CONSEQUENCES OF THE COVID-19 PANDEMIC ON ANXIETY AND DEPRESSION: A DESCRIPTIVE AND CROSS-SECTIONAL STUDY

CONSEQUÊNCIAS DA PANDEMIA DA COVID-19 NA ANSIEDADE E DEPRESSÃO: UM ESTUDO DESCRITIVO E TRANSVERSAL

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ABSTRACT

Objective: To describe the consequences of anxiety and depression caused by the coronavirus disease (COVID-19) pandemic in the general population. **Methods:** This descriptive, cross-sectional, and retrospective study used the database provided by a questionnaire applied via Google Forms® between September 2021 and February 2022. The study was disclosed on social media, and a quick-response code of the questionnaire was fixed in the environments of the Faculdade de Medicina de Olinda. The software STATA/SE 12.0 and Excel 2010 were used for data analysis. **Results:** A total of 357 participants were evaluated; most had depressive symptoms, such as sleep difficulties and irritability. Regarding anxiety symptoms, the most recurrent were sleep difficulties, difficulty concentrating, and fatigue. Anxiety and depression were correlated with the COVID-19 pandemic, which worsened the condition and functionality of the participants in daily activities. **Conclusion:** The COVID-19 pandemic impaired mental health, leading to a high prevalence and worsening of anxiety and depression symptoms in the general population during this period.

Keywords: anxiety; COVID-19; depression; mental health; pandemic.

RESUMO

Objetivo: Descrever as consequências na ansiedade e na depressão ocasionadas pela pandemia da COVID-19. **Métodos:** Estudo transversal, descritivo e retrospectivo, realizado por um questionário no banco de dados do Google Forms entre o período de setembro de 2021 a fevereiro de 2022. A divulgação da pesquisa foi por meio de redes sociais e QR code do questionário fixado nos ambientes da Faculdade de Medicina de Olinda. Foram utilizados os softwares STATA/SE 12.0 e o Excel 2010. **Resultados:** Foram avaliados 357 participantes, a partir dos 18 anos, que, na maioria, apresentavam sintomas depressivos, como "dificuldade para dormir" e "irritabilidade". Quanto aos sintomas de ansiedade, a maior prevalência foi de "problemas de sono", "dificuldade de concentração" e "fadiga'. Houve correlação da ansiedade e depressão com a pandemia da COVID-19, com impacto direto no agravamento de sua condição e na funcionalidade em atividades diárias. **Conclusão:** Esse estudo verificou que reflexos negativos na saúde mental estão associados à pandemia da COVID-19, identificando a predominância e piora de sintomas de ansiedade e depressão nos participantes durante o período pandêmico.

Palavras-chave: Saúde mental; COVID-19; Ansiedade; Pandemia; Depressão.

INTRODUCTION

Coronavirus disease (COVID-19) is an infectious disease caused by the new severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that impairs the nervous system; this disease was declared a pandemic by the World Health Organization in March 2020[1,2].

In 2020, mental and psychosocial health problems increased in the context of public health, with depression rates sevenfold higher in the general population. This incidence is directly related to the rapid increase in the number of

COVID-19 deaths and the social distancing imposed by the government[1].

Psychological consequences may emerge as direct effects of the pandemic, not only in those with COVID-19 but also in the general population due to its high impact on mental health[3].

Therefore, this study aimed to estimate the consequences of the COVID-19 pandemic on the prevalence of depression and anxiety symptoms in the general population.

METHODS

This descriptive, cross-sectional, and retrospective study used data from an online questionnaire developed by the authors of this study (i.e., students of the Faculdade de Medicina de Olinda [FMO]), which was applied between September 8, 2021, and February 18, 2022. The questionnaire was created using Google Forms® and included questions about sociodemographic characteristics, changes in lifestyle, mood, health conditions, and access to health services during the COVID-19 pandemic.

The sample was obtained using a non-probabilistic method. Participants were invited via social media, and each researcher sent the questionnaire to 20 random individuals, ensuring stratification by gender, age group, and contact with SARS-CoV-2. Participants were asked to invite others from their social media, following a “virtual snowball” sampling method. Additionally, a quick-response code for the questionnaire was fixed in the environments of the FMO to increase disclosure.

The software STATA/SE 12.0 and Excel 2010 were used for data analysis. Data were calculated considering only valid responses (i.e., questions answered). The results are presented as tables and charts with their absolute and relative frequencies.

This study was approved by the research ethics committee of the FMO and the national research ethics commission (No. 48107821.6.0000.8033), affiliated with the National Health Council. The informed consent form was presented in Google Forms®. The participants proceeded with the questionnaire after being informed about the study and agreeing to answer it.

RESULTS

A total of 357 participants were included. Most were female, young adults, and adults; over half of the participants did not contract COVID-19; a quarter was diagnosed with COVID-19 and had mild symptoms; a small percentage was not diagnosed but had symptoms; and less than 1% were hospitalized because of the disease (Table 1).

Table 1. Sociodemographic data of participants

Variable	n	%
Age (years)		
18 to 29	181	50.7
30 to 39	99	27.7
40 to 59	62	17.4
60 or older	15	4.2
Gender		
Female	237	66.4
Male	117	32.8
Prefer not to say	3	0.8
Had COVID-19		
Yes, diagnosed by a doctor and had mild symptoms	94	26.3
Yes, I needed to be hospitalized	3	0.8
Think I had it, but I was not diagnosed by a doctor	50	14.0
No, I did not had COVID-19	210	58.9

n: number of participants; COVID-19: coronavirus disease.

Slightly more than half of the participants reported anxiety or depression or both, but most were not diagnosed by a doctor. Less than a quarter had the diagnosis for more than two years, and an even smaller number received a diagnosis recently (within the last two years) (Table 2).

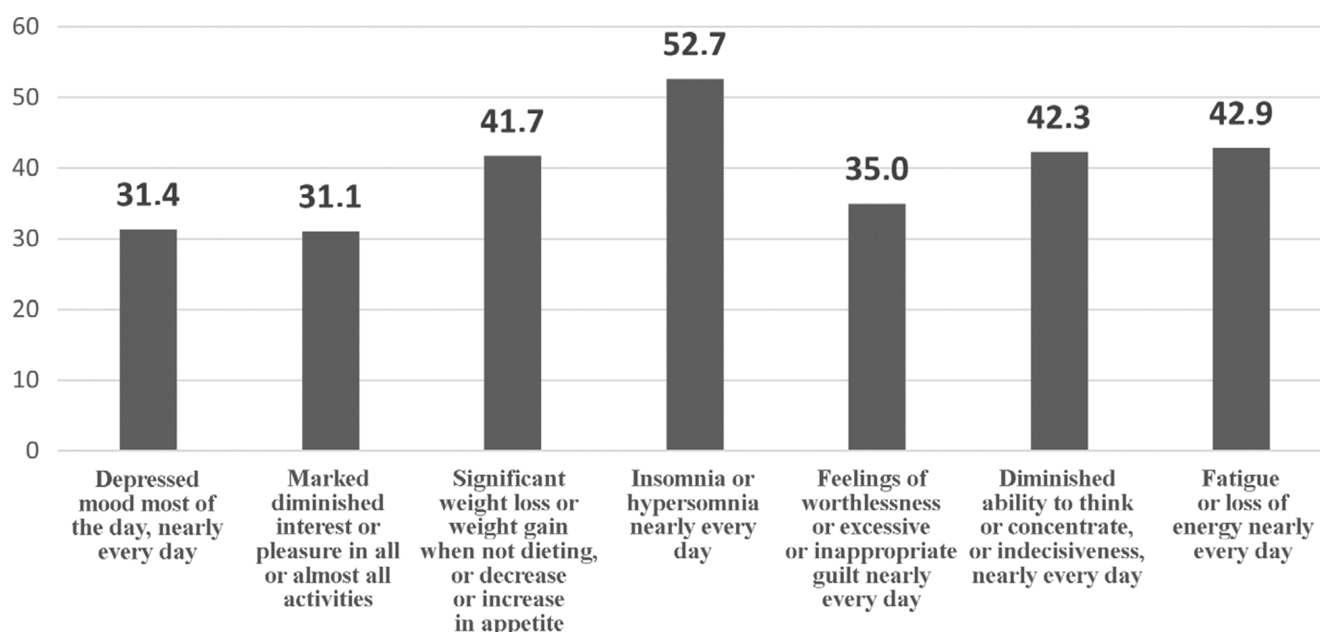
Table 2. Pre-existing mental diseases

Variable	n	%
Have anxiety or depression (or both)		
Yes	191	53.5
No	119	33.3
Unable to answer	47	13.2
Diagnosed with anxiety or depression (or both) by a doctor		
Yes, have a diagnosis (for more than two years)	75	21.0
Yes, have a recent diagnosis (in the last two years)	53	14.8
No, never diagnosed	229	64.2
The pandemic worsened your pre-existing anxiety or depression (or both)		
Yes	165	46.2
No	72	20.2
I do not have the diagnosis	120	33.6

n: number of participants.

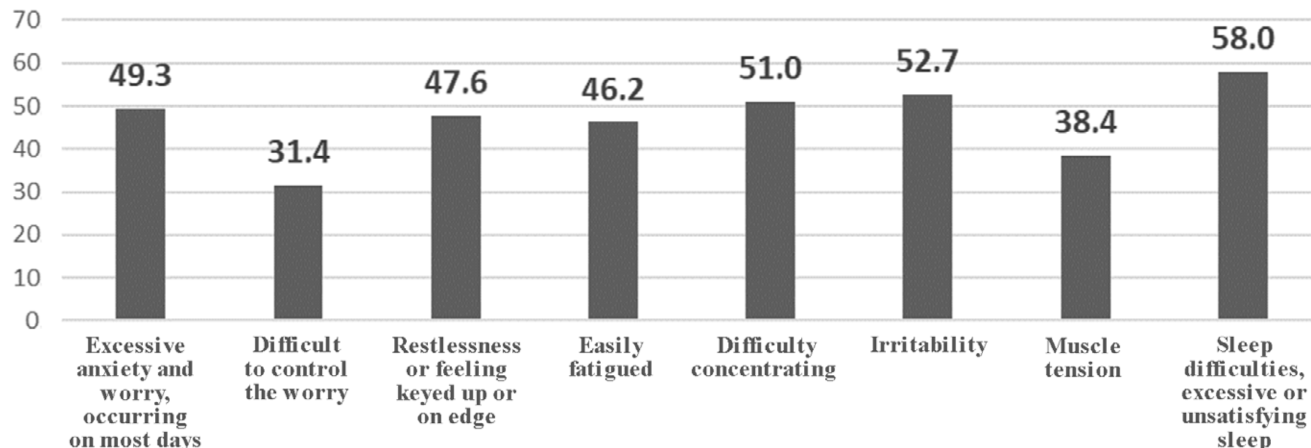
Diagnosed or not by doctors, almost half of the participants who reported a pre-existing condition indicated that the pandemic worsened their anxiety or depression (or both) (Table 2).

During the COVID-19 pandemic and social distancing, insomnia or hypersomnia nearly every day was the predominant depressive symptom from the Diagnostic and Statistical Manual of Mental Disorders (5th edition) (DSM-5), followed by fatigue or loss of energy nearly every day (Figure 1).



DMS-5: Diagnostic and Statistical Manual of Mental Disorders (5th edition)

According to the DSM-5 criteria, the most anxiety symptoms reported were sleep difficulties, excessive or unsatisfactory sleep, followed by irritability and difficulty concentrating (Figure 2).



DMS-5: Diagnostic and Statistical Manual of Mental Disorders (5th edition).

Most participants felt that these behavioral changes impaired their daily activities. However, most did not seek professional support or follow social distancing properly, mostly because of the need to work or study. Sources of information more often used during the pandemic were newspapers and television, followed by the internet, family or friends, and radio (Table 3).

Table 3. Behaviors during the COVID-19 pandemic

Variable	n	%
The adopted behaviors are impairing your daily activities		
Yes	184	51,6
No	99	27,7
Maybe	74	20,7
Are you following social distancing guidelines		
Yes, I stayed isolated at home	111	31,1
No, I need to go out to work or study	216	60,5
I am not following social distancing	30	8,4
Professional support during the pandemic		
Yes, I had professional support	91	25,5
No, I cannot afford it	52	14,6
No, I did not seek professional support	214	59,9
Source of information		
Newspapers and television	279	78,2
Internet (WhatsApp, Facebook, Instagram)	235	65,8
Radio	69	19,3
Family or friends	148	41,5

n: number of participants.

DISCUSSION

The increased number of confirmed COVID-19 cases worldwide and deaths in March 2020 led the World Health Organization to implement restrictive measures, such as social distancing, lockdowns, and the mandatory use of masks to control the peak of virus transmission. These measures resulted in moderate or severe psychological impact of depressive and anxious symptoms in 53.8% of the participants, corroborating the results of a Chinese study with 1,210 participants from 194 cities in 20204.

Another 2020 study5 with 500 participants in Hong Kong used the Patient Health Questionnaire-9 (PHQ-9), a 9-item tool that evaluated major depressive disorder symptoms, and the Generalized Anxiety Disorder 7-item (GAD-7) questionnaire, which evaluated the main symptoms of generalized anxiety disorder according to the DSM-IV for suspected depressive and anxious conditions. The study indicated a prevalence of 19.0% for major depressive disorder symptoms and 14.0% for generalized anxiety disorder. Additionally, 25.4% reported that their mental health has worsened since the outbreak of the COVID-19 pandemic.

The situation of women during social distancing was also emphasized. Historically, women have been responsible for domestic activities and associated with lower-prestige occupations. This situation intensified during social distancing, which has overwhelmed women because of the increased domestic demands, resulting in a high probability of developing mental disorders[6, 7].

In this study, 66.4% of the participants were female, which suggests a greater concern among women regarding mental health and eventual symptoms6. However, this finding is insufficient to estimate if they were the most affected during the pandemic.

The predominant age group that responded to the questionnaire was 18 to 29 years old (50.7%). This finding can be justified by the interrruption of extracurricular actitivies performed by most participants from this age group, besides their greater access to rapid and sometimes false information via social media[8].

Although 58.9% of the participants reported that they had not been infected with COVID-19, 26.3% were diagnosed and had mild symptoms and 14.0% had symptoms but did not receive a diagnosis. These data reveal that depressive and anxious symptoms increased among participants, regardless of the COVID-19 diagnosis (Table 2 and Figures 1 and 2).

The most frequent symptoms presented in Tables 1 and 2 may result from the uncertainties of the pandemic, unemployment, risk of infection, and fear of death of family members and oneself6. Compared with the pre-pandemic period, the incidence of these symptoms significantly increased after the outbreak of the pandemic (Figures 1 and 2).

The COVID-19 pandemic was a key factor in the incidence and worsening of depressive and anxious symptoms due to subjective (e.g., the uncertainty and fear of death) and objective factors (e.g., the severity of symptoms and transmissibility of the virus)[9].

When analyzing the depressive and anxious behaviors, 51.6% of the participants experienced disruptions in their daily activities. Among the variables, social distancing caused routine changes. Despite this, 60.5% of participants did not follow social distancing guidelines as they needed to go out for work, including essential services, or study or both[10, 11].

Since mental health issues increased during the COVID-19 pandemic, participants were asked about professional support; 59.9% did not seek professional support, and only 25.5% received care. Participants with pre-existing mental diseases who required care tended to clinical worsening and had difficulties accessing psychotherapeutic services. Besides the closure of clinics[12], individuals had difficulties recognizing the need for help to treat and identify potential mental diseases. In addition, individuals were afraid of being diagnosed with depression or anxiety and socially labeled as mentally ill[13].

Many studies warned about the social harm of fake news during the COVID-19 pandemic. In this study, 78.2% of the participants relied on newspapers and television as sources of information, and 65.8% used the internet. The abundance of fake news hinders access to legitimate, trustworthy sources11. Therefore, the

internet, as a means of information with a wide circulation of news, sometimes false, affects reliable sources. This excess of information can be a precipitating factor for anxiety[15].

CONCLUSION

COVID-19 is an infectious disease that has caused significant harm to mental health. This study evaluated the consequences of the COVID-19 pandemic on depression and anxiety symptoms in the general population and identified that the psychological reflexes were associated with the pandemic due to stressors factors, such as social distancing, lack of psychotherapy support, and fake news exposure. Moreover, the occurrence and severity of depression and anxiety increased during this period. Given the psychosocial damages evidenced during the pandemic, public health measures focused on mental health (i.e., combating psychophobia) are needed to ensure access to psychosocial care network and support of individuals in psychological distress by qualified professionals. Restraints the dissemination of fake news are also a measure of mental health promotion.

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