

Factors Associated With Burnout Syndrome In Covid-19 Frontline Health Workers In The Department Of Sucre In 2021

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Abstract

Introduction: In the department of Sucre, although there were epidemiological peaks for COVID cases infection in Health Human Resources, there are no related studies of how this affected the health personnel during the pandemic. **Objective:** To determine the factors associated with Burnout syndrome in Covid-19 frontline health workers in the Department of Sucre in 2021. **Materials and methods:** A descriptive cross-sectional study with a correlative approach was conducted on 210 health officials from four institutions. After informed consent, through the MBI-HSS and the socio-occupational and family conditions survey, a reliability analysis (Cronbach's Alpha) was used to validate them. An analysis of chi-square statistical significance <0.05 was prepared to calculate the association between these instruments. We proceeded to identify the magnitude of the relationship of the variables with Cramer's V. **Results:** 64.29% of frontline health personnel manifested a moderate overall percentage of Burnout; in the three-dimensional axis, the emotional fatigue subscale is the most relevant since the signs are severe in 69.05%. **Conclusion:** We determined statistical significance and moderate relationship between Burnout and labor factors.

Keywords: Health personnel, job burnout, anxiety, Job satisfaction, Coronavirus infection. (Source: DeCS)

Introduction

In our study, we emphasize Burnout Syndrome which is, according to the World Health Organization (WHO, 2020), “an illness characterized by emotional exhaustion, depersonalization, and low job satisfaction” (Torres & OMS, 2022) COVID-19 has spread

until it became a pandemic, for this reason, the World Health Organization (WHO, 2020) states that in many countries, health systems have been forced to require the state authorities to act on travel restrictions, social distancing and quarantines to prepare the Health System for the urgent burden of care needed and scenery of likely resource shortages. However, the first major challenge of the pandemic has been the fragile health systems.

Two years have passed since COVID-19 infected Latin America; consequently, becoming the continent affected the most by the virus. As Enriquez states (WHO, 2022) two of the three countries with more deaths are in the Americas and during several months there has been a collapse in some regional hospitals that caused alarm to the authorities.

The human cost of the pandemic is one of the consequences that warn the most different sectors and leads to action. According to official statistics reported by the Pan-American Health Organization (PAHO, 2020), for the second semester of 2020, “more than 570,000 health workers would have been infected and approximately 2.500 deaths” (PAHO, 2020) due to COVID-19 in the Americas.

The understaffing has been tangible in terms of numbers and competencies to face an unknown and highly contagious illness. On the other hand, the Pan-American Health Organization (PAHO, 2020) claimed that this led to considering the health personnel as the frontline staff, but also with high vulnerability to infection which caused fear among them since they did not want to spread the virus to their families.

Regarding the statistics published in the newsletters for 2022 by the Institute for Global Health report, 01-03-2022/ Bulletin 117 reported that 1.3% of health workers were infected with COVID-19 or 77.905 people of which 354 died. The infection figures in the Department of Sucre estimated 222 cases (National Institute of Health, 2022).

As a consequence of COVID-19 Burnout syndrome has been studied in health personnel. Therefore, authors such as Alrawashdeh et al., examined the association between Burnout syndrome, occupational exhaustion, and job satisfaction in the health professional during the COVID-19 pandemic, "relating factors such as female gender, the workload in hospitals, long hours, night shifts, shortage of personal protective equipment, and positive SARS-CoV-2 testing" (Alrawashdeh et al., 2021).

Another factor associated with Burnout syndrome after the COVID-19 pandemic documented by (Alrawashdeh et al., 2021, p.1-811) is stress which puts mental health and personal welfare of at risk. Under this statement, authors like (Arslan, 2021; Arslan et al., 2021, Ceri & Cicek, 2021), and () connect COVID-19 stress to low and severe levels of psychosocial and mental health problems, such as depression, anxiety, post-traumatic stress, and loneliness. In addition, they emphasize the public health emergency that can cause these pathologies if they are not treated in time.

In the case of Colombia, authors such as (Monterrosa et al., 2020) conducted a cross-sectional study that explored symptoms and perceptions during the COVID-19 pandemic in Colombian general practitioners (the department of Sucre is not taken into account in the data) with compulsory quarantine requirement and who worked in March 2020, noting that health

workers are often afraid to infect their families, friends or colleagues and that they develop stress symptoms, anxiety or depression with long-term psychological consequences. Also, (Bedoya et al., 2021), indicated in his study that health professionals tend to develop more anxious and depressive symptoms. "Younger age and a mental disorder history were factors associated with symptomatic patients".

According to the study conducted by Lezama in a group of anesthesiologists, these professionals are evidenced as the members of the health team with the highest risk of suffering burnout syndrome "(55.6%) they were those who worked the most hours per month, between 251 - 300 hours" (Lezama, 2020).

In the Sucre department, even though there were epidemic peaks and great affectation on the health personnel, there are no studies related to measuring how health workers were affected during the pandemic.

Methodology

A descriptive cross-sectional study with a correlative approach was carried out in a population of covid19 first-line workers in 2021. It was based on a population of 413 staff registered on the SISPRO platform (Mi Vacuna) from different health service providers in the Department of Sucre.

The sample size was obtained through a probabilistic procedure using the EPI INFO epidemiological calculator with a 5% confidence limit and a 95% confidence level for a total sample of 200 officials, 210 were determined to ensure a loss percentage.

For the selection of participants, the Simple Random Sample method was used by each of the health institutions, using the EPI INFO Epidemiological Calculator thus ensuring all officials of different institutions have the same opportunities to be selected as follows:

For the selection of participants, a call process was carried out through WhatsApp and emails to first-line staff "personnel whose main activity is involved with the care of patients who have a confirmed diagnosis of COVID-19 and consequently, are in a permanent, longer and direct exposure to the virus"(Ministry of Health, 2021) attached to four health institutions in the department of Sucre and registered on the "SISPRO platform/My vaccine from the Ministry of Health and Social Protection, this institutional register in accordance with technical and operational guidelines for vaccination against Covid19 versionn1"(Ministry of Health, 2021) and resolution 493 of 15 April 2021, Colombia.

The lists of each of the health institutions were used and invited to participate in the study: doctors/as, nurses/as, auxiliaries, physiotherapists, bacteriologists, dentists, psychologists, social workers, and administrative staff who performed assistance activities during the application of the form (concurrent auditors, epidemiologists, health administrators, admissions). These personnel worked in services such as emergencies, hospitalization, vaccination SARS cov2, ERA office and ERA room, in accordance with the definition of front-line personal work areas (Ministry of Health, 2021)

Inclusion criteria to conduct this study:

To treat patients diagnosed with COVID-19 registered on SISPRO/MI VACUNA platform, to be linked to the entity for more than six months, and not to be immersed in academic training processes (student practices), plus, voluntary acceptance.

As exclusion criteria:

Erroneous and incomplete completion of the questionnaire. Human talent staff who was on vacation or licensed. Health personnel from the administrative area who do not provide care services do not have contact with patients, "since they are not named as front-line" (Ministry of Health, 2021, p 1- 9).

The instruments used in the study, upon signature of the informed consent by each of the participants, were the Maslach Burnout Inventory Human Services Survey MBI-HSS questionnaire (Maslach & Jackson, 2013) and an own-made questionnaire of socio-occupational and family conditions.

The instruments were analyzed through "a reliability analysis of the questionnaires in order to validate them" (International center for research on social networks in business, 2018), therefore a pilot test was applied to 30 workers from two health institutions: State Social Enterprise of the second level of public nature to 17 and in a first level Public Health Institute 13. Responses were saved on a Google form between July 23 and August 17, 2021.

To estimate the reliability of the two instruments applied, "Cronbach's Alpha index (α) was used (International center for research on social networks in business, 2018). The results indicate the appropriate values of reliability in the scale of each survey, i.e., greater than or equal to 0.7. (Wiley J & Sons, Inc. 2018).

To complete the data collection using the Google form, a survey of socio-occupational conditions was applied. To identify sociodemographic factors related to the Burnout of the target health population, the form was also verified with the same population by which a global Cronbach Alpha of 0.70 was obtained.

Results

Factors Characterization

The human talent participants were grouped by professions according to their performance in health services provided to patients, corresponding to physical health care officers (Doctors, physiotherapists, bacteriologists, head nurses, respiratory therapists, speech therapists, microbiologists, nutritionists, occupational therapists, and dentists) in a 48.1%, assistants 28.6% (assistants from of all clinical and administrative areas in health), in a 19.05 % mental health care workers (social worker, psychologist, sociologist, psychotherapist) and administrative professions in health, 8.6%. Three of the participant institutions were of a public nature and a private one with the highest level of participation 35.7% corresponded to the ESE II Level and the lowest 10.0% was the provider of the I level.

Regarding socio-demographic characteristics, 64.8% of the population is male, their ages range from 28 to 37 years 34.3% and 38- 48 years 29.5% and 36.7% are married, 33.3% are single and 25.2% are free union.

Concerning satisfaction with the quality of the current health system, 62.85% are dissatisfied. In addition, 72.3% of respondents were dissatisfied with the income earned by the profession.

The respondents also answered that in the institutions where they worked during the time elapsed of the pandemic by covid19 the realization of institutional training was greater in relation to the years without the pandemic, therefore, 44.3% indicated that during a year of pandemic minimally received between 1 and 2 institutional pieces of training, but there is a 6.7% who responded that they did not receive training in a year despite the constant training that health workers merited due to the health emergency of a new unknown disease worldwide.

Level of Burnout syndrome.

Of the subscales for the measurement of the Burnout sign (Emotional fatigue, Depersonalization, and Self Realization), 69.05% of the sample responded to suffering from emotional fatigue in severe signs, 145 officials of the human talent in health showed severe signs of burnout being this symptom the one that most affected the first line Covid19, compared to the other two dimensions of depersonalization and personal fulfillment that showed slight signs of burnout.

Table 1. Summary of MBI-HSS scores.

Score and distribution in severity levels of subscales

Subscale	Signs of burnout	n=210	Percentage
Emotional Fatigue	Mild	34	16.20%
	Moderate	31	14.76%
	Severe*	145	69.05%
Depersonalization	Mild	156	74.3%
	Moderate	8	3.81%
	Severe*	46	21.90%
Self-Realization	Mild*	47	22.40%
	Moderate	31	14.80%
	Severe	132	62.90%

Note: * Burnout Síndrome Symptoms. Source: Own-made

Overall Scale score.

MBI-HSS	Signs of burnout	n=210	Percentage
Overall Score	Mild	71	33.81%
MBI-HSS	Moderate	135	64.29%
	Severe	4	1.90%

Source: self made

Considering the overall inventory score Maslach Burnout Inventory- Human Services Survey, 64.29% of first-line workers Covid19 showed signs of moderate burnout, 33.81% mild and 1.9% severe.

Relationship of factors and Burnout syndrome.

The chi-square test of individual significance determined the significant variables in terms of the level of association between socio-occupational and family variables and the Maslach score which showed that there is a statistically significant relationship between burnout and variables, demographic sex ($p = .023$), socio-occupational professions ($p = .029$), workplace ($p = .001$), CL4. Time of professional title ($p = .038$), CL9. Satisfaction of income from work ($p = .044$), CL10. Satisfaction according to the quality of the health system. In addition, institutional refresher training per year ($p = .006$) and family variables CF2 influence. Number of Children ($p = .024$), free time spent ($p = .048$), and time spent listening to music ($p = 0.006$).

From the analyzed data, 2% showed signs of severe burnout, and the totality of this percentage corresponded to the male sex without reporting female cases, as for the workplace of the cases identified as serious, 1% worked in the second-tier ESE and the other 1% in the territorial entity, 64.8% of cases with moderate sign 29.5% work in the second-tier ESE and 35.2% of mild burnout sign % is an ESE first level official.

In two percent of cases with severe signs of the syndrome, 1 percent were auxiliary professionals and 1 percent were physical health professionals. Moderate suspicions of Burnout resulted (64.8%) and mild cases (35.2%). The profession with the highest percentage of moderate indicators was related to physical health care 31%.

The satisfaction according to the income of the profession also evidenced statistical significance, therefore, 2% of the staff present serious signs of dissatisfaction with the payment. Regarding satisfaction s the quality of the health system, 2 percent of cases of serious signs is unsatisfied.

By relating family variables only, the number of children presented a statistical significance ($p = .024$). This is explained when 2% of cases of severe signs of burnout 1.43% replied to having between 1 and 2 children and 0.5% indicated having between 3 and 4 children. Of the 64.8% of the cases with a moderate sign of burnout, 38.1% have more than one child and of the mild cases of 35.2%, only 10.0% have more than one child.

Regarding carrying out responsibilities in their free time 2% of the severe cases of Burnout are not satisfied with the activities practiced in their leisure time.

To measure the degree of association of the categorical fields Burnout syndrome and each of the statistically significant variables (p value < 0.05), a correction of the effect size (v of Cramer) was applied for the chi-square test, the result was obtained, that only four variables had a moderate association ($0.2 < EN 0.6$). Workplace (.237), Income satisfaction from work (.210), Satisfaction according to the quality of the health system (.231) and Institutional refresher training per year (.207).

Table N°2.

Degree of intensity among statistically significant variables

Symmetrical measures

Significance variables	P value	V de Cramer	Efect size (ES)
Burnout syndrome and workplace	.001	.237	0.2 < ES ≤ 0.6 (Moderado)
Burnout syndrome and payment satisfaction	.018	.210	0.2 < ES ≤ 0.6 (Moderado)
Burnout syndrome and satisfaction with the quality of the health system	.004	.231	0.2 < ES ≤ 0.6 (Moderado)
Burnout syndrome and institutional refresher training	.006	.207	0.2 < ES ≤ 0.6 (Moderado)

Source: own-made

Discussion and conclusions.

The results of this study can be compared with similar studies that have evidenced severe figures of the presence of Burnout during the health emergency by Covid19 in human talent in health, "associating the negative impact this has on their family, work environment and physical and mental health." (Dopelt et al., 2021)

The overall results obtained from Burnout syndrome and by subscales can be compared with works carried out in Latin America such as the case of (Rendón et al., 2020) who carried out a study in the nursing staff of the critical care unit and hospitalization in 2019 in Sonora, Mexico; after a sanitary emergency by SARS COV2, obtaining an average level of Burnout syndrome 82.2% of the total participants, In the subscales Emotional exhaustion, Depersonalization and Lack of self-realization were low.

Referring to the Department of Sucre in 2009 (Domínguez et al, 2009), conducted a study in Sincelejo, Sucre in two health institutions, one of public nature and the other one of private nature, which resulted in a moderate overall percentage of burnout syndrome (in public and private institutions 54.4% and 41.3%), as for the three dimensions to measure burnout were found that the dimension that came out with the least signs of burnout presentation was that of emotional fatigue and moderate risk in terms of the scale of self-realization

It should be noted that even before the public health crisis, health personnel already showed moderate signs of the syndrome, but without significant involvement in the subscales that evaluate the syndrome. It is for this reason that authors such as (Mosolova et al., 2021) conducted research in the Russian Federation; to evaluate the range of psychopathological symptoms (anxiety, stress, depression, exhaustion) and risk factors in front-line human health talent during outbreaks of new coronavirus infection 2020. Revealing that the anxiety rate was higher in October 2020 compared to May 2020, as the rates of emotional exhaustion, perceived stress, and depression. In addition, 2.4 percent of health workers reported suicidal thoughts.

For WHO the figures presented in human talent in chronic stress and mental health diseases secondary to it were exacerbated after the pandemic by covid19, this led to a need for countries to take the lead and generate public health interventions in terms of the physical,

emotional, and mental protection of health workers. In addition, they warn nations to take action to address the factors that may exacerbate these conditions in the midst of the SARSCOV2 health emergency (PAHO, 2022).

Therefore, in Colombia, the Ministry of Labor, through Circular 064 of 2020," issues the minimum actions to evaluate psychosocial risk factors, promotion of mental health and prevention of mental problems and disorders in workers within the framework of the health emergency by Covid19" (Ministry of Labor, 2020). Mandatory circular for the public, private sector, special regimes among other workers with different hiring modalities.

Therefore, since it is necessary to know the triggering variables of the syndrome, the results obtained in the present work are relevant since they showed that there is a significantly moderate relationship between socio-working conditions, Burnout in times of health emergency.

The level of complexity of health entities is a variable that presented a significantly moderate relationship in relation to Burnout syndrome, which is why 29.5% of the total cases of burnout of moderate signs were evidenced in the second level ESE, being the highest number of cases identified by institution, indicating that these 62 (29.5%) employees are people who can handle "feelings of disability, low self-esteem and ideas of failure" (Muñoz & Montaña, 2019). Of the 2% of severe cases of the syndrome, 1% corresponds to this entity, and the remaining 1% to the territorial entity. It should be noted that, during the period of this study, the two institutions presented situations alien to normal work performance due to the fact that one was unemployed workers and the other institution in charge of temporary staff working officials who won merit competition.

These situations in two of the four surveyed entities are not familiar to the ones in human talent at the level of Colombia, as reflected in the "survey of the employment situation for health professionals in 2019", (Colombian medical school, 2019) three out of five doctors or health professionals report having problems at work, so their working condition was affected, as main causes were changes in working conditions, Restrictions on professional practice and harassment at work.

In a similar way to our results "the survey of employment situation for health professionals for 2019 in Colombia," (Colombian medical school, 2019) showed that more than 77% of health professionals felt dissatisfied with their salary, thinking that they are being exploited and are not compensated for the effort and the millionaire investment they had to make to pay for professional studies.

In addition, in this survey 54 per cent of general practitioners and 56 per cent of specialists replied that their type of recruitment is under the service order modality, that is, they are not entitled to the services premium social benefits, Unemployment, unemployment and holiday interest. This is similar to our results, where 61.0% of human talent is linked by the provision of services with a fixed monthly payment.

The participants of this survey not only responded to be dissatisfied with the conditions of the quality of the health service, with the salaries received and with the type of hiring that

are linked in more than half of the sanitary facilities, also indicated that 68.1% were not satisfied with the activities performed in their free time, which is a statistically significant variable among family determinants ($p=0.48$) with a mild association magnitude ($v=1.93$). Of this percentage, 2% had severe cases of Burnout and 44.8% had moderate symptoms. In turn, some officials commented that they do not enjoy their leisure time because they are tired, as some work more than 48 hours a week.

Similar situation in "the survey of employment situation for health professionals 2019, showed that rural doctors work 264 or more hours a month; that is, they work about 66 hours a week, when the legal thing is to work 48 hours. Thirty-three per cent of specialist doctors also work 48 to 66 hours per week" (Colombian medical school, 2019)

But nevertheless the National University of Colombia in its publication of September 30, 2019 "Burnout and suicides, consequences of harassment of health professionals" (Universidad Nacional de Colombia, 2022) through its digital newspaper, indicate that a study conducted by Deepika Tanwar, Harlem Hospital Center in New York and published in Medscape Medical News in 2018, showed that the risk of dying by suicide among male doctors is twice as high as in the general population, and in doctors is triple or quadruple, compared to other workers, in addition, they turn on alarms since doctors have the suicidal risk tendency much higher than any other career, Depression is a condition that occurs in 12% of doctors and up to 20% of doctors.

As projected "the National University in 2019 after knowing the report of the National Observatory of mental health in Colombia 2019" (Universidad Nacional de Colombia, 2022), the suicide rate in the country is 5 cases per 100,000 inhabitants, and in the world at least 11% of doctors have had suicidal ideas. The main reasons are the high demands on their work (chronic work stress) depression and the fear of being stigmatized. In addition, the results of "the survey of the Colombian Medical Association in 2019 showed that the country is undergoing a precarious working conditions of health personnel, which has led to an increase in cases of Burnout and suicides." (Colombian medical school, 2019)

Therefore, the results of this study are intended to be the first study in the Department of Sucre to determine the numbers of Burnout syndrome after the health emergency by covid19 in health personnel in addition to identifying the relationship of the main factors to interventions that can exacerbate chronic work stress from the family, society and the workplace.

Due to the health problems evidenced by Burnout syndrome and the results that respond to the objectives of this work, it is necessary to intervene not only from the institutional level but also in conjunction with municipal health entities, The European Union is a member of the European Union.

Therefore, an improvement plan is proposed that it would be easy to develop and that is adjusted to the needs and functions of the Departmental Mental Health Program, the health sector, health institutions and the community. To prevent the increase of future non-communicable chronic pathologies secondary to Burnout.

The review of the Development Plan of the Department of Sucre does not currently show an objective or strategies, specifically aimed at the health sector in terms of prevention of mental illness. While the Sustainable Development Goals, especially the number three "Health and Welfare in the target, 3.4 by 2030, seeks to reduce premature mortality from non-communicable diseases by one third through prevention and treatment and promote mental health and well-being" (United Nations Organization, 2015) and "3d Substantially increase health financing and recruitment, development, training and retention of health personnel in developing countries, especially in the least developed countries and small island developing States,"(United Nations Organization, 2015) delegate governments to intervene in mental health prevention strategies and encourage funding for human talent, Therefore, it is meritorious to work in these sections and give importance to sectors such as health to advance in the fulfillment of these objectives.

The purpose of this improvement plan is to raise awareness and demystify the health sector from the public and private spheres, on occupational chronic stress diseases and the consequences of this at the mental health level as well as promote the importance of reporting behavioral changes and behavior secondary to work chronic stress. Encourage and promote the importance of mental health prevention in the health of the Department's caregivers.

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References

- Alrawashdeh, H. M., Al-Tammemi, A. B., Alzawahreh, M. K., Al-Tamimi, A., Elkholy, M., Al Sarireh F., Abusamak, M., Elehamer N., Malkawi, A. Al-Dolat, W., Abu-Ismaïl, L., Al-Far, A. y Ghoul, I. (2021). Occupational burnout and job satisfaction among physicians in times of COVID-19 crisis: a convergent parallel mixed-method study. *BMC Public Health*, (21), 1-811. <http://dx.doi.org/10.1186/s12889-021-10897-4>
- Arslan, G., Yıldırım, M., Tanhan, A., Buluş, M., Allen, K-A. (2021). Coronavirus stress, optimism-pessimism, psychological inflexibility, and psychological health: Psychometric properties of the Coronavirus stress measure. *International Journal of Mental Health and Addiction*, (19), 2423–2439. <http://dx.doi.org/10.1007/s11469-020-00337-6>
- Arslan, G. (2021). Loneliness, college belongingness, subjective vitality, and psychological adjustment during coronavirus pandemic: Development of the College Belongingness Questionnaire. *Journal of Positive School Psychology*. 5(1):17–31. <https://www.journalppw.com/index.php/jpsp/article/view/122>
- Bedoya, J. D., Púlido Ángel, J., García Valencia, J., Aguirre Acevedo, D. C., Cardeño Castro, C. A. (2021). Factores asociados con la intensidad de los síntomas ansiosos y depresivos en personal de salud de dos centros de referencia para la atención de pacientes con COVID-19 de Antioquia, Colombia. Un análisis de clases latentes.

Revista Colombiana de Psiquiatría.
<https://www.sciencedirect.com/science/article/pii/S0034745021001475>

Ceri, V., Cicek, I. (2021). Psychological Well-being, depression and stress during COVID-19 pandemic in Turkey: A comparative study of healthcare professionals and non-healthcare professionals. *Psychol Health Med.*,(26), 85–97.
<http://dx.doi.org/10.1080/13548506.2020.1859566>

Colombian Medical College. (29 enero – 26 febrero 2019.) Encuesta de situación laboral para los profesionales de salud 2019.

<https://s3-aws-semana.s3.amazonaws.com/semana/economia/upload/documents/encuesta-situacion-laboral-2019-ff.pdf>

Domínguez de la Ossa E, Marichal Señas V, Mosquera Caldera D, Causil Pérez P. (2009). Síndrome de Burnout en los funcionarios del Instituto de Cancerología de Sucre y del Hospital Universitario de Sincelejo - Sucre. *Revista de divulgación científica en Ciencias Sociales y Humanas CECAR*, (1), 75-85. <https://search-proquest-com.ezproxy.cecar.edu.co/cgi-bin/koha/opac-detail.pl?biblionumber=25396>

Dopelt K, Bashkin O, Davidovitch N, Asna N. (July - September 2021). Facing the unknown: Healthcare workers' concerns, experiences, and burnout during the COVID-19 pandemic—A mixed-methods study in an Israeli hospital. *Sustainability*, 13(16), 9021.
<https://www.mdpi.com/2071-1050/13/16/9021>

Lezama Restrepo S. (April 2020) Incidencia y factores asociados con el síndrome de burnout en anestesiólogos inscritos a scare Bolívar Colombia 2019 - 2020. [Tesis Especialización Anestesiología] [Seccional Cartagena]: Universidad del Sinú.
<https://repositorio.unisinucartagena.edu.co:8080/xmlui/handle/123456789/419>

Maslach, C., & Jackson, S. e. (1981). (September 2013). MBI Maslach burnout inventory. Manual. Palo Alto, CA University of California, Consulting Psychologists Press. Scientific research, 4(9).
[https://www.scirp.org/\(S\(lz5mqp453edsnp55rrgct55\)\)/reference/referencespapers.aspx?referenceid=950069](https://www.scirp.org/(S(lz5mqp453edsnp55rrgct55))/reference/referencespapers.aspx?referenceid=950069)

Ministry of Health. (15 April 2021). Resolución 493. Por la cual se habilita la plataforma PISIS para el cargue de registro de información.
<https://www.minsalud.gov.co/sites/rid/Lists/BibliotecaDigital/RIDE/DE/DIJ/resolucion-493-de-2021.pdf>

Ministry of Health. (February 2021). Lineamientos técnicos y operativos para la vacunación contra el Covid-19.
<https://www.minsalud.gov.co/sites/rid/Lists/BibliotecaDigital/RIDE/VS/lineamientos-tecnicos-operativos-covid19-anexos.pdf>

- Ministry of labor. (7 October 2020). Circular 064. Acciones mínimas de evaluación de los factores de riesgos psicosocial, promoción de la salud mental y la prevención de problemas y trastornos mentales en los trabajadores en el marco de la emergencia sanitaria por Covid19 en Colombia. <https://www.mintrabajo.gov.co/documents/20147/0/Circular+0064.PDF/a3370954-2e5c-72fd-0801-f359a91ba67c?t=160210757#:~:text=Establecer%20las%20medidas%20especiales%20de,la%20infecci%C3%B3n%20con%20COVID%2D%2019>
- Monterrosa CA, Dávila RR, Mejía MA, Contreras SJ, Mercado LM, Flórez MC. (Noviembre 2020). Estrés laboral, ansiedad y miedo al COVID-19 en médicos generales colombianos. Revista de la facultad de ciencias de la salud Medunab. <https://www.redalyc.org/journal/719/71965089003/71965089003.pdf>
- Mosolova E, Sosin D, Mosolov S. (December 2021). Stress, anxiety, depression and burnout in frontline healthcare workers during two peaks of COVID-19 pandemic in Russia. Psychiatry Research, (306), 114-226. <https://www.sciencedirect.com/science/article/pii/S0165178121005229>
- Muñoz Samboni LA, Montaña Moreno MC. (14 december 2019). Síndrome de Burnout en Trabajadores de Salud de Dos Clínicas de Assbasalud E.S.E [Especialización Gerencia de la Calidad y Auditoria en Salud]. [Pereira.]: Universidad Cooperativa de Colombia. https://repository.ucc.edu.co/bitstream/20.500.12494/15954/1/2019_s%C3%ADndrome_burnout_trabajadores.pdf
- National Institute of Health. (2022). Colombia Boletín No. 117| 01-03-2022. <https://www.ins.gov.co/Noticias/Paginas/coronavirus-personal-salud.aspx?7>
- National university of Colombia. (30 september 2019). Burnout y suicidios, consecuencias del acoso a profesionales de la salud. <https://unperiodico.unal.edu.co/pages/detail/burnout-y-suicidios-consecuencias-del-acoso-a-profesionales-de-la-salud>.
- Pan American Health Organization. (2 September 2020). Cerca de 570.000 trabajadores de la salud se han infectado y 2.500 han muerto por COVID-19 en las Américas. <https://www.paho.org/es/noticias/2-9-2020-cerca-570000-trabajadores-salud-se-han-infectado-2500-han-muerto-por-covid-19>
- Pan American Health Organization. (2 March 2022). La pandemia por Covid19 provoca un aumento del 25% en la prevalencia de la ansiedad y la depresión en todo el mundo. <https://www.paho.org/es/noticias/2-3-2022-pandemia-por-covid-19-provoca-aumento-25-prevalencia-ansiedad-depresion-todo>
- Rendón Montoya MS, Peralta Peña SL, Hernández Villa EA, Hernández-Pedroza RI, Vargas MR, Favela Ocaño MA. (10 August 2020). Síndrome de burnout en el personal de enfermería de unidades de cuidado crítico y de hospitalización. Enfermería global, 19 (59). <https://dx.doi.org/10.6018/eglobal.398221>

Torres & WHO. (7 January 2022). OMS Oficializa el Síndrome del Burnout como una enfermedad de trabajo. Medicina y Salud Pública. <https://medicinaysaludpublica.com/noticias/salud-publica/oms-oficializa-el-sindrome-del-burnout-como-una-enfermedad-de-trabajo/12348>

United Nations Organization. (25 September 2015). Sustainable Development Goals (SDG). <https://www.un.org/sustainabledevelopment/es/objetivos-de-desarrollo-sostenible/>

Wiley J & Sons, Inc. (2018). International center for research on social networks in business. Cronbach's Alpha. En: A Practical Approach to Using Statistics in Health Research. Hoboken, NJ, USA. <http://www.analytictech.com/ba762/handouts/alpha.htm>

World Health Organization. (30 July 2020). Considerations while summarizing international travel. <https://www.who.int/es/news-room/articles-detail/public-health-considerations-while-resuming-international-travel>