



Somatization in front-line health care personnel in pandemic COVID-19

Somatización en personal de salud de primera línea en pandemia COVID-19

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ABSTRACT

The objective of this study was to analyze psychosomatic symptoms in front-line health personnel of district 18-D04 during the current COVID-19 pandemic. The study was descriptive and cross-sectional. The impact of the experience associated (contagion, infected family members, infected friends, deceased family members and friends) to COVID-19 on the presence of somatization among the participants. It was found with significant differences ($p < .05$) in which the levels of somatization are higher among participants who were infected with Covid-19, as well as those who had family members infected and friends deceased by Covid-19 than in those who have not been infected or did not have family members infected or friends deceased. These elements point to the inference that Covid-19, in circumstances of lived or close personal experience in friends and family members, had a greater impact on the development of somatization.

Descriptors: health policy; mental stress; emotions. (Source: UNESCO Thesaurus).

RESUMEN

Se tiene por objetivo analizar los síntomas psicósomáticos en personal de salud de primera línea del distrito 18-D04 durante la actual pandemia del COVID-19. De carácter descriptivo de corte transversal. El impacto que ha tenido la experiencia asociadas (contagio, familiares contagiados, amigos contagiados, familiares y amigos fallecidos) a la COVID-19 en la presencia de la somatización entre los participantes. Se encontró con diferencias significativas ($p < .05$) en el que los niveles de somatización son mayores entre los participantes que se contagiaron de Covid-19, así como aquellos que tuvieron familiares contagiados y amigos fallecidos por Covid-19 que en aquellos que no se han contagiado o no tuvieron familiares contagiados o amigos fallecidos. Estos elementos apuntan a inferir que la COVID-19, en circunstancias de experiencia personal vivida o cercana en amigos y familiares incidieron en una mayor presencia para el desarrollo de la somatización.

Descriptores: política de la salud; estrés mental; afectividad. (Fuente: Tesoro UNESCO).

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INTRODUCTION

Among the different psychological affectations that affect health personnel mentioned above, somatization, psychosomatization or somatic symptom disorders are considered important for study due to their recurrent presence in physical and psychological health care. This phenomenon is a condition of psychological alteration, in which an individual presents at least one bodily symptom (headache, low back pain, others) marked and recurrent with psychic etiology and that significantly affects the proper development of an individual's life (Torales, 2018).

Among the most frequent somatic symptoms are physical pain (abdomen, head, back), feeling of tiredness and exhaustion, sleep problems, neurovegetative symptoms (hyperhidrosis, tics, dyspepsia) among others (Poulsen *et al.*, 2013). Which have a diverse duration time that can include several days, weeks and even months. On the other hand; in a survey of physicians during the peak of the pandemic, sleep problems were found to exceed 55% of the prevalence (Zhang, *et al.*, 2020), while muscle tension, nervous breakdowns, hyperhidrosis, stomach upset fluctuated between 35% and 48% and finally tachycardia, breathing difficulties and chest pain between 14 and 30% of cases (Barello, *et al.*, 2020).

In consideration, caring for people with COVID-19 on the front line has psychological impacts for healthcare professionals. Despite the significant psychological impacts of the pandemic on nurses, qualitative evidence on this topic has not been synthesized; the main psychological impacts of caring for people with COVID-19 perceived by nurses working on the front line were fear, anxiety, stress, social isolation, depressive symptoms, uncertainty, and frustration. Fear of infecting family members or being infected was the main impact perceived by nurses. Other negative impacts added by this review and suffered by nurses as the COVID-19 pandemic progresses were anger, obsessive thoughts, compulsiveness, introversion, apprehension, helplessness, altered spatio-temporal perception, somatization and feelings of betrayal. Resilience was a coping tool used by nurses (Huerta-González, *et al.* 2021).

Therefore; we aim to analyze psychosomatic symptoms in front-line health personnel of district 18-D04 during the current COVID-19 pandemic.

METHOD

The present investigation is a cross-sectional descriptive study, with the purpose of knowing the reality presented by health workers and similar in district 18D04 of the province of Tungurahua - Ecuador, regarding the prevalence of psychosomatic symptoms during the current pandemic of COVID-19.

For the realization of the study, we started with the identification of the participants, who correspond to health workers of the district 18D04 of the province of Tungurahua; these make up a population of 840 cases (between men and women; as well as doctors, nurses and health technicians). From this, a representative sample of 264 cases was obtained (through the calculation of the sample size considering 5% sampling error (e), 95% reliability [Z] and 50% probability of occurrence and non-occurrence [p, q]).

Regarding the data collection techniques, given that the study is descriptive based on self-reports, the techniques used correspond to the interview, which allows a structured dialogue between the researcher and the respondent to collect information relevant to the research objective; the survey is also used, which corresponds to a set of specific questions about the object of study that allow for more precise identification of relevant information.

The instruments used were: Ad Hoc sociodemographic information sheet. Survey designed exclusively for the present investigation, which collects information about age, sex, professional training, work time, work situation and other variables related to the dynamics of the population that allow us to understand or explain the response pattern that may be related to the presence or absence of psychosomatic symptoms.

Goldberg General Health Questionnaire in the 28-item version (GHQ-28, Goldberg, 1978) which is a psychological test that collects the perception of general health of the people evaluated and

which is grouped into four forms of mental health alteration: a) somatization, b) anxiety-insomnia; c) interpersonal difficulties; and d) depression and which is measured on a 4-option Likert scale. This tool made it possible to determine the incidence of well-being or discomfort of a person's perception of mental health, as well as the most and least prevalent symptoms. In addition, the instrument has a high reliability with values of $\alpha = .97$.

Once the data were collected, they were statistically processed in a descriptive calculation of means with the support of the SPSS V25 statistical program.

RESULTS

The results of the research are presented:

Table 1. Analysis of prevalence of Somatization versus other psychological Disorders.

Trastornos	M	DT.	As.	Cu.	Casos de riesgo
Somatización	12,15	4,42	1,02	0,64	3,0%
Ansiedad e Insomnio	11,17	5,03	1,24	0,92	3,7%
Disfunción social	12,39	3,57	0,71	1,15	2,1%
Depresión	8,84	3,49	2,53	7,91	1,2%
GHQ28	44,55	13,40	1,26	1,98	

Note: M: Mean; SD: Standard Deviation; As: Skewness; Cu: Kurtosis. Source: Own elaboration.

Table 1 shows the presence of Somatization versus other pathological conditions of psychic etiology. It uses the GHQ-28 test that measures pathologies associated with mental health such as Somatization, Anxiety and insomnia, Social Dysfunction and Depression. In the analysis of results, it is observed that the presence of psychological distress in general is low considering the scores achieved by each condition (fluctuating between 7 and 28 points).

Among the different conditions, Somatization symptoms are the second most prevalent symptoms among the study participants behind social dysfunction problems and above anxiety and insomnia and depression problems. It should be noted that according to the evidence, somatic symptoms are coexisting with other psychic pathologies.

On the prevalence of at-risk cases (number of cases exceeding the cut-off point [greater than 21 points] divided by the total number of cases). Somatic symptomatology presents 3% of risk cases with indicators of probable somatization disorder. In this aspect, it should be considered that this condition occupies the second place in prevalence of mental alteration conditions below the prevalence cases of anxiety and insomnia.

Table 2. Descriptive analysis of somatic symptoms.

Síntomas	M	DT.	As.	Cu.
Dolor en el pecho	0,54	0,76	1,49	2,23
Sensación de desmayo	0,43	0,72	1,78	3,18
Pesadez en extremidades	0,53	0,79	1,64	2,74
Hormigueo	0,51	0,83	1,74	2,65
Dolor de cabeza	0,92	0,95	1,00	0,68
Nudos en la garganta	0,56	0,84	1,50	1,69
Dolor muscular	0,74	0,85	1,07	0,70
Cambios de temperatura	0,52	0,79	1,57	2,14
Náuseas	0,57	0,82	1,43	1,58
Debilidad en el cuerpo	0,55	0,79	1,44	1,66
Dificultad para respirar	0,40	0,74	1,93	3,34
Dolor lumbar	0,72	0,90	1,30	1,42
Total	0,58	0,81	1,69	3,40

Note: M: Mean; SD: Standard Deviation; As: Skewness; Cu: Kurtosis. Source: Own elaboration.

La tabla 2, muestra la prevalencia de los Síntomas Somáticos entre los participantes del estudio. De manera general la sintomatología existente en general es baja, aunque no se descarta la ausencia de problemas de somatización, en sí es leve. Los síntomas de mayor presencia en la muestra corresponden a los asociados al dolor como el dolor de cabeza, los dolores musculares y dolor lumbar. Mientras los de más baja presencia corresponden a la sensación de desmayo y

las dificultades para respirar. Además, sobre la prevalencia de casos con criterios de Trastorno Somático, está presente en el 3% de los participantes, por lo que este grupo requiere de una evaluación particular específica más profunda.

Tabla 3. Análisis comparativo de la exposición a la Covid-19 y los síntomas psicosomáticos.

Variables de agrupación	Condición	Somatización		Contraste t
		M	DT	
Contagio de Covid-19	Si (n= 212)	7,66	7,69	2,04; p< .05
	No (n= 122)	5,79	8,75	
Familiares contagiados de Covid-19	Si (n= 297)	7,33	8,20	2,29; p< .05
	No (n= 37)	4,11	7,10	
Amigos contagiados de Covid-19	Si (n= 319)	7,03	8,04	0,61; p> .05
	No (n= 15)	5,73	10,10	
Familiares fallecidos de Covid-19	Si (n= 128)	7,77	8,41	1,40; p> .05
	No (n= 206)	6,48	7,95	
Amigos fallecidos de Covid-19	Si (n= 157)	8,73	9,16	3,78; p< .001
	No (n= 177)	5,42	6,77	

Note: M: Mean; SD: Standard Deviation; t: t-test; p: significance. Source: Own elaboration.

Table 3 shows the impact of the experiences associated (infection, infected family members, infected friends, family members and deceased friends) with Covid-19 on the presence of somatization among the participants. It was found with significant differences ($p < .05$) in which the levels of somatization are higher among participants who were infected with Covid-19, as well as those who had family members infected and friends deceased by Covid-19 than in those who have not been infected or did not have family members infected or friends deceased. These elements point to the inference that Covid-19 in circumstances of lived or close personal experience in friends and relatives had a greater impact on the development of somatization.

DISCUSSION

The results are consistent with the study by (Conti, *et al.* 2020), showing that health care workers who perceived the need for psychological support scored above the clinically alarming level (cut-off scores) on all psychological scales, ranging from 76% to 88%. Psychological distress ($p < 0.01$), anxiety ($p < 0.05$), depression ($p < 0.05$), and being female ($p < 0.01$) contribute to explaining the need for psychological care and accounted for 32% of the variance. in this sample. These findings point to the importance of considering the psychological impact of COVID-19 on health care workers and strongly suggest that psychological support services be established to provide adequate professional care.

Likewise, the evidence of the current work agrees with the research of (da-Silva-Neto, *et al.* 2021), who indicate that health professionals had higher levels of anxiety (13.0 vs. 8.5%, $p < 0.01$, OR = 1.6152; 95%CI 1.3283 to 1.9641; $p < 0.0001$) and depression 12.2 vs. 9.5%; $p = 0.04$, OR = 1.3246; 95% CI 1.0930 to 1.6053; $p = 0.0042$), in addition to somatization and insomnia with respect to professionals from other areas; a situation that generates in health professionals, regardless of their age, significant levels of mental disorders, strengthening the prevalence of anxiety and depression. Insomnia was a risk factor.

Regarding insomnia, the work of (Wu, & Wei, 2020), agree with (da-Silva-Neto, *et al.* 2021), indicating that participants with moderate insomnia reached 61.67% and participants with severe insomnia reached 26.67%; while psychological symptoms and sleep symptoms in front-line medical staff involved in the fight against COVID-19, and affect each other. Hospitals should improve emergency management measures, strengthen psychological counseling for front-line clinical medical staff, strengthen exercise intervention, and improve sleep quality and mental health.

It is important to note that there is a strong association between healthcare professionals and COVID-19 in terms of psychiatric repercussions; therefore, healthcare professionals have a



higher level of indirect traumatization, where the level of harm exceeds psychological and emotional tolerance and indirectly results in psychological abnormalities. The incidence of obsessive-compulsive traits and somatizations was higher in situations involving front-line professionals (Troglio-da-Silva, & Rolim-Neto, 2021).

In this order; complementing the work of (Troglio-da-Silva, & Rolim-Neto, 2021), we have the proposal of (Huerta-González, *et al.* 2021), who indicate that the main psychological impacts of caring for people with COVID-19 perceived by nurses working on the front line were fear, anxiety, stress, social isolation, depressive symptoms, uncertainty and frustration. Fear of infecting family members or being infected was the main impact perceived by nurses. Other negative impacts added by this review and suffered by nurses as the COVID-19 pandemic progresses were anger, obsessive thoughts, compulsiveness, introversion, apprehension, helplessness, altered spatio-temporal perception, somatization and feelings of betrayal. Resilience was a coping tool used by the nurses.

Following the previous authors, in agreement with the current research results, the prevalence of high emotional exhaustion, high depersonalization and low self-actualization after the second wave of COVID-19 was relevant and should not be overlooked. Our findings suggest that job tenure may play a protective role in burnout in health care workers (Antao, *et al.* 2022). Being considerable to note that healthcare professional who had been infected by COVID-19 was the only predictor variable of severe emotional exhaustion and severe depersonalization. The health professional who had been infected by COVID-19 and had no compensatory rest were two independent variables and predictive of severe lack of personal fulfillment at work (Jouini, *et al.* 2022).

As a measure to prevent burnout and somatization, public health authorities should reduce the workload of physicians involved in the treatment of infected patients in the context of the pandemic. Psychotherapeutic measures focused on preventing burnout should reduce their number among physicians interacting with coronavirus-infected patients (Rozhdestvenskiy, *et al.* 2022).

CONCLUSION

The impact that the associated experience (contagion, infected family members, infected friends, deceased family members and friends) to Covid-19 has had on the presence of somatization among the participants. It was found with significant differences ($p < .05$) in which the levels of somatization are higher among participants who were infected with Covid-19, as well as those who had family members infected and friends deceased by Covid-19 than in those who have not been infected or did not have family members infected or friends deceased. These elements point to the inference that Covid-19, in circumstances of personal lived or close experience in friends and relatives had a greater impact on the development of somatization.

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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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