

Psychosocial factors associated with symptoms of generalized anxiety disorder in general practitioners during the COVID-19 pandemic

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ABSTRACT

Healthcare providers commonly experience symptoms of anxiety during public health crises and pandemics. The objective of the study was to identify the frequency of symptoms of generalized anxiety disorder (GAD) in general practitioners and to estimate the association with particular psychosocial and demographic factors. This is a cross-sectional study, where a total of 531 general practitioners completed an online form that contained sociodemographic variables, questions about fear and perceptions concerning medical work during the COVID-19 pandemic, 7-Item Generalized Anxiety Disorder Scale (GAD-7), questionnaire on psychosomatic problems and Fear of COVID-19 Scale. The presence of symptoms of GAD was defined by a GAD-7 score of 10 or more points. Voluntary and anonymous participation, acceptance of terms, and informed consent were requested. A p value of <0.05 was considered statistically significant. Symptoms of GAD were identified in 4 out of 10 Colombian general practitioners; the following psychosocial and demographic factors were associated with a greater presence of these symptoms: female gender, social discrimination, anguish, job disappointment, nightmares, stress and other symptoms of fear regarding the pandemic. Conversely, feeling protected by the state or employer, being satisfied with their job as a physician, and trusting government measures and information were associated with a lower presence of symptoms of GAD. These findings highlight the importance of timely psychotherapeutic and psychopharmacological interventions in these individuals. The authors suggest mental health providers should be deployed during times of crisis to decrease the risk of developing mental illness.

INTRODUCTION

COVID-19, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), was first identified in Wuhan, China, in December 2019.¹ It was declared by the WHO as a public health emergency of international concern.^{2,3} With more than five million cases and 340 000 deaths confirmed worldwide in mid-May 2020, COVID-19 is likely the worst public health catastrophe in a century, with severe negative

Significance of this study

What is already known about this subject?

- ▶ There is an association between anxiety, fear, and stress.
- ▶ Anxiety and fear appear early in pandemics.
- ▶ Physicians can suffer short-term and long-term psychological consequences during and after pandemics.

What are the new findings?

- ▶ A high rate of symptoms of generalized anxiety disorder (GAD) was found in general practitioners who took care of all types of patients in the current pandemic, even when there was no overload on institutional capacity.
- ▶ Social discrimination and work-related stress were associated with a greater presence of symptoms of GAD in general practitioners.
- ▶ In general practitioners, feeling protected by the state or employer, being satisfied with their job as a physician, and receiving reliable government information were associated with a lower presence of symptoms of GAD.

How might these results change the focus of research or clinical practice?

- ▶ These results provide necessary statistical information to promote wellness and to prevent psychological distress in healthcare workers during public health crises and pandemics.
- ▶ Our findings highlight the importance of early screening and ensure the availability of mental health services for healthcare providers during times of public health emergencies.
- ▶ In addition, these results seek to sensitize occupational health entities to the need to implement interventions aimed at combating and reducing the presence of factors associated with increased anxiety.

sociopolitical and humanitarian repercussions throughout the world.⁴

In Colombia, the first confirmed case was identified on 6 March 2020. Despite the daily increase in morbidity and mortality rates, there



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is currently no overflow in the healthcare system's capacity. More than 20 200 cases and 705 deaths were confirmed after 2.5 months of the pandemic, the country being under various degrees of quarantine, including 169 cases and 4 deaths in health professionals.⁵

It has been noted that physicians who take care of patients during epidemics or pandemics may be more likely to experience fear, anxiety, stress, or depression.⁶⁻⁹ The following factors can contribute to this mental health deterioration: excessive working hours, disadvantageous employment contracts, insufficient personal protective equipment, and exposure to the virus, with risks to their health or those of their families.^{2,6} In this regard, studies on health professionals in Latin America are scarce. No psychosocial assessments were identified in Colombian general practitioners in times of epidemics.

The objective of this study was to identify the frequency of symptoms of generalized anxiety disorder (GAD) and to estimate associations with particular psychosocial and demographic factors.

MATERIALS AND METHODS

Design and population

This is a cross-sectional study that is part of the research project *Dinámicas Psicosociales en Universitarios (DISEU)*, which belongs to the *Colectivos Universitarios* research line. Scientific, technical, and administrative standards for health research, as established in resolution 8430-1993 of the Republic of Colombia, were considered.¹⁰ No compensation was offered for participation. In 2018, it was reported that 65 939 general practitioners were working in Colombia.¹¹ Using the online *Netquest* calculator, it was estimated that 385 subjects should be included in the study, with a sample size with heterogeneity of 50%, a confidence level of 95% and a margin of error of 5%.

In the first 5 days of April 2020, an open invitation to fill out an online form was sent through WhatsApp, Facebook, and email to general practitioners who worked in Colombia during March of that year. They had to apply their responses to the 24-30 March period, when the country was in a health emergency, in the initial phase of containment, with little community compliance to the government measures and under the strong presence of catastrophic information from Europe and Asia.

Once the reception of forms from the electronic platform Google Forms was finished, the database automatically generated in Microsoft Excel was downloaded. The information regarding the subject's email was deleted to preserve anonymity. Forms from subjects who claimed to be general practitioners who treated patients of any sex, age, or type of pathology or health condition were evaluated. They worked in private or public health centers, outpatient or inpatient, of any level of complexity. To leave the form incomplete was determined as the only exclusion criteria.

The form consisted of two parts. The first part requested age, gender, city of work, and 25 yes or no questions about fears and perceptions concerning medical work during the COVID-19 pandemic. The second part contained three scales. Initially, in the 7-Item Generalized Anxiety Disorder Scale (GAD-7), composed of seven items, total score of 0-21, 10 or more points indicate the presence of symptoms

of GAD, specifically moderate and severe symptoms. In the original study, this cut-off point optimized sensitivity (89%) and specificity (82%) for the diagnosis of GAD. This tool has good reliability, as well as criterion, construct, factorial, and procedural validity.^{12,13} Next, the questionnaire on psychosomatic problems, also called the Work-related Stress Test, is derived from a wide range of tools that explore burnout syndrome in various work activities. It consists of 12 questions about somatizations, each one with six Likert-type answer options, to assign from 1 to 6 points. The higher the score of each item or a total score of the scale, the worse the evaluation. Work-related stress is established with a score equal to or greater than 25. No studies reporting psychometric evaluations were identified.¹⁴ Finally, the Fear of COVID-19 Scale (FCV-19S). It consists of seven questions, each one assessed with five Likert-type answer options. For the present report, the three lowest scores were considered as a negative response; the two highest scores were considered as a positive response. Reliability values, such as internal consistency, α Cronbach=0.82 and test-retest reliability, interclass correlation coefficient=0.72, were acceptable.¹⁵

Statistical analysis

When completing the five projected days for the reception of the forms, 548 forms were obtained, of which 17 (3.1%) were incomplete and were excluded. This is a reanalysis of data from the DISEU-arm COVID-19 project, conducted with EPI-INFO 7 (Centers for Disease Control and Prevention, Atlanta, GA, 2008). GAD-7 was used to identify the presence of symptoms of GAD. According to the obtained result, the subjects were divided into two groups: with and without symptoms of GAD. Quantitative variables are presented as averages and SD. Qualitative variables are presented in absolute and relative frequencies and 95% CIs. The differences between the quantitative variables were evaluated with U of Mann-Whitney or analysis of variance, the qualitative variables with χ^2 test or Fisher test. Logistic regression was performed to estimate crude OR and 95% CI between symptoms of GAD and gender, fears and perceptions concerning medical work during the COVID-19 pandemic, and symptoms regarding fear of COVID-19. Spearman's rank correlation coefficient between the total score of GAD-7 and the items and total score of the questionnaire on psychosomatic problems was calculated. A p value of <0.05 was considered statistically significant.

RESULTS

The study was conducted in 531 subjects, 37.9% above the calculated sample size. Of the general practitioners, 47.9% were over the age of 30 years old and 59.5% were female. Of a total of 209 (39.3%) (95%CI 35.2% to 43.6%) with symptoms of GAD and 322 (60.6%) (95%CI 56.3% to 64.8%) without symptoms of GAD, the group with symptoms of GAD had a lower mean age and included a higher proportion of female gender (table 1).

Subjects with symptoms of GAD most often reported fear of having presented symptoms of COVID-19, fear of taking the virus home, disappointment at work, feeling anguished about going to work the next day and considering quitting their job to protect family members, compared with those

Table 1 Sociodemographic characteristics

Variables	Total N=531 (100.0%)	With symptoms of GAD, n=209 (39.3%)	Without symptoms of GAD, n=322 (60.6%)	P value
Age (years) (X±SD)	33.0±9.3	31.6±7.8	33.8±10.2	0.03*
	n (%) (95% CI)			
Age range (years)				
21–30	277 (52.1) (47.8 to 56.4)	114 (54.5) (47.5 to 61.4)	163 (50.6) (45.0 to 56.2)	0.37†
31–40	164 (30.8) (27.0 to 35.0)	67 (32.0) (25.7 to 38.8)	97 (30.1) (25.2 to 35.5)	0.63†
41–50	49 (9.2) (6.9 to 12.1)	21 (10.0) (6.3 to 14.9)	28 (8.7) (2.9 to 12.4)	0.59†
51–60	31 (5.8) (4.0 to 8.2)	5 (2.3) (0.7 to 5.4)	26 (8.0) (5.4 to 11.7)	0.006†
61–70	10 (1.8) (0.9 to 3.5)	2 (0.9) (0.1 to 3.4)	8 (2.4) (1.1 to 5.0)	0.32†*
Female	316 (59.5) (55.2 to 63.6)	153 (73.2) (66.6 to 79.0)	163 (50.6) (45.0 to 56.2)	<0.001†
Male	215 (40.4) (36.4 to 44.7)	56 (26.7) (20.9 to 33.3)	159 (49.3) (43.8 to 54.9)	
Non-capital city	142 (26.7) (23.0 to 30.7)	55 (26.3) (20.4 to 32.8)	87 (27.0) (22.3 to 32.2)	0.85†
Capital city	389 (73.2) (69.2 to 76.9)	154 (73.6) (67.1 to 79.5)	235 (72.9) (67.7 to 77.6)	
Disinfection protocol when getting home	482 (90.7) (87.9 to 93.0)	195 (93.3) (89.0 to 96.2)	287 (89.1) (85.0 to 92.2)	0.10†

Source: Own elaboration.

*Mann-Whitney/Wilcoxon test.

† χ^2 .

‡Fisher.

GAD, generalized anxiety disorder.

without symptoms of GAD ($p < 0.05$). Half of the group with symptoms of GAD and 30% of the group without symptoms of GAD reported experiencing social discrimination for working as a general practitioner ($p < 0.05$) (table 2).

Item scores and total score of the questionnaire on psychosomatic problems were higher in general practitioners with symptoms of GAD ($p < 0.001$). Work-related stress was identified in 64.4% of all the subjects, in 95.2% of the subjects with symptoms of GAD and in 44.5% of those without symptoms of GAD ($p < 0.01$) (table 3). Subjects with symptoms of GAD had a greater presence of symptoms regarding fear of COVID-19. The most commonly reported symptoms regarding fear of COVID-19 were being afraid of losing life because of COVID-19 by 98% of the subjects with symptoms of GAD and feeling the heart race or palpitate when thinking about getting COVID-19 by 81.3% of the subjects without symptoms of GAD (table 4).

Several psychosocial and demographic factors, especially symptoms regarding fear of COVID-19, as well as female gender, were associated with a greater presence of symptoms of GAD. Feeling protected by the state or employer, being satisfied working as a physician and considering COVID-19 testing capabilities and governmental measures to be sufficient were associated with a lower presence of symptoms of GAD (table 5). Positive and moderate correlation coefficients were observed between all the items and the total score of the questionnaire on psychosomatic problems with the total score of GAD-7 (table 6).

DISCUSSION

Anxiety is an adaptive emotional and behavioral response to threatening stimuli and is essential for survival.¹² Symptoms of GAD were found in 4 out of 10 subjects, similar to that reported by Lai *et al* and higher than that reported by Lu *et al* in doctors and health professionals, respectively, during the current pandemic.^{2 16} In a study using Depression, Anxiety, and Stress Scale-21, anxiety was found in 39.5% of 152 physicians in India, on the same dates the present study was conducted.¹⁷ Lower frequencies have been reported by other authors, 13.0% in Wuhan and 10.8% in Singapore in physicians and nurses, also in the middle of COVID-19.^{6 18} Several factors can explain the differences, especially cultural patterns and psychosocial, environmental, and work influences. Also, the evolution of the infectious event in terms of morbimortality and impact on society, is important.¹⁷

Fear and negative perceptions concerning medical work during the COVID-19 pandemic were significantly higher among general practitioners with symptoms of GAD. Among these, more than 90% reported fear of catching the virus at work and fear of taking the virus home. Lu *et al* indicate that the concern about being infected is a contributing factor to psychological pressure on medical personnel.² Fear of infection has a negative psychological effect on health professionals who take care of patients during epidemics.^{7 19 20} In the severe acute respiratory syndrome (SARS) epidemic, health workers expressed fear and guilt about exposing their family to the infection and felt conflicted between their roles as healthcare providers and parents.¹⁹

In this study, half of the professionals who reported anxiety symptoms also experienced social discrimination for working as a general practitioner. Lee *et al* reported that experiencing discrimination was associated with anxiety disorders and depression.²¹ During the current pandemic, stigma and social discrimination have been generated against people who may have been exposed to the SARS-CoV-2 virus.²² In the 2003 SARS epidemic, healthcare professionals reported feeling stigmatized and also reported avoiding identifying themselves as hospital workers.^{19 23} Social discrimination can represent an obstacle in the search for psychological help, a disturbance in social cohesion, increased isolation, and a reduction in the ability to adopt healthy behaviors.^{22 24}

Anxiety is closely related to psychological stress and work-related stress.²⁵ A significantly greater presence of work-related stress was observed among professionals with symptoms of GAD. A similar finding was also reported by Chua *et al*.⁸ Work-related stress is one of the most important factors in the development of burnout syndrome.²⁶ The overload on institutional capacity, long work hours, the limited availability of efficient protocols, the lack of personal protective equipment, diagnostic tests, or other hospital supplies are challenges for health systems that can contribute to burnout syndrome in times of epidemics.²⁷ Professional burnout is also associated with poor job performance and acute and chronic health problems.²⁸

Anxiety is accompanied by feelings of anguish, social isolation, depression, panic, irritation, inability to concentrate, sleep disturbances, and a reduction in professional

Table 2 Medical work and the COVID-19 pandemic

Variables	Total N=531 (100.0%)	With symptoms of generalized anxiety disorder, n=209 (39.3%)	Without symptoms of generalized anxiety disorder, n=322 (60.6%)	P value*
	n (%) (95% CI)			
Fears				
Having presented symptoms	204 (38.4) (34.2 to 42.7)	104 (49.7) (42.7 to 56.7)	100 (31.0) (26.1 to 36.4)	<0.001
Reaching morbidity and mortality rates similar to China	488 (91.9) (89.1 to 94.0)	199 (95.2) (91.3 to 97.6)	289 (89.7) (85.7 to 92.7)	0.024
Consulting health services as a patient	437 (82.3) (78.7 to 85.4)	191 (91.3) (86.7 to 94.8)	246 (76.4) (71.3 to 80.8)	<0.001
Catching the virus at work	508 (95.6) (93.4 to 97.1)	204 (97.6) (94.5 to 99.2)	304 (94.4) (91.1 to 96.5)	0.07
Taking the virus home	503 (94.7) (92.3 to 96.4)	206 (98.5) (95.8 to 99.7)	297 (92.2) (88.6 to 94.8)	0.001
Being an asymptomatic carrier	318 (59.8) (55.5 to 64.0)	119 (56.9) (49.9 to 63.7)	199 (61.8) (56.2 to 67.0)	0.26
Family fear of taking the virus home	429 (80.7) (77.1 to 84.0)	178 (85.1) (79.6 to 89.6)	251 (77.9) (72.9 to 82.2)	0.02
Perceptions				
Reliable government information	32 (6.0) (4.2 to 8.4)	6 (2.8) (1.0 to 6.1)	26 (8.0) (5.4 to 11.7)	0.01
Sufficient diagnostic tests	28 (5.2) (3.6 to 7.6)	6 (2.8) (1.0 to 6.1)	22 (6.8) (4.4 to 10.3)	0.04
Sufficient government measures	120 (22.6) (19.1 to 26.4)	34 (16.2) (11.5 to 21.9)	86 (26.7) (22.0 to 31.9)	0.004
Compliance with preventive measures by the community	16 (3.0) (1.7 to 4.9)	4 (1.9) (0.5 to 4.8)	12 (3.7) (2.0 to 6.5)	0.23
Sufficient health personnel	50 (9.4) (7.1 to 12.3)	16 (7.6) (4.4 to 12.1)	34 (10.5) (7.5 to 14.5)	0.26
Satisfied working as a physician	392 (73.8) (69.8 to 77.4)	137 (65.5) (58.6 to 71.9)	255 (79.1) (74.2 to 83.4)	<0.001
Feeling protected by the state or employer	122 (22.9) (19.5 to 26.8)	36 (17.2) (12.3 to 23.0)	86 (26.7) (22.0 to 31.9)	0.01
Contribution to the prevention of COVID-19	468 (88.1) (85.0 to 90.7)	188 (89.9) (85.0 to 93.6)	280 (86.9) (82.6 to 90.3)	0.29
Anguished about going to work the next day	384 (72.3) (68.2 to 76.0)	185 (88.5) (83.4 to 92.5)	199 (61.8) (56.2 to 67.0)	<0.001
Consider quitting job to protect family members	259 (48.7) (44.4 to 53.1)	146 (69.8) (63.1 to 75.9)	113 (35.0) (29.9 to 40.6)	<0.001
Disappointment at work	305 (57.4) (53.1 to 61.6)	153 (73.2) (66.6 to 79.0)	152 (47.2) (41.6 to 52.8)	<0.001
Social discrimination for working as a general practitioner	207 (38.9) (34.8 to 43.2)	106 (50.7) (43.7 to 57.6)	101 (31.3) (26.4 to 36.7)	<0.001
Live with people at high risk of severe COVID-19	306 (57.6) (53.2 to 61.8)	132 (63.1) (56.2 to 69.7)	174 (54.0) (48.4 to 59.5)	0.03
Consider moving out of the house to protect family members	360 (67.8) (63.6 to 71.7)	161 (77.0) (70.7 to 82.5)	199 (61.8) (56.2 to 67.0)	<0.001
Nightmares about COVID-19	174 (32.7) (28.8 to 36.9)	106 (50.7) (43.7 to 57.6)	68 (21.1) (16.8 to 26.0)	<0.001
Stressed since the beginning of the pandemic	406 (76.4) (72.5 to 79.9)	202 (96.6) (93.2 to 98.6)	204 (63.3) (57.8 to 68.5)	<0.001
Anguished since the beginning of the pandemic	122 (22.9) (19.5 to 26.8)	82 (39.2) (32.5 to 46.2)	40 (12.4) (9.1 to 16.6)	<0.001

Source: Own elaboration.

* χ^2 .

commitment.^{24 29 30} Anxious states are also related to physical manifestations, as a consequence of hormonal influences and somatovegetative mechanisms.³¹ All these were identified

in the group of general practitioners evaluated. It has been asserted that individuals with somatic symptoms seem to be more aware of the possibility of getting sick.³² Stress can

Table 3 Questionnaire on psychosomatic problems

Items	Total§ N=531 (100.0%)	With symptoms of generalized anxiety disorder n=209 (39.3%)	Without symptoms of generalized anxiety disorder n=322 (60.6%)	P value
	X±SD			
Unable to fall asleep	3.0±1.4	4.0±1.2	2.4±1.2	<0.001*
Migraines and headaches	3.0±1.5	3.9±1.3	2.4±1.3	<0.001*
Indigestion or gastrointestinal complaints	2.6±1.5	3.4±1.5	2.1±1.3	<0.001†
Extremely tired or exhausted	3.2±1.5	4.1±1.3	2.6±1.4	<0.001*
Eat, drink, or smoke more than usual	3.1±1.7	4.0±1.6	2.6±1.5	<0.001*
Decreased sexual interest	2.8±1.6	3.6±1.6	2.2±1.4	<0.001*
Shortness of breath or choking sensation	1.8±1.3	2.4±1.5	1.4±0.8	<0.001†
Decreased appetite	1.9±1.3	2.6±1.4	1.5±0.9	<0.001†
Muscle tremors	1.6±1.1	2.1±1.4	1.3±0.7	<0.001†
Pinpricks in different parts of your body	2.0±1.4	2.8±1.6	1.5±1.0	<0.001†
Strongly tempted not to get up in the morning	2.7±1.6	3.5±1.6	2.3±1.4	<0.001*
Tendency to sweat or have palpitations	1.8±1.3	2.5±1.5	1.3±0.7	<0.001†
Total score	30.1±11.5	39.4±9.6	24.1±8.1	<0.001†
n (%) (95% CI)				
Presence of work-related stress	342 (64.4) (60.1 to 68.4)	199 (95.2) (91.3 to 97.6)	143 (44.4) (38.9 to 50.0)	<0.001‡

Source: Own elaboration.

*Analysis of variance.

†Mann-Whitney/Wilcoxon test.

‡ χ^2 .

§Cronbach's alpha=0.873.

reduce the capacity of the immune system, predisposing to a greater opportunity to acquire the infection.³¹ In the 2003 SARS outbreak, Maunder *et al* reported that in patients and workers of a university hospital, the anxiety peaks coincided with the presence of feverish sensation.¹⁹ We observed that fear of having presented symptoms of COVID-19 was associated with twice the presence of symptoms of GAD.

We found that several of the COVID-19 fear symptoms were significantly more frequent and associated with symptoms of GAD. From the early stages of epidemics, fear and anxiety are present, as unconscious physiological mechanisms of survival and defense of the individual in the face of the aggressions of infectious agents.³³ Later, they can become pathological, affecting general well-being, the ability to act rationally, and decision-making.^{15 24 34}

It was found that the female gender, compared with the male, was associated with twice the presence of symptoms of GAD in the initial phase of containment. Zhang *et al*, in

a cross-sectional study during the mitigation phase of the COVID-19 pandemic in China, concluded that the female gender was associated with increased anxiety, depression, insomnia, and obsessive-compulsive symptoms.⁶ Lai *et al* observed a 69% increase in the presence of anxiety in women.¹⁶ In general, Gong *et al* have indicated that women have OR=1.81 (95% CI 1.37 to 2.38) and OR=1.57 (95% CI 1.21 to 2.03) for anxiety and depressive symptoms, respectively.³⁵

Our results indicate that general practitioners' perception of being protected by the state or employer was associated with 43% less presence of symptoms of GAD. At the same time, in China, Chua *et al* reported that feeling confident about infection control was associated with a lower level of stress and fewer negative psychological effects. Awareness of the importance of hygiene was reported as a positive psychological effect.⁸ Fortunately, 90% of the physicians studied, with no differences according to the presence of symptoms

Table 4 Fear of COVID-19 Scale

Items	Total† n=531 (100.0%)	With symptoms of generalized anxiety disorder, n=209 (39.3%)	Without symptoms of generalized anxiety disorder, n=322 (60.6%)	P value*
	n (%) (95% CI)			
Most afraid of COVID-19	437 (82.3) (78.7 to 85.4)	191 (91.3) (86.7 to 94.8)	246 (76.4) (71.4 to 80.7)	<0.001
Uncomfortable to think about COVID-19	417 (78.5) (74.7 to 81.9)	192 (91.8) (87.3 to 95.1)	225 (69.8) (64.4 to 74.7)	<0.001
Hands become clammy when thinking about COVID-19	368 (69.3) (65.1 to 73.1)	111 (53.1) (46.1 to 60.0)	257 (79.8) (74.9 to 83.9)	<0.001
Afraid of losing life because of COVID-19	377 (71.0) (66.9 to 74.7)	205 (98.0) (95.1 to 99.4)	172 (53.4) (47.8 to 58.9)	<0.001
Nervous or anxious when watching news and stories about COVID-19	357 (67.2) (63.0 to 71.1)	201 (96.1) (92.6 to 98.3)	156 (48.4) (42.8 to 54.0)	<0.001
Unable to sleep because of worry about getting COVID-19	286 (53.8) (49.5 to 58.1)	166 (79.4) (73.3 to 84.6)	120 (37.2) (32.0 to 42.8)	<0.001
Heart races or palpitates when thinking about getting COVID-19	343 (64.6) (60.3 to 68.6)	81 (38.7) (32.1 to 45.7)	262 (81.3) (76.5 to 85.3)	<0.001

Source: Own elaboration.

* χ^2 .

†Cronbach's alpha=0.598.

Table 5 Psychosocial and demographic factors associated with symptoms of generalized anxiety disorder, not adjusted logistic regression (N=531)

Variables	OR (95% CI)	P value
Stressed since the beginning of the pandemic	16.68 (7.59 to 36.63)	<0.001
Unable to sleep because of worry about getting COVID-19	6.49 (4.33 to 9.73)	<0.001
Fear of taking the virus home	5.76 (1.72 to 19.33)	0.004
Uncomfortable to think about COVID-19	4.86 (2.80 to 8.43)	<0.001
Anguished about going to work the next day	4.76 (2.94 to 7.70)	<0.001
Anguished since the beginning of the pandemic	4.55 (2.95 to 7.01)	<0.001
Consider quitting job to protect family members	4.28 (2.94 to 6.22)	<0.001
Nightmares about COVID-19	3.84 (2.62 to 5.62)	<0.001
Fear of consulting health services as a patient	3.27 (1.89 to 5.66)	<0.001
Most afraid of COVID-19	3.27 (1.89 to 5.66)	<0.001
Disappointment at work	3.05 (2.09 to 4.45)	<0.001
Female versus male	2.66 (1.82 to 3.87)	<0.001
Fear of reaching morbidity and mortality rates similar to China	2.27 (1.09 to 4.71)	0.027
Social discrimination for working as a general practitioner	2.25 (1.57 to 3.22)	<0.001
Fear of having presented symptoms of COVID-19	2.19 (1.53 to 3.15)	<0.001
Consider moving out of the house to protect family members	2.07 (1.39 to 3.07)	<0.001
Family fear of taking the virus home	1.62 (1.02 to 2.58)	<0.040
Live with people at high risk of severe COVID-19	1.45 (1.02 to 2.08)	0.038
Feeling protected by the state or employer	0.57 (0.36 to 0.88)	0.011
Sufficient government measures	0.53 (0.34 to 0.83)	0.005
Satisfied working as a physician	0.49 (0.33 to 0.74)	<0.001
Reliable government information	0.33 (0.13 to 0.83)	0.018

Source: Own elaboration.

of GAD, complied with a disinfection protocol when they got home.

This study has the limitations of cross-sectional studies, establishing statistical association and non-causality. Although a larger number of subjects were included than the sample size, there may be an underestimate or overestimate in the results. FCV-19S was used, not yet validated in Spanish, and low reliability was obtained. No study was found that estimated the reliability of the questionnaire on psychosomatic. There were no questions about the availability and use of personal protective equipment, care for patients proven to have COVID-19,

or the pre-existence of personal or family anxiety traits. The strength of this study is to be among the first to address mental health aspects of Colombian general practitioners in times of pandemics, carried out using the GAD-7, an international scale of adequate reliability. The virtual strategy to call and receive the information allowed the participation of a good number of professionals from different Colombian geographical regions but limited reaching a representative sample and being able to demonstrate compliance with the inclusion criteria, generating some biases.

During and after epidemics, a greater presence of psychiatric disorders has been observed, with an impact on attention, understanding, decision-making, and general well-being.^{17 36 37} In conclusion, symptoms of GAD were identified in 4 out of 10 Colombian general practitioners. Psychosocial and demographic factors were associated with symptoms of GAD. These findings bring to understanding the need for early mental health screening in healthcare providers during times of public health emergencies and highlight the importance of timely psychotherapeutic and psychopharmacological interventions in these individuals. Future research on this regard should focus on assessing the impact of therapeutic interventions in the presence of anxiety symptoms. It is recommended that government and healthcare entities deploy multidisciplinary teams of mental health providers capable of implementing programs that benefit adjustment, prevent mental illness, and promote recovery in healthcare providers during social and public health crises, especially when routine capacity has been overwhelmed.^{6-8 16 24}

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Table 6 Correlation between total score of 7-Item Generalized Anxiety Disorder Scale and the items and total score of questionnaire on psychosomatic problems (N=531)

Variables	Rho	95% CI	P value
Unable to fall asleep	0.617	0.541 to 0.684	<0.001
Migraines and headaches	0.552	0.467 to 0.627	<0.001
Indigestion or gastrointestinal complaints	0.498	0.406 to 0.579	<0.001
Extremely tired or exhausted	0.531	0.444 to 0.608	<0.001
Eat, drink, or smoke more than usual	0.524	0.435 to 0.602	<0.001
Decreased sexual interest	0.491	0.399 to 0.573	<0.001
Shortness of breath or choking sensation	0.463	0.368 to 0.548	<0.001
Decreased appetite	0.474	0.380 to 0.558	<0.001
Muscle tremors	0.409	0.309 to 0.500	<0.001
Pinpricks in different parts of your body	0.501	0.410 to 0.582	<0.001
Strongly tempted not to get up in the morning	0.474	0.380 to 0.558	<0.001
Tendency to sweat or have palpitations	0.587	0.507 to 0.658	<0.001
Total score of work-related stress test	0.768	0.717 to 0.811	<0.001

Source: Own elaboration.

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