



## COVID 19 anxiety in healthcare workers

### Ansiedad por COVID 19 en personal de salud

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#### ABSTRACT

The objective of this study was to determine the prevalence of generalized anxiety disorders in the context of the COVID-19 pandemic in health personnel of the Type B Health Center of the Municipality of Riobamba 2021. A quantitative, descriptive and cross-sectional study was conducted, the study universe represented 19 workers. The research was carried out in 19 health professionals who worked at the Health Center of the Municipality of Riobamba during the COVID-19 pandemic; the prevalence of anxiety registered was 84.2%. Of the personnel studied in the current research, 42.1% presented mild anxiety and 42.1% according to Hamilton's Test for generalized anxiety in health professionals: worry affected 84.2%.

**Descriptors:** mental stress; psychological effects; mental health. (Source: UNESCO Thesaurus).

#### RESUMEN

Se tiene por objetivo determinar la prevalencia de trastornos de ansiedad generalizada en el contexto de la pandemia por COVID-19 en el personal de salud del Centro de Salud Tipo B del Municipio de Riobamba 2021. Se realizó un estudio cuantitativo, descriptivo y trasversal, el universo de estudio representó 19 trabajadores. La investigación realizada en 19 profesionales de la salud que laboraron en el Centro de Salud del Municipio de Riobamba durante la pandemia del COVID-19; la prevalencia de ansiedad registrada fue de 84,2% Del personal estudiado en la actual investigación, 42,1% presentaron ansiedad leve y el 42,1% según el Test de Hamilton para ansiedad generalizada a los profesionales de la salud tenemos: la preocupación que afectó al 84,2%

**Descriptores:** estrés mental; efectos psicológicos; salud mental. (Fuente: Tesauro UNESCO).

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Research articles section



## INTRODUCTION

As anxiety disorder has an extensive classification, this study addressed generalized anxiety disorder (ICD-10: F41.1) which is characterized by anxiety and excessive worry or apprehensive anticipation that occurs for several days or months (minimum 6 months) and is related to events or activities where the individual cannot control the worry associated with physical symptoms of anxiety (Penninx, *et al.* 2021).

Since the beginning of the pandemic and up to the present time, health personnel who are in direct contact with COVID-19 patients have developed various mental health problems, including anxiety, which has occurred more frequently in these professionals due to various work factors such as: extended work shifts, reduced rest periods, excessive workload and emotional factors such as: fear of becoming infected or infecting their family, discrimination by society, loss of family contact (Daly, & Robinson, 2022).

The professionals, being constantly exposed to COVID-19 patients, have presented emotional affectation characterized by: excessive worry, easy crying, fears, insomnia and difficulty to concentrate among others. In addition, they presented physical symptomatology compatible with anxiety disorder, most of them characterized by: headache, abdominal pain, paresthesia, palpitations, nausea, choking sensation, joint pain and urinary discomfort that were not justified by a concomitant pathology or mental disorder and were associated with fear and worry of catching and infecting their family due to their constant exposure to COVID-19 patients (Li, *et al.* 2021), (Yilmaz, *et al.* 2021), (Şahin, *et al.* 2020).

Having said the above, this study is relevant for medicine specifically for the Occupational Health branch, as it helps to identify the levels of generalized anxiety to which health personnel are exposed allowing to take measures that help to favor the mental hygiene of professionals and consequently the work performance in each of their activities.

The objective is to determine the prevalence of generalized anxiety disorders in the context of the COVID-19 pandemic in the health personnel of the Type B Health Center of the Municipality of Riobamba 2021.

## METHOD

A quantitative, descriptive and cross-sectional study was conducted with the purpose of determining the prevalence of generalized anxiety disorder in the context of the COVID-19 pandemic in the health personnel of the type B Health Center of the Municipality of Riobamba - Ecuador. The study universe represented 19 health care workers of the Health Center (Table 1).

Table 1. Characterization of the professionals

| PROFESIÓN                | HOMBRES | MUJERES |
|--------------------------|---------|---------|
| Médicos                  | 1       | 4       |
| Fisioterapistas          | 0       | 2       |
| Psicólogos               | 2       | 0       |
| Bioquímico farmacéutico  | 1       | 0       |
| Laboratoristas           | 0       | 1       |
| Odontólogos              | 1       | 0       |
| Auxiliares de enfermería | 0       | 6       |
| Nutricionista            | 0       | 1       |
| TOTAL                    | 5       | 14      |

Source: Own elaboration.

The validated Hamilton test for anxiety was used, whose main objective is to evaluate the severity of anxiety (Rosenberg, 2022). This test consists of 14 items that evaluate three aspects of anxiety: psychological, physical and somatic, and one item that exclusively evaluates depressed mood. For the application of this scale it is important to take into account 3 aspects such as; the severity, the frequency of presentation and the disability that could produce the most relevant or problematic symptom of each item. The score ranges from 0 to 4 being 0= none, 1= mild, 2= moderate, 3=severe and 4 = incapacitating, the test application time should not exceed 30

minutes. Descriptive statistics were applied to the data obtained from the application of the instrument.

## RESULTS

The anxiety related to the profession we have that the auxiliary nursing staff is the most affected with 3 (15.8%) professionals who have mild anxiety and 3 (15.8%) have moderate/severe anxiety; in physicians 2 (10.5%) professionals have mild anxiety and 2 (10.5%) have moderate/severe anxiety; among physiotherapists 1 (5.3%) professional has mild anxiety and 1 (5.3%) professional has moderate/severe anxiety; 1 (5.3%) dentist has mild anxiety; 1 (5.3%) professional nutritionist has moderate/severe anxiety; 1 (5.3%) professional pharmacist has moderate/severe anxiety; 1 (5.3%) professional laboratory technician has mild anxiety. While 3 (15.8%) professionals did not present anxiety, among them we have 1 (5.3%) medical professional and 2 (10.5%) psychologist professionals who do not have anxiety.

Table 2. Prevalence of anxiety according to gender.

|           | NO ANSIEDAD |      | ANSIEDAD LEVE |      | ANSIEDAD MODERADA/<br>GRAVE |      |
|-----------|-------------|------|---------------|------|-----------------------------|------|
| GÈNERO    | Nº          | %    | Nº            | %    | Nº                          | %    |
| FEMENINO  | 1           | 5,3  | 7             | 36,8 | 6                           | 31,6 |
| MASCULINO | 2           | 10,5 | 1             | 5,3  | 2                           | 10,5 |
| TOTAL     | 3           | 15,8 | 8             | 42,1 | 8                           | 42,1 |

Source: Own elaboration.

According to gender, 3 (15.8%) professionals did not present anxiety, of which 1 (5.3%) was female and 2 (10.5%) were male. Mild anxiety was presented by 8 (42.1%) professionals; 7 (36.8%) of the female gender and 1 (5.3%) of the male gender. Finally, 8 professionals presented moderate/severe anxiety, 6 (31.6%) of the female gender and 2 (10.5%) of the male gender (Table 2).

Table 3. Hamilton test for anxiety.

|                     | NINGUNO<br>(0) |      | LEVE (1) |      | MODERADA<br>(2) |      | GRAVE<br>(3) |     | INCAPACITANTE<br>(4) |   |
|---------------------|----------------|------|----------|------|-----------------|------|--------------|-----|----------------------|---|
| ITEMS               | Nº             | %    | Nº       | %    | Nº              | %    | Nº           | %   | Nº                   | % |
| ANSIOSO             | 3              | 15,8 | 5        | 26,3 | 10              | 52,6 | 1            | 5,3 | 0                    | 0 |
| TENSION             | 4              | 21,1 | 7        | 36,8 | 8               | 42,1 | 0            | 0   | 0                    | 0 |
| MIEDO               | 8              | 42,1 | 4        | 21,1 | 7               | 36,8 | 0            | 0   | 0                    | 0 |
| INSOMNIO            | 9              | 47,4 | 3        | 15,8 | 7               | 36,8 | 0            | 0   | 0                    | 0 |
| INTELECTUAL         | 8              | 42,1 | 8        | 42,1 | 2               | 10,5 | 1            | 5,3 | 0                    | 0 |
| HUMOR DEPRESIVO     | 7              | 36,8 | 8        | 42,1 | 3               | 15,8 | 1            | 5,3 | 0                    | 0 |
| SOMATICO MUSCULAR   | 5              | 26,3 | 6        | 31,6 | 8               | 42,1 | 0            | 0   | 0                    | 0 |
| SOMATICO SENSORIAL  | 7              | 36,8 | 8        | 42,1 | 3               | 15,8 | 1            | 5,3 | 0                    | 0 |
| S. CARDIOVASCULAR   | 8              | 42,1 | 7        | 36,8 | 4               | 21,1 | 0            | 0   | 0                    | 0 |
| S. RESPIRATORIO     | 8              | 42,1 | 8        | 42,1 | 3               | 15,8 | 0            | 0   | 0                    | 0 |
| S. GASTROINTESTINAL | 5              | 26,3 | 12       | 63,2 | 2               | 10,5 | 0            | 0   | 0                    | 0 |
| S. GENITOURINARIO   | 13             | 68,4 | 4        | 21,1 | 2               | 10,5 | 0            | 0   | 0                    | 0 |
| S. AUTONOMO         | 6              | 31,6 | 8        | 42,1 | 4               | 21,1 | 1            | 5,3 | 0                    | 0 |
| COMPORTAMIENTO      | 13             | 68,4 | 6        | 31,6 | 0               | 0    | 0            | 0   | 0                    | 0 |

Source: Own elaboration.

Table 3 presents the 14 items assessed by Hamilton's test, where it was found that more than half of the workers presented several symptoms associated with COVID-19 anxiety. We have that

16 (84.2%) professionals were anxious and their main symptom was worry where 5 (26.3%) are of mild intensity, 10 (52.6%) are of moderate intensity and 1 (5.3%) of severe intensity; 15 (78.9%) professionals presented a feeling of tension where 7 (36.8%) are of mild intensity and 8 (42.1%) are of moderate intensity. In the case of fear 11 (57.9%) professionals presented fear exclusively of strangers, 4 (21.1%) are of mild intensity and 7 (36.8%) of moderate intensity; 10 (52.6%).

For the insomnia item, the professionals presented mainly difficulty in falling asleep, 3 (15.8%) are of mild intensity and 7 (36.8%) of moderate intensity.

The intellectual symptomatology picture was placed in that 11 (57.9%) professionals presented difficulty concentrating, 8 (42.1%) are of mild intensity and 2 (10.5%) of moderate intensity and 1 (5.3%) of severe intensity.

For the depressive mood, 12 (63.2%) professionals presented lack of interest in daily activities, 8 (42.1%) of mild intensity, 3 (15.8%) of moderate intensity and 1 (5.3%) of severe intensity.

In the description of muscular discomfort, 14 (73.7%) professionals presented this sign characterized by pain, 6 (31.6%) of mild intensity and 8 (42.1%) of moderate intensity;

The professionals who presented sensory alterations 12 (63.2%), presented with sensation of weakness, 8 (42.1%) are of mild intensity and 3 (15.8%) of moderate intensity and 1 (5.3%) of severe intensity.

Cardiovascular symptoms with 11 (57.9%) professionals presented with signs of palpitations as follows: 7 (36.8%) are of mild intensity and 4 (21.1%) of moderate intensity; 11 (57.9%) professionals presented with respiratory symptoms such as choking sensation, 8 (42.1%) are of mild intensity and 3 (15.8%) of moderate intensity.

For gastrointestinal symptoms 14 (73.7%) professionals presented abdominal pain, with the following levels of intensity, 12 (36.2%) are of mild intensity and 2 (10.5%) of moderate intensity.

The professionals who presented urinary symptoms numbered 6 with 31.6% characterized by increased frequency of urination, 4 (21.1%) of mild intensity and 2 (10.5%) of moderate intensity.

Autonomic symptoms characterized by tension headache were present in 13 professionals (68.5%) with the following level of intensity: 8 (42.1%) of mild intensity, 4 (21.1%) of moderate intensity and 1 (5.3%) of severe intensity.

Finally, 6 (31.6%) professionals presented behavioral alterations such as nervousness during the application of the test, of which 6 (31.6%) were of mild intensity.

## DISCUSSION

The research conducted in 19 health professionals of the Health Center of the Municipality of Riobamba - Ecuador, during the COVID-19 pandemic; it is found that the prevalence of anxiety registered was 84.2%, which differs from a study conducted in health professionals in Wuhan, China, where the prevalence was 44.6% (Lai, et al. 2020).

Of the personnel studied in the current research, 42.1% presented mild anxiety and 42.1% presented moderate/severe anxiety; that is, a prevalence of generalized anxiety of 84.2%, such figures differ with a study conducted on health professionals of a tertiary infectious disease Hospital by COVID-19 in China where 16.09% tested positive for mild anxiety and 6.95% for moderate/severe anxiety (Huang, 2020). Another study indicates that 49.9% of the studied population had no anxiety symptoms, 31.7% mild anxious symptoms, 13.4% moderate symptoms and 5.1% severe symptoms assessed with the GAD-7 (Restrepo-Martinez, et al. 2021).

In the relationship between marital status and anxiety, there is a greater affectation in single professionals with a prevalence of 36.8%, which is contrary to the study conducted by (Ortega-Malla, et al. 2021), where the population mostly affected were married with 45.6% in relation to the singles who were affected by 36.8% (Ortega-Malla, et al. 2021).



We inquired about the presence of anxious symptoms in the study population where 15.8% had no symptoms compatible with anxiety, 42.1% had mild symptoms and 42.1% had severe moderate symptoms; as for the symptoms associated with anxiety that mostly affected health professionals according to the Hamilton Test for generalized anxiety, we have: worry, which affected 84.2%, followed by the feeling of tension in 78.9%; which differs from what was found by (Monterrosa-Castro, et al. 2020), where it was found that 27.1% did not present symptoms of anxiety, 33.5% symptoms of mild anxiety, 26% symptoms of moderate anxiety and 13.4% symptoms of severe anxiety evaluated with the GAD-7, of which 26% of the population reported feeling nervous, 15% expressed fear of the unknown and worry.

## CONCLUSION

The research carried out in 19 health professionals who worked in the Health Center of the Municipality of Riobamba during the COVID-19 pandemic; the prevalence of anxiety registered was 84.2%. Of the personnel studied in the current research, 42.1% presented mild anxiety and 42.1% according to Hamilton's Test for generalized anxiety in health professionals: worry affected 84.2%.

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## CONFLICT OF INTEREST

There is no conflict of interest with persons or institutions linked to the research.

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