, it was reported that 61% of the total calls were made by women (Brühlhart et al., 2021). This gender-related finding is consistent with other studies that have found that a slightly larger percentage of women have used helplines for mental health assistance during the COVID pandemic in general (Jensen et al. 2021, Monreal-Bartolomé et al. 2022). Several studies have shown that women have been identified as more vulnerable to psychological distress during the pandemic and are more able to express their vulnerability than men (Qiu et al. 2020, Pierce et al. 2020). This may also be because when isolation at home is necessary, it has led to difficult situations in families that place excessive responsibilities on women (Berdullas Saunders et al. 2020).

In our study, it was observed that 586 (48.5%) of 1208 (55.2%) individuals who underwent risk assessment had disturbances in sleep patterns. Of the individuals who stated that their sleep patterns were disrupted, 62.8% stated that their sleep duration was shortened, 6% stated that their sleep duration was prolonged and 31.2% stated that their sleep cycle was disrupted. Similar to this finding, in a study published on crisis hotline data in Spain, it was reported that insomnia was among the complaints of callers during the pandemic (Monreal-Bartolomé et al. 2022). In another study, data from a tele-counseling hotline launched in Bangladesh to address mental health problems during the COVID-19 period were shared, and 87% of callers described anxiety and/or insomnia related to the current situation (Iqbal et al. 2021). In a study investigating psychological status, sleep quality, and coping styles during the COVID-19 pandemic in Wuhan, it was reported that more than a quarter of the sample experienced psychological problems such as anxiety and depression, and about one-third experienced sleep disorders (Fu et al. 2020). In a study conducted in Greece during the pandemic, it was found that intolerance of uncertainty and insomnia were associated and 37.6% of the participants had sleep problems (Voitsidis et al. 2020). Being unaware of many aspects of the pandemic (e.g. virus transmission rate, morbidity)

may have caused stress on individuals who had difficulty coping with uncertainty. Sleep disorders appear to be among the most common reactions after a traumatic event (Belleville et al. 2019).

The World Health Organization states that older individuals and those with pre-existing medical conditions (such as diabetes, high blood pressure, heart disease, lung disease, or cancer) seem to have COVID-19 more often than others (WHO 2020, 2023). In our study, individuals with a family member over the age of 65 or with a family member with a chronic illness had more anxiety symptoms, excessive health concerns, depressive mood, attention difficulties, intolerance, anger, and sleep appetite changes than those without. Similar to our findings in the literature, it was found that anxiety symptoms were commonly observed in calls to the helpline during the pandemic period in Spain, and concern for family and friends ranked first about anxiety (Berdullas Saunders et al. 2020). Considering their sensitivity to COVID-19, the presence of elderly/chronically ill relatives in the family may cause individuals to experience more anxiety and mental distress.

Individuals with a family member undergoing COVID-19 treatment had more anxiety symptoms, excessive health concerns, depressive mood, and sleep appetite changes than those without. Similarly, more anxiety symptoms, depressive mood, attention difficulties, intolerance, anger, and sleep appetite changes were found in individuals who experienced the loss of a relative due to COVID-19 compared to those who did not.

It is suggested that clinical symptoms may worsen and psychological problems in infected patients may change with the progression of COVID-19 disease, and therefore psychological intervention measures should be appropriately targeted and implemented (Duan and Zhu 2020). In our findings, anxiety symptoms, excessive health concerns, depressive mood, and sleep appetite changes were significantly higher in individuals receiving treatment for COVID-19. At the same time, anxiety symptoms, excessive health concerns, and sleep appetite changes were found to be higher in individuals who were in quarantine/isolation period compared to those who were not.

When the literature in this field is reviewed, it is seen that many studies support our results. Studies examining calls to the helpline in Greece during the COVID-19 Pandemic emphasize the dominance of anxiety symptoms. It has been shown that most of these calls include pandemic-specific concerns such as fear of disease and quarantine-related problems (Ravindran et al. 2020, Peppou et al. 2021).

With the introduction of a partial lockdown, the first local deaths, and spikes in the number of cases, Malta has seen a significant increase in the number of mental health calls (Scerri et al. 2021). In Switzerland, calls to a free anonymous helpline during the COVID-19 period showed an increase in the total volume of calls compared to the 2019 period, and the calls were mostly about concerns related to the pandemic (Brühlhart and Lalive 2020).

In a systematic review published during the COVID-19 pandemic, it was reported that individuals with chronic illness and a history of medical/psychiatric illness had more anxiety and stress symptoms (Xiong et al. 2020). In our study, individuals with existing chronic conditions had higher rates of anxiety symptoms, excessive health concerns, depressed mood, intolerance, anger, and changes in sleep appetite compared to individuals without chronic conditions. Similarly, during the second and third waves of COVID-19, a large proportion of calls to the helpline were related to physical health in France (Brühlhart et al. 2021). This may be related to the risks of being infected with COVID-19 in at-risk individuals or health concerns due to limited access to treatment facilities. In our study, individuals with a psychiatric diagnosis or treatment had more anxiety symptoms, attention difficulties, and sleep-appetite changes than individuals without a diagnosis or treatment.

According to data from a tele-counseling helpline launched in Bangladesh to address mental health problems during the COVID-19 period: 87% of callers had anxiety about the current situation and/or insomnia, 42.1% had health concerns, and 9.2% had a mental illness (clinical depression, schizophrenia, obsessive-compulsive disorder, panic disorder) (Iqbal et al. 2021). Among the reasons for calling a telephone helpline established to serve elderly individuals in India are the feeling of loneliness and the need for psychological support (Lal et al. 2021). Considering the health-related and social risks arising from the pandemic, the fear and anxiety experienced by individuals diagnosed with chronic physical or mental illness may explain our current findings.

There are some limitations of our study. The data in the analysis were analyzed retrospectively through the system and obtained with a large number of user entries. Therefore, there may be differences in terms of standardization among user records. Another limitation is that validated scales were not used for the study and the sociodemographic-clinical variable form prepared for the KORDEP line was used. These limitations of the KORDEP line can serve as a reference for further studies, as it is a rapidly organized structure and was established acutely during the COVID-19 pandemic.

## Conclusion

In conclusion, online hotline applications, which have become widespread all over the world with the COVID-19 pandemic, are valuable in terms of providing important opportunities in situations where it is not possible to benefit from the usual face-to-face interview service or where there are limitations in access. As a result of our study, anxiety symptoms, depressive mood, attention difficulties, intolerance, anger, and changes in sleep appetite were found in people seeking help, especially in those who were in quarantine or isolation and individuals with relatives over the age of 65. The current study highlights the importance of the increased need for mental helplines as mental health services have been affected during the COVID-19 pandemic and face-to-face meetings (especially for people with serious mental illness) have become limited. It is valuable that the KORDEP support line can be sustainable in the post-COVID-19 period in case of need, that the organizational infrastructure and personnel are structured, and that mental support can be provided in acute situations. The KORDEP Support Line call data can contribute to the planning of new applications in the future in terms of showing the needs regarding mental health in the community during the pandemic period. For similar services in the future, it may be recommended to use categorized systems, valid and reliable screening tools, and scales as much as possible during the processing of sociodemographic data. In addition, to evaluate the effectiveness of the service provided, it may be considered to repeat the scales as pre-test and post-test.

In our study, it was found that the majority of the calls to the KORDEP line were for themselves, the proportion of women was high, the majority lived with their families, the marital status was high in terms of marital status, and the educational level was high in terms of primary education and lower. Nearly half of the callers were referred to the second stage of the helpline. Nearly half of the individuals who underwent risk assessment stated that there were disturbances in sleep patterns. Individuals over 65 years of age or with a family member with a chronic illness had more anxiety symptoms, excessive health concerns, depressive mood, attention difficulties, intolerance, anger, and changes in sleep and appetite. Individuals who were in quarantine or isolation had more anxiety symptoms, extreme health concerns, and changes in sleep and appetite. The findings of our study are important in terms of showing the need for online psychological support in situations such as the COVID-19 pandemic, where there are limitations in accessing face-to-face counseling services. Our current study may guide in cases where online mental support services are planned to be offered in the future..

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