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Brief Report

Stress, Anxiety, and Depression in People Aged Over 60 in the COVID-19 Outbreak in a Sample Collected in Northern Spain

Maitane Picaza Gorrochategi, Ph.D., Amaia Eiguren Munitis, Ph.D. Student, Maria Dosil Santamaria, Ph.D. Student, Naiara Ozamiz Etxebarria, Ph.D.

ABSTRACT

Objective: This study examines the levels of stress, anxiety, and depression in people over 60 years of age at the time of the COVID-19 outbreak. Design: The study used an exploratory-descriptive cross-sectional methodology. The resulting responses were analyzed using SPSS v.25. Participants: Participants (N = 290) were aged 60 years and above. Setting: The study was carried out in the Basque Country (North of Spain). Measurements: Stress, anxiety, and depression were measured using the Anxiety and Stress Scale - 21 (DASS-21). Results: Most of the participants did not report levels of stress, anxiety, and depression. Among participants age 66 and above and those with chronic illness, a proportion reported experiencing one, two or all three of these symptoms (Am J Geriatr Psychiatry 2020; 28:993–998)

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OBJECTIVE

In December 2019, an outbreak of new coronavirus pneumonia occurred in Wuhan, Hubei, China.1 The rapid increase in confirmed cases and deaths has created problems such as stress, anxiety, and depression in the general population.2 On March 14, 2020, the Spanish Government declared a state of emergency. In the case of the COVID-19 outbreak, the first waves of epidemiological data show that it disproportionately affects older people (as reported in China) but currently, relatively little is known about its wider impact on mental health.3 In this regard, the international health community and institutions have warned of the risk of exposure to the COVID-19 virus, particularly in older age groups.4

In fact, the majority of deaths caused by COVID-19 have occurred in people with chronic diseases and in older people, with mortality rates increasing with
People with chronic diseases present higher levels of psychological symptoms just as those people with multiple underlying diseases present more severe symptoms of Covid-19. In any biological disaster, fear, uncertainty, and stigmatization are common, and therefore, appropriate medical and mental health interventions are important. In order to develop such interventions, it is essential to identify the specific psychological situation of the potential target group. For example, in relation to gender, the statistics suggest that women are experiencing more anxiety than men during the COVOD-19 crisis.

WHO has also warned that the risks posed by COVID-19 may generate greater distress, anxiety, anger, stress, agitation, and withdrawal in older people during the outbreak, or whilst in confinement. Further, according to Craske & Stein COVID-19 may act as a stressor, creating collective panic due to uncertainty and a lack of knowledge. In addition, its rapid rate of transmission, infectious nature, and serious threat to life could contribute toward increasing anxiety levels. This state of emergency in response to COVID-19 is likely to cause the anxiety-prone population to experience high levels of stress. In addition, the lockdown conditions imposed by governments are also creating symptoms of depression in the population.

In summary, the current lack of knowledge regarding the psychological symptoms experienced by the older population amid the COVID-19 crisis has prompted us to explore the incidence of stress, anxiety, and depression in older people. It is anticipated that the confinement situation could be affecting the mental health of older people, since it is the older people at risk of isolation who are at risk to develop serious concerns such as anxiety or depression while socially isolated. Similarly, the loneliness that accompanies confinement is one of the underlying causes of anxious and depressive states of mental health, with living alone in old age being considered a major risk factor. In addition, depression is in itself a risk factor for health concerns, including osteoporosis, cancer, and cardiovascular disorders.

The aim of this study was to measure the levels of stress, anxiety, and depression in older people and to also explore the relationships between these variables and chronic diseases.

### METHODOLOGY

**Participants**

The participants of this study were 290 people from the Basque Autonomous Community (BAC), of whom 62.1% (n = 180) were women and 37.9% (n = 110) were men. In relation to age, 36.6% (n = 106) were men and women between 60 and 65 years of age and 63.4% (n = 184) were over 66 years of age (M = 66.36; DT = 5.03), the oldest participant in this sample being 82 years of age. Further, 32.8% (n = 95) indicated having a chronic disease and 67.2% (n = 195) reported having no chronic disease.

**Instruments**

*Ad hoc questionnaire.* This instrument gathers information on the participants’ age, sex, and whether or not they have a chronic disease.

*Depression Anxiety and Stress Scale - 21 (DASS-21, validated by. This scale is composed of 21 Likert-type items, with three factors: depression, anxiety and stress. The scores for these dimensions are divided into five categories (none, mild, moderate, severe, and extremely severe).

In this study, the Cronbach's alpha coefficient varied depending on the factor: for depression this value is $\alpha = 0.86$, for anxiety, $\alpha = 0.77$ and for stress, $\alpha = 0.84$. It should also be noted that to ensure the validity of the questionnaire, the relationship indices between the variables of anxiety and stress ($r = 0.686$), depression and stress ($r = 0.690$) and, depression and anxiety ($r = 0.698$) were taken as a reference. These three factors show a close and positive relationship.

**Procedure**

For data collection, all the canons established by the Organic Law 15/99 on the Protection of Personal Data were followed. These questionnaires were created using Google Forms and randomly distributed among the general population and various associations that work with older people.

**Data Analysis**

We calculated the frequencies and percentages of levels of depression, anxiety, and stress according to...
sex (recoded to women with 1 and men with 2), age and the presence (or not) of a chronic illness. We also analyzed the differences between the groups using various between-group comparison tests for nonparametric data. Depending on the type of analysis and the variables under study, we used the Mann-Whitney U-test and the Kruskal Wallis test.

Finally, we explored the joint effect of the variables sex and presence of disease and age and presence of disease by conducting pair-wise comparisons using Bonferroni’s correction. All analyses were carried out using the statistical program SPSS v. 25.

RESULTS

Table 1 displays the frequencies and percentages in the levels of depression, anxiety, and stress, according to sex, age, and the presence of a chronic illness.

It is clear from Table 2 that there are statistically significant differences in depression ($U = 8,271.50$, $p = 0.029$, $r = 0.08$) and anxiety $U = 7,770.00$, $p = 0.001$, $r = 0.13$) according to whether or not the participants have a chronic disease, with small effect sizes in both cases. Further, for scores on depression and anxiety, we found a significant joint effect between the presence of a chronic disease and the gender of the participants, and between the presence of a chronic disease and the age of the participants. The sources of these joint effects are displayed in further detail in Tables 3 and 4.

### TABLE 1. Variables Associated with the Categorized Depression, Anxiety and Stress

|                      | DASS-Depression | DASS-Anxiety | DASS-Stress |
|----------------------|-----------------|--------------|-------------|
|                      | None n (%)      | Mild n (%)   | Moderated n (%) | Severe n (%) | Extremely Severe n (%) |
| Women                | 143(79.4)       | 16(8.9)      | 18(10.0)     | 3(1.7)      | 0(0.0)                 |
| Men                  | 93(84.5)        | 8(7.3)       | 6(5.5)       | 1(0.9)      | 2(1.8)                 |
| 60-65 years          | 85(29.3)        | 7(2.4)       | 10(3.4)      | 3(1)        | 1(0.5)                 |
| ≥66 years            | 151(52.1)       | 17(5.9)      | 14(4.8)      | 1(0.3)      | 1(0.3)                 |
| Illness chronic yes | 70(24.5)        | 9(3.1)       | 10(3.4)      | 3(1)        | 2(0.7)                 |
| Illness chronic no   | 165(56.9)       | 15(5.2)      | 14(4.8)      | 1(0.5)      | 0(0)                   |
|                      | DASS-Anxiety    |              |              |             |                         |
|                      | None n (%)      | Mild n (%)   | Moderated n (%) | Severe n (%) | Extremely Severe n (%) |
| Women                | 150 (85.5)      | 11 (6.1)     | 18 (10.0)    | 1 (0.6)     | 0 (0.0)                |
| Men                  | 101 (91.8)      | 2 (1.8)      | 5 (4.5)      | 0 (0.0)     | 2 (1.8)                |
| 60-65 years          | 87 (82.1)       | 5 (4.7)      | 12 (11.3)    | 1 (0.9)     | 1 (0.9)                |
| ≥66 years            | 164 (89.1)      | 8 (4.3)      | 11 (6)       | 0 (0.0)     | 1 (0.5)                |
| Illness chronic yes | 72 (75.8)       | 8 (8.4)      | 12 (12.6)    | 1 (1.1)     | 2 (2.1)                |
| Illness chronic no   | 179 (91.8)      | 5 (2.6)      | 11 (5.6)     | 0 (0.0)     | 0 (0.0)                |
|                      | DASS-Stress     |              |              |             |                         |
|                      | None n (%)      | Mild n (%)   | Moderated n (%) | Severe n (%) | Extremely Severe n (%) |
| Women                | 155 (86.6)      | 15 (8.4)     | 8 (4.5)      | 1 (0.6)     | 0 (0.0)                |
| Men                  | 100 (91.7)      | 5 (4.6)      | 3 (2.8)      | 1 (0.9)     | 0 (0.0)                |
| 60-65 years          | 91 (98.7)       | 10 (9.5)     | 3 (2.9)      | 1 (1.0)     | 0 (0.0)                |
| ≥66 years            | 258 (88.5)      | 20 (6.9)     | 11 (3.8)     | 2 (0.7)     | 0 (0.0)                |
| Illness chronic yes | 80 (85.1)       | 8 (8.5)      | 4 (4.3)      | 2 (2.1)     | 0 (0.0)                |
| Illness chronic no   | 175 (90.2)      | 12 (6.2)     | 7 (3.6)      | 0 (0.0)     | 0 (0.0)                |
Table 3 shows that there are differences in anxiety scores between our male participants who did not have a chronic illness and our female participants who reported having a chronic illness. In relation to depression scores, we found differences between women with a chronic illness and those without chronic illness. Similarly, we found a significant difference in anxiety scores between women that have a chronic illness and those that do not.

Table 4 displays the significant differences in depression and anxiety found between adults with and without chronic illness below the age of 66. Anxiety scores also differ significantly between adults without a chronic illness aged 66 and above and chronically ill adults aged under 66. Finally, anxiety scores differ between chronically ill participants and those without a chronic illness in both age groups.

**CONCLUSION**

The descriptive data collected from our sample during the confinement phase of the COVID-19 outbreak in Spain indicate that the majority of participants in this study do not report stress, anxiety, or depression. However, there is a small proportion of people who experience mild, moderate, severe, and extremely severe levels of all three symptoms. This group includes people aged 66 and above and those with chronic diseases.

Chronic illness appears to be a significant factor when it comes to the levels of depression and anxiety reported by our participants. In particular, individuals with a chronic disease appear to experience more symptoms of stress and anxiety than those who do not have a chronic disease, a difference that was significant among the women in our sample. Broadly speaking, our results are consistent with those of other studies that report more signs of anxiety in people with chronic disease than those without any chronic disease. Moreover, in our study, men with chronic diseases experience more anxiety than women with chronic diseases, although these symptoms are generally mild. In contrast, most studies on COVID-19 report more anxiety in women than in men.

With regard to age, the data of our sample indicate significant differences in depression and anxiety among people aged 60–65 years. Within this age group, people with a chronic illness suffer more depression and anxiety than those without a chronic illness. People aged 66 and above without a chronic illness report more symptoms of anxiety than those aged under 65 with a chronic illness. Older people with a chronic illness also show more anxiety than younger people with a chronic illness. Thus, it appears that, as indicated by previous studies.

**TABLE 3. Pairwise Comparisons for Groups Generated by the Interaction Presence of Chronic Illness and Sex in Depression and Anxiety**

|                  | Depression | Anxiety |
|------------------|------------|---------|
|                  | U          | p adjusted Bonferroni | U          | p adjusted Bonferroni |
| Man chronic illness – Man no chronic illness | 2.258 | >0.999 | –20.374 | 0.220 |
| Man chronic illness - Female chronic illness | 29.282 | 0.076 | 39.060 | <0.001 |
| Female no chronic illness - Man no chronic illness | –2.203 | >0.999 | –8.959 | >0.999 |
| Female no chronic illness - Female chronic illness | –29.228 | 0.010 | –27.645 | 0.004 |

**TABLE 4. Pairwise Comparisons for Groups Generated by the Interaction Presence of Chronic Illness and Age in Depression and Anxiety**

| Age Group | Depression | Anxiety |
|-----------|------------|---------|
| U          | p adjusted Bonferroni | U          | p adjusted Bonferroni |
| 60–65 years nonchronic – 60–65 years chronic | 31.549 | 0.054 | 4.115 | <0.001 |
| ≥66 years nonchronic – 60–65 years chronic | 24.985 | 0.091 | 39.415 | <0.001 |
| ≥66 years chronic – 60–65 years chronic | 20.198 | 0.525 | 28.633 | 0.03 |
their younger counterparts. This could be explained by the lethality of COVID-19 in this age range. For this reason, special emphasis should be placed on psychological interventions aimed at people aged 66 and above.

In conclusion, it is vitally important to safeguard the mental health of older people, particularly those who suffer from chronic diseases. In particular, there is a need to provide these vulnerable members of the population with psychosocial interventions and tools aimed at improving their emotional and social state in these challenging times in which we are currently living. In the BC, the Public Health Services have provided a psychological care service for all citizens, and, in the light of the findings presented here, it is clear that older people must seek the help of these services. Unfortunately, confinement, isolation, and lack of information regarding these services can lead to older adults being unaware of the help that is available to them. Thus, one possible type of intervention could take the form of mental health outreach services, and, importantly, our results imply that such programs would not only be of benefit to older people in general, but also to those that suffer from chronic diseases. Whatever the solution, it is clear that, as observed in China, the COVID-19 outbreak presents major challenges that mental health services will need to overcome in order to protect the older members of the community.

**AUTHORS’ CONTRIBUTIONS**

M.P., A.E., M.D. and N.O. contributed substantially to the conception or design of the work; M.D. and N.O. carried out the analysis and interpretation of the work's data; M.P. and A.E. critically reviewed it for its important intellectual content; all authors approved the latest version and are responsible for the entire manuscript.

**DISCLOSURE**

None of the authors of this article declare any conflicts of interest.

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