Assessment of anxiety and depression symptoms in the Albanian general population during the outbreak of COVID-19 pandemic

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ABSTRACT

Background: During the COVID-19 pandemic, the Albanian authorities declared mandatory stay-at-home measures, closing businesses, schools, and public places. This study aims to investigate the impact of these immediate changes on the mental well-being of the population.

Methodology: Respondents (N = 1678) aged 18–60 years were selected through a convenient sampling method. A questionnaire was administered online for 26 days, where respondents reported the time spent daily in the COVID-19 topic and filled in their generalities, the Patient Health Questionnaire-9 and Generalized Anxiety Disorder-7.

Results: Findings suggest a significant negative correlation between age and anxiety scoring (r = −0.121, P ≤ 0.001) and between age and depression scoring (r = −0.232, P ≤ 0.001), shown also on the ANOVA test for age and anxiety (F = 6.019, P ≤ 0.05), where younger populations had higher anxiety levels, as well as age and depression (F = 20.326, P ≤ 0.05), where older populations had higher levels of depression. Differences on the level of education resulted in a lower score of anxiety and depression (F = 3.524, P ≤ 0.05; F = 7.739, P ≤ 0.05, respectively) on respondents with higher education. Those who found themselves jobless from the pandemic scored higher on anxiety and depression (F = 9.760, P ≤ 0.05; M = 6.21, ds = 4.686 and F = 16.051, P ≤ 0.05; M = 8.18, ds = 5.791, respectively) compared with those who are still working. Significant differences were found on the ANOVA test related to different amounts of time spent daily on the COVID-19 topic for anxiety and depression (F = 25.736, P ≤ 0.001; F = 5.936, P ≤ 0.003, respectively), with people who spend >1 h scoring higher on depression (M = 7.57, ds = 5.849) and those who spent >3 h scoring higher on anxiety (M = 6.76, ds = 5.60). On the t-test, people on a romantic relationship scored lower levels of depression (t = −4.053, P ≤ 0.0001) compared to single individuals, and females scored higher levels of anxiety (t = 12.344, P ≤ 0.001) compared to males.

Conclusions: Younger participants scored higher levels of anxiety and depression. Higher education individuals show lower levels of anxiety and depression. Having a job translates into lower levels of anxiety and depression. People who spent more time on the COVID-19 topic daily have higher levels of anxiety, whereas those who spent less time have higher levels of depression. Being in a romantic relationship relates to lower levels of depression. Females report higher levels of anxiety compared to males.

Key words: Albanian population, anxiety, depression, social distancing
INTRODUCTION

The coronavirus disease (COVID-19) emerged in Wuhan, China, in the late of December 2019. It has spread very rapidly all over China and other countries, causing an outbreak of acute atypical pneumonia. The World Health Organization declared the outbreak a pandemic in March 11.[2] To prevent the spread of the infection, the Albanian authorities declared mandatory stay-at-home measures, closing businesses, schools, and public places. People were allowed to leave their homes for basic necessities (e.g., doing grocery shopping or going to work, if this cannot be done from home). There have been reports of the psychological impact of the strict isolation measures in the general population from previous epidemics.[3,4] Depression, anxiety, and sleep disorders, negative psychological effect, psychotic symptoms, and suicidal tendency have been reported in recent epidemiological studies.[5,6] To the best of our knowledge, no previous studies in Albania have evaluated the anxiety and depression symptoms during the COVID-19 outbreak. This study also investigated the effect on these variables of potentially affecting factors, such as gender, age, marital status, educational level, employment status, time spent on the COVID-19 topic, and current mental illness. We aimed to explore the potential influence factors of mental health burden of the general population during the COVID-19 pandemic. The research also included measures of alcohol intake, cigarette smoking, and curfew duration. The study findings would be helpful to understand the impact of such pandemics on the mental health and may assist government agencies and healthcare professionals in adopting protective measures on the psychological well-being of the community.

MATERIALS AND METHODS

Participants and data collection

We assessed these variables expressed in the Albanian population, using an anonymous online questionnaire that had been inspired by the literature.[3,4] The questionnaire, completely voluntary, was shared via social media for 26 days (from April 4, 2020, to April 29, 2020). All respondents reported their demographic data, time spent on COVID-19 topic, current mental illness, their alcohol consumption, cigarette smoking, and curfew duration. Participants were asked about the stressors during the confinement. They also completed two standardized questionnaires: Generalized Anxiety Disorder-7 (GAD-7) and Patient Health Questionnaire-9 (PHQ-9).

A total of 1703 respondents filled in the questionnaires. Inclusion criteria were (a) age range from 18 to 60 years and (b) living in Albania. In addition, 25 respondents were excluded. The final sample consisted of 1678 participants.

Ethics statement

The procedures were clearly explained and the participants could quit from the study at any point without explaining their reasons for doing so.

Measures

Demographic data

Demographic variables included age, gender, education level, marital status, working life (whether participants lost their job, were working from their houses, or were going to work), and living with their families or not. Specifically, participants were asked about the curfew duration (more or less than 10 days).

COVID-19 confinement

Participants were also asked about the average time spent focusing on the COVID-19 outbreak information every day (1 or <1 h, 1–2 h, and 3 h or more). Further information related to COVID-19 was collected to identify the stressors during confinement: fear of being infected themselves, fear of infecting their loved ones, frustration from losing the usual routine, inadequate basic supplies, inadequate information, and financial loss. Of the above six questions, one point was for “strongly disagree” and five for “strongly agree.”

We included additional questions related to the consumption of benzodiazepines, alcohol, and smoking during confinement. Changes in benzodiazepines and alcohol consumption and cigarette smoking were assessed using a self-report question: “Since the onset of the COVID-19 pandemic I…,” with the following response options: “drink much more than usual,” “drink less than usual,” and “drink with the same frequency as usual.” Having or not a current mental illness was required as information too.

Anxiety and depression symptoms assessment

Generalized Anxiety Disorder-7

GAD-7 scale was used to assess the respondent’s anxiety symptoms. The GAD-7 is a self-administered screening tool based on the seven DSM criteria for GAD. Participants reported their symptoms for the last 2 weeks, using a 4-item rating scale ranging from 0 (not at all) to 3 (almost every day). The total anxiety scale was divided into: 0–5 minimal, 6–10 mild, 11–15 moderate, and 15–21 severe anxiety.

The GAD-7 has been previously applied in research related to MERS[6] and Ebola outbreak,[10] in recent studies in China,[3] and it has been approved to be a well-valuated screening instrument.[11,12] In this study, it has demonstrated excellent internal consistency (Cronbach’s α = 0.900).

Patient Health Questionnaire-9

The PHQ-9 was used to measure depressive symptoms. A total score of 0–4 indicates minimal depression, 5–9 mild depression, 10–14 moderate depression, 15–19 moderately
severe depression, and 20–27 severe depression. Other studies have shown that PHQ-9 is a reliable, valid measure of depression severity[13] and more sensitive than other diagnostic tools.[14] The Cronbach’s alpha coefficient of the PHQ-9 was 0.882.

Statistical analysis
Descriptive statistics were calculated for demographic characteristics, stressors during confinement, consumption of alcohol, smoking, and psychotropic drugs. ANOVA test was used to find a correlation between anxiety and depressive symptoms and age, alcohol use, employment status, and time spent on the COVID-19 topic. All data were analyzed using IBM, SPSS Statistics for Windows, Version 25.0. (Armonk, NY: IBM Corp.). P < 0.05 was considered statistically significant.

RESULTS
Sociodemographic characteristics of the included population
Table 1 shows the demographic characteristics of the population included in the study (n = 1678). The majority of the respondents belonged to the age group of 18–25 (n = 1046, 62.3%) followed by 26–35 years (n = 434, 25.9%). Regarding gender, 73.2% of the respondents were females (n = 1229) and 26.8% (n = 449) were males. 1467 respondents (87.4%) had completed a higher education, 197 (11.7%) had a high school degree, and 14 respondents (0.8%) had completed primary education. When asked if they were currently in a romantic relationship, 871 (51.9%) said yes, and most of the population lived with their families (n = 1416, 84.4%). Regarding their employment status, 769 (45.8%) reported unemployment, 262 (15.6%) said, “Yes, but it was interrupted after pandemic,” 309 (18.4%) reported, “Yes, I work from home after pandemic,” and 338 (20.1%) responded, “Yes, I continue to go to work like before pandemic.” Most of the respondents reported < 1 h of daily time spent on the COVID topic (n = 871, 51.9%), followed by 1–2 h (n = 557, 33.2%) and >3 h (n = 250, 14.9%). Table 2 shows that there was no effect on the increase of alcohol consumption or cigarette smoking, with a slight decrease of alcohol consumption after the pandemic for those who reported that they used alcohol even before the curfew orders (reduced amount - n = 98, 40.7%; increased amount - n = 29, 12.0%) and a similar effect on cigarette smoking (reduced amount - n = 81; 39.1%, increased amount - n = 43, 20.8%). There was a slight number of respondents who reported an increased use of benzodiazepines (increased amount - n = 17 45.9%); decreased amount - n = 3 8.1%.

Correlation between variables
Findings suggest a significant negative correlation between age and anxiety scoring (r_{(p=1678)} = -0.121, P ≤ 0.001) and between age and depression scoring (r_{(p=1678)} = -0.232, P ≤ 0.001), shown also on the ANOVA test for age and anxiety (F = 6.019, P ≤ 0.05), where younger populations had higher anxiety levels, as well as age and depression (F = 20.326, P ≤ 0.05), where older populations had higher levels of depression. Those who found themselves jobless from the pandemic scored higher on anxiety and depression (F = 9.760, P ≤ 0.05; M = 6.21, ds = 4.686; and F = 16.051, P ≤ 0.05; M = 8.18, ds = 5.791, respectively) compared with those who are still working. Significant differences were found on the ANOVA test related to different amounts of time spent daily on the COVID-19 topic for anxiety and depression (F = 25.736, P ≤ 0.001 and F = 5.936, P ≤ 0.003, respectively), with people who

| Variables                           | Variable categories       | n (%)       |
|-------------------------------------|---------------------------|-------------|
| Age-groups (years old) (M±SD)       |                           |             |
| 18-25                               | 1046 62.3                 |             |
| 26-35                               | 434 25.9                  |             |
| 36-45                               | 118 7.0                   |             |
| 46-55>55                            | 68 4.1                    |             |
| (26.49±8.068)                       | 12.7                      |             |
| Gender                              |                           |             |
| Male                                | 449 26.8                  |             |
| Female                              | 1229 73.2                 |             |
| Education level                     |                           |             |
| Primary                             | 14.8                      |             |
| Secondary                           | 197 11.7                  |             |
| Tertiary                            | 1467 87.4                 |             |
| Being in a romantic relationship    |                           |             |
| Yes                                 | 871 51.9                  |             |
| No                                  | 807 48.1                  |             |
| Living currently                    |                           |             |
| Alone                               | 101 6.0                   |             |
| Friends                             | 161 9.6                   |             |
| Family                              | 1416 84.4                 |             |
| Employment status                   |                           |             |
| No                                  | 769 45.8                  |             |
| Yes, but it was interrupted after pandemic | 262 15.6              |             |
| Yes, I work from home after pandemic | 309 18.4                |             |
| Yes, I continue to go to work like before pandemic | 338 20.1          |             |
spend <1 h scoring higher on depression (M = 7.57, ds = 5.849) and those who spent >3 h scoring higher on anxiety (M = 6.76, ds = 5.60). Table 3 shows the measurements and the comparison of the individuals divided into groups regarding the self-reported variables and their level of depression and anxiety symptoms as measured by GAD-7 and PHQ-9.

**DISCUSSION**

This is the first study in the scientific literature reporting the psychological impact of the COVID-19 outbreak in a sample of the Albanian population. The data in this study suggest that anxiety symptoms were more likely to occur on those who spent a longer time focusing on the outbreak of COVID-19, supported also by the data from other studies. One explanation for this result may be the greater access to information through social media, which can easily trigger stress. In contrast with other studies, those who spent less time focusing on the COVID-19 topic scored higher on depressive symptoms.

With regard to the variables related to the psychological impact, we found that being unemployed or having to go out for work during the confinement results in higher levels of anxiety and depression, as shown in recent studies. The COVID-19 pandemic has had a negative impact on the global economy and research from financial stress related to extreme events suggests serious consequences on the mental well-being. In more detail, the results showed that having to leave one’s domicile for work during the pandemic time was related to higher levels of anxiety and depression. Therefore, they were more susceptible to the COVID-19 coronavirus and consequently risked their families, which is one of the greatest worries that people have during outbreaks.

More than three quarters of the respondents reported no change or positive change in alcohol use since the onset of COVID-19 and the other part reported a negative change. The reduction in alcohol use may be explained with the closures of bars, clubs, and temporary restriction on alcohol purchases. This is more reliable to the occasionally or light drinkers; however, since the changes in alcohol consumption behavior after pandemic was assessed using a self-report question, it makes it difficult to distinguish if the respondents are heavy or light drinkers. We believe that the increase in alcohol consumption is well justified from other studies that demonstrated that people who experience negative psychological changes (e.g., depression and anxiety) during pandemics are more likely to exacerbate alcohol use, especially for those vulnerable to relapse. The increase in alcohol use might be as well an improving emotion regulation for better coping the fear of the unknown (one-third of the humanity under COVID-19 lockdown) and an adaptive behavior to mental health burden.

| Variables                                      | Variable categories | n   | (%) |
|------------------------------------------------|---------------------|-----|-----|
| Confinement duration (days)                    | <10                 | 160 | 9.5 |
|                                                | >10                 | 1518| 90.5|
| Time spent focusing on the COVID-19 topic (hours per day) | <1 | 871 | 51.9 |
|                                                | 1-2                 | 557 | 33.2|
|                                                | ≥3                  | 250 | 14.9|
| Current psychiatric illness                    | Yes                 | 14  |     |
|                                                | No                  | 1664|     |
| Smoking (cigarettes per day)                   | No                  | 1471| 87.7|
|                                                | Yes                 | 207 | 12.3|
|                                                | After pandemic      |     |     |
|                                                | Yes, reduced        | 81  | 39.1|
|                                                | Yes, increased      | 43  | 20.8|
|                                                | Yes, with the same frequency | 83 | 40.1 |
| Alcohol use                                    | No                  | 1437| 85.6|
|                                                | Yes                 | 241 | 14.4|
|                                                | After pandemic      |     |     |
|                                                | Yes, reduced        | 98  | 40.7|
|                                                | Yes, increased      | 29  | 12.0|
|                                                | Yes, with the same frequency | 114 | 47.3 |
| Benzodiazepines use                            | No                  | 1641| 97.8|
|                                                | Yes                 | 37  | 2.2 |
|                                                | After pandemic      |     |     |
|                                                | Yes, reduced        | 3   | 8.1 |
|                                                | Yes, increased      | 17  | 45.9|
|                                                | Yes, with the same frequency | 17 | 45.9 |
There were various research limitations in this study. First, since the data presented here are collected from a cross-sectional design, it is difficult to make causal inferences. Second, the study was conducted during the COVID-19 outbreak and we were unable to assess respondent’s psychological conditions before the pandemic. Third, this study estimated anxiety and depressive symptoms in the beginning of the pandemic, so longitudinal studies will be helpful to understand the trajectories of mental health during the pandemic of COVID-19.

CONCLUSIONS

The COVID-19 pandemic and the subsequent curfew measures adopted by the government have affected the mental health well-being of the Albanian population. According to our study, younger participants show higher levels of anxiety and depression. Higher education individuals show lower levels of anxiety and depression compared to other groups. Having a job translates into lower levels of anxiety and depression compared to people who have lost their job due to the economic recession. People who spent more time on the COVID-19 topic daily had higher levels anxiety, whereas those who spent less time had higher levels of depression. Alcohol consumption and cigarette smoking were decreased or have stayed the same during the pandemic compared to the time before the outbreak of COVID-19.

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