Master's in Management

Burnout syndrome, occupational stress and quality of life among health professionals during the SARS-CoV-2 pandemic period

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Burnout syndrome, occupational stress and quality of life among health professionals during the SARS-CoV-2 pandemic period

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guided by Dr. April Hargreaves (NCI)

Abstract

The main objective of this study is to correlate the demographic and pandemic factors of health professionals in the development of Burnout Syndrome, under the context of the SARS-CoV-2 pandemic. This is a study resulting from field research, of a descriptive nature, as it allows the researcher to achieve a better understanding of the relationship between the factors that influence the fact studied; and a multi-pronged approach (quantitative and qualitative). Data collection took place between the months March and April of 2021, from the submission of a link for the participants to answer the questionnaire. The research was carried out in a private long-stay institution for the elderly, called Ashbury Nursing Home, located in Blackrock/Dublin. Data were tabulated and analyzed descriptively in the Statistical Package for Social Science (SPSS) program, version 23.0, inferentially using Pearson's chi-square test and/or Fisher's exact test, and the level of accuracy was established significance in the statistical tests at 5% (p-value equals 0.05). The correlation of demographic variables and SARS-CoV-2 pandemic on Burnout Syndrome in its three-dimensionality, which is composed of emotional exhaustion, low personal fulfillment and depersonalization among health professionals. The correlations acquired between the immensities of the emotional exhaustion and the demographic factor and the COVID-19 pandemic denote the importance of variables between health professionals and their agents in the occurrence of episodes directly linked to mental health at work that directly influence the well-being and quality of life, unbalancing the biopsychosocial aspects.

Keywords: Burnout Syndrome; Pandemic; COVID-19; Health Professionals; Occupational Health.

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List of Abbreviations

BS – Burnout Syndrome

COVID-19 - Coronavirus Disease 2019

DP - Depersonalization

EE - Emotional Exist

EFS - Exploratory factor analysis

MBI - Maslach Burnout Inventory

PA - Personal Accomplishment

PPE - Personal protective equipment

SARS-CoV-2 - Severe Acute Respiratory Syndrome Coronavirus 2

SPSS – Statistical Package for Social Science

WHO - World Health Organization

Summary

1 Introduction

A virus called Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) was discovered in December 2019, which originated the Coronavirus Disease 2019 (COVID-19), named after the World Health Organization (WHO); the virus manifested itself preliminary in Wuhan city, China, and spread widely throughout the world. The WHO recognized the COVID-19 period on January 30th, 2020, as an outbreak of this new disease and giving an emergency alert in public health of international importance, which is seen as the highest level of alert (WHO, 2020).

The COVID-19 was again evaluated as a pandemic, with the modern concept of an epidemic of enormous proportions, which spreads across several countries and more than one continent. It has become a health problem that humanity has faced. Health professionals are at the forefront in this tormenting fight of countries around the world against this pandemic. In the meantime, of the development of the epidemic, all health professionals have been committed to this strenuous struggle regardless of their interests. These professionals are at risk of contracting the virus for the greater good of protecting society. Numerous studies indicate that health professionals experience rapid work stress and anxiety due to the COVID-19 pandemic, symptoms that can trigger burnout, making it a relevant problem among health professions. (Rezende & Marcondes, 1998; WHO, 2020; Rimmer & Abi, 2020; Shanafelt, 2015).

Thinking about society as a whole, at this first moment, overnight, it was necessary to deal with and live in a totally isolated, unknown world, surrounded by fears, uncertainties, known people, friends and loved ones getting sick and dying. All happening for something so small that invisible to the naked eye, however, its effects were and continue to be seen, felt and certainly changes the mind and way of acting of every human being who has experienced this pandemic. It was necessary to stay away from those you love, it was necessary to deal with your environment being the primary, your home, and at the same time dealing with the adversities and evolutions of Health Sciences, which society was not used to. Science evolves, it always evolves, and this means that the research carried out and published today will provide subsidies for the realization of another that will be published and validated tomorrow, that is, it does not mean that the first research was wrong, however, it was the knowledge available and discovered until that moment, guiding the social, economic and health guidelines and policies.

From this general view of society, a subgroup is included, belonging to the general group, called health professionals. Health professionals already have, in essence, dealing with difficult times,

illness, serious cases, with the process of finitude, however, there is a threshold between entering a profession in which there are bad moments, however, the individual studies, trains himself , is qualified to save lives, carry out health promotion, disease prevention, health rehabilitation, generating quality of life and well-being; and to be immersed in a world of fears, ignorance, lack of inputs, lack of quality of life, drawing strength from where none exists to try to save as many lives as possible and save yourself. As the saying goes, in times of turmoil, if you do not put your oxygen mask on yourself first, you will not be able to help other people. In addition, it is precisely from this perspective that this research emerges (Goés et al, 2022; Alves & Ferreira, 2020).

Combining the feelings of the general group (society) and the subgroup (health professionals), there were many challenges encountered: having to stay away from their families, many professionals did not return home so as not to run the risk of infecting their family members; changes in work routines, and these changes are often daily, because as the studies progressed and declarations from competent governmental organizations and bodies were released, new protocols had to be followed, at the same time that there was no longer their work, the professional health was immersed in an exhausting routine, with new protocols, protocols of war; changes in physical structures for the care and isolation of suspected and confirmed patients; intra-hospital pharmacies not meeting the demand, as well as all supplies, and this includes material, drug, human resources, physical resources, among others; the issue of personal protective equipment is also emphasized, which is extremely necessary to preserve the lives of health professionals and patients, which, however, made the professional make the "Sofia's choice", between protecting himself, urinating, and hydrating himself. or to eat, as there was no time with the demand and intercurrences to attend and the availability of complete equipment for the exchange. Moreover, speaking of "Sofia's choice", health professionals faced the most painful decision between who will breathe, unfortunately in the literal sense, in which there was no artificial respirator for everyone (Batista et al, 2020; Lima, Soares & Oliveira, 2021).

The psychological and psychic repercussions arising from the given context can be characterized as a total imbalance of biopsychosocial aspects, which form the human being. Fear of work, fear of going home, fear of using public transport, fear of leaving home, anxiety about the next shift, anxiety about the next day, anxiety about the next hour, when turning on the television or contacting any media hopelessness and sadness take over the individual, the health professional, evolving into crises of anxiety, depression, changes in sleep patterns, physical and mental exhaustion, intolerance, some moments of seclusion and others of aggression, impairment of interpersonal relationships , social distancing, social isolation, the emergence of psychosomatic illnesses; which are risk factors for the development of Burnout Syndrome (Mucke et al, 2021; Borges et al, 2021).

Burnout Syndrome (BS) is the set of specific signs and symptoms of exhaustion, mental exhaustion, depersonalization, reduction of professional fulfilment, loss of its essence and motivation and suffering resulting from direct sources of stress and leading to burnout, absence from work, which can be considered one of the major actors of this pandemic, in terms of health workers. It is emphasized that this syndrome affects more workers who have direct contact with other individuals. People who work in professions that lead to stress tend to suffer from burnout. Healthcare professionals are among the high-stress professionals with the parsimony of deeply personal interactions with people, specifically with patients, family members, and other healthcare providers, who, being in the healthcare field, have their share of high levels of stress, which produces an excessive level of burnout (Vitorino et al, 2018; Borges et al, 2021; Krystal & McNeil, 2020).

There was an increase in SB cases in the period of the COVID-19 pandemic, in which health professionals faced, and continue to face, a high workload, complications and stress. Over the years, many instruments, protocols and research have been carried out to monitor, classify and reduce the occurrence of Burnout cases, one of which is the Maslach Burnout Inventory (MBI), a tool used to assess the propensity of individuals to BS. For some decades, the method went through an authentication process in several countries to gather elements that could obtain secure data for the study of the syndrome. This assessment is able to accurately classify Burnout Syndrome in health professionals in three dimensions, such as emotional exhaustion, personal fulfilment and depersonalization (Lin, Alimoradi, Griffiths & Pakpour, 2022).

To better understand the problem in order to support future research on proposals for new strategies and implementations to change this sad reality among health professionals, the present research hypothesizes that, in addition to the pandemic factors, under the labor aspect, the demographic factors also influence the development of Burnout Syndrome and directly impact the quality of service provided by these health professionals and their quality of life, answering the guide question: “What is the correlation between the demographic and pandemic factors of health professionals in the development of Burnout Syndrome, under the context of the SARS-CoV-2 pandemic?”.

2 Objectives

2.1 Main Objective

The objective of this study is to correlate the demographic and pandemic factors of health professionals in the development of Burnout Syndrome, under the context of the SARS-CoV-2 pandemic.

2.2 Specific Objectives

- Identify the impact of Burnout Syndrome in the work activities of the health professional;
- Identify the impact of Burnout Syndrome on the health professional's quality of life.

3 Justification

The justification and motivation for carrying out this research consists of two pillars. The first pillar is intended to contribute to Science, in which more and more - with the advent of globalization, technology, metaverse and multiple tasks - we receive a lot of information at the same time and from all places, the tasks need to be immediate, the high stress and the number of cases of Burnout Syndrome continues to increase, especially after the beginning of this pandemic. The second pillar is empathy and love for the profession. As a human being and a professional in the Health Area, I seek, in my commitment to society, to provide tools, instruments, data, research and strategies to improve the well-being and quality of life of other fellow professionals.

There is an increase in cases of Burnout, as well as in published research with prescribed data, however, it is necessary to raise awareness that changes are necessary in management and in bedside care itself, especially in the case of such a troubled period as a pandemic and with the emergence of a variant of smallpox (Monkeypox), a disease that was already eradicated and that threatens the world with a look at a new epidemic and another public health problem in this transpandemic context (Morais, Salles & Coêlho, 2022).

Health professionals are exhausted physically, emotionally, socially, at work, and the current scenario does not show us a good prognosis for the coming months. In this way, this research is justified by bringing the criticality, data and reflections that health professionals are not just a workforce in health services, they are individuals who belong to a society and who deserve attention, their rights preserved and their maintenance of well-being and quality of life, in which work is a source of income and professional and personal achievements, and not a reason for illness.

4 Literature Review

4.1 Mental health

When we talk about health, well-being and quality of life, we instantly refer to people without comorbidities, smiling, close to friends and family, in leisure time and taking pictures for social media. This is the picture of health for society. However, under these aspects of the lay population, there is a grain of truth. People in psychological distress, with disorders or syndromes can also smile. In this case, the popular saying of "you can't judge a book just by its cover" fits perfectly. Mental health implies the balance of many factors, including what many would say is "luxury", such as alone time, quality time with friends, children, partner, a peaceful night's sleep, adequate meals etc.

Under the above context, if before, with a busy life, multiple functions at home and at work, bills to pay, a lot of information received from all sides at all times, it was already difficult; with the pandemic, all this circumstance got worse in an exorbitant way and, without a doubt, health professionals were the most affected. How to have mental health if before the pandemic there was a high rate of professionals on sick leave due to psychological problems? How to have mental health not being able to return to your home after an exhausting day trying to save lives and watching an invisible virus destroy everything? How to have mental health when having to choose which patient will have their last breath? How to have mental health if after the exhausting day at work, the health professional comes into contact with the world outside the hospital and is "bombed" by overwhelming news by social, television and journalistic media? How to have mental health seeing people you know, dear, co-workers getting sick and dying?

In the Undergraduate Courses, professionals are taught to deal with lives, learn techniques and develop skills to deal with illnesses and pathologies and to heal people, restoring the quality of life of these people. In addition, the first point is that we are not taught to deal with death, especially mass death. We are taught in Undergraduate Courses about existing pathologies and how to care for carriers and infected individuals. We are not taught to deal with the unknown. In our professional training, there are few fields of discussion about the process of finitude and dealing with death, which results in future frustrations, very high levels of stress with death, management, dealing with the family, in short, all aspects that involve and weigh with pain, suffering and feelings of powerlessness (Perboni, Zilli & Oliveira, 2018).

Before the pandemic, health professionals were already affected by depression, anxiety and psychic suffering. This data can be verified in several studies in which they present the same results: nursing as the most affected category, women, young people, with an income of 2 to 5 minimum wages, less than 10-15 years of experience in the area and who perform some kind of professional improvement, whether postgraduate in the modalities of residency, specialization, master's and doctorate. It appears that this data goes further, being factors of direct impact on the quality of life of the individual, changing their routine, wearing down functions and relationships, discouraging and discouraging (Gonsalez et al, 2017; Guido, Silva, Goulart, Bolzan & Lopes , 2012).

Regarding Burnout Syndrome, pre-pandemic studies indicate a very high rate of diagnoses with mental and physical exhaustion, reaching 50% of health professionals, resulting from in-hospital performance, emphasizing professionals working in intensive care sectors, for its high workload, in addition to being a closed space, with the sounds of monitors and medical assistance devices, dealing with critically ill patients, complications of a high degree of complexity and deaths (Gonsalez et al, 2017).

According to the International Stress Management Association, in Brazil, of professionals who deal directly with other people, suffer physical and emotional exhaustion and make up the percentage of 30% affected by BS. In this same study, it is emphasized that the nursing team occupies the third position in the ranking of the professions most affected and susceptible to the development of the syndrome (Kimura et al, 2021).

4.2 Transpandemic period

During the pandemic or transpandemic period, health professionals dealt, at their peak, with the most adverse situations, with greater workload, greater concern and extremely high levels of stress and fear. In addition, facing extreme difficulties, emotional destabilization, psychological pressure and even the development of psychosomatic diseases, which is the case of Burnout Syndrome (Esperidião, Saidel & Rodrigues, 2020).

Certainly, three episodes around the world served as a lesson for public managers and, unfortunately, health professionals paid the price. Firstly, in March 2020, the shortage of material inputs, which hit developing and underdeveloped countries due to large-scale purchase by developed countries and failure to meet demand by factories and logistics companies, such as: procedure masks, PFF2 type masks, 70% alcohol gel, syringes, personal protective equipment in general, among others.

The second episode was, in January 2021, the lack of oxygen cylinders in the city of Manaus, Brazil, in which several people died literally without oxygen and resulted in a gigantic social movement among the Brazilian population in general, entities and famous people outside the country. The third case is more recent, in April 2022, however, no less important, which was the isolation of suspects and confirmed in China, in which the government set up a quarantine place to allocate these people, separating children from their parents, with severe isolation, unsanitary , among other countless absurdities that occurred, which was revised after national and international pressure (Goés et al, 2020; Prestes, 2021; Stanway & Goh, 2022).

In addition to all the problems, obstacles and difficulties faced, situations such as those mentioned in the previous paragraph directly influence the mental health of professionals who assist this population. Situations like these, unfortunately, were common in this pandemic, each unit with its challenge, whether economic, cultural, social, which, once again, directly influence the life of the professional who is there in the health unit to try to save lives. After extreme situations like these, the probability of having a post-traumatic stress disorder is high, as well as anxiety, suicidal ideation and behaviors, psychotic episodes, drug abuse, stress, fatigue, physical, mental and professional exhaustion, whose present themselves as risk factors for the development of SB (Lai et al, 2020; Freitas et al, 2021; Esperidião, Saidel & Rodrigues, 2020).

4.3 Burnout Syndrome

In 1974, the concept that gave rise to burnout was first described by Freudenberg, which means "a condition of exhaustion that becomes a failure, conflict, loss of energy or unfulfilled desires on internal human resources". Some researchers have researched exhaustion in numerous areas in recent years, and in the widely accepted opinion of Maslach and Jackson, burnout is characterized as a syndrome that encompasses three dimensions, such as Emotional Exhaustion, Depersonalization and Personal Fulfillment. Emotional exhaustion is the impact on workers of being exhausted and emotionally drained, feeling extremely busy at work, unfolding in the absence of energy and imprinting the emotional mechanism of individual interruption. Depersonalization is understood as cold, apathetic or even, at times, inhumane, when treated in relation to other people in the work environment. A person who shows behavior in which he does not care about the other, showing attitudes of humiliation and rudeness, disregarding the requests and demands of others. Personal fulfillment is about competence and inner feelings of conduct. During this period, the worker internally

feels a sense of failure at work and is unable to manage his or her situation. These three dimensions are independents of each other and can manifest at any time (Maslach & Jackson, 1981).

Regularly, a healthcare professional already has a high-stress characteristic, and burnout has become a significant concern between occupational health and psychiatry and mental health professionals, as these healthcare professionals experience prolonged stress in their work because of their workloads, which are mostly very long and a wide range of activities and complex relationships with patients, their families and their co-workers. To prevent and reduce burnout, it is of great importance to understand its deterrents (Salvador et al, 2021).

Because of SB, individuals distance themselves from the work and family environment and experience nonconformity in interpersonal relationships, health setbacks and still need to face psychological problems, consequences of exhaustion. An important point regarding burnout and the demographic factor is that they can also be responsible for burnout. Some authors correlate aspects of gender, age, marital status, educational level and burnout. These results are sometimes confusing and remind us that research is essential and needs continuity to determine the significance of demographic factors in this causal relationship (McCormack & Cotter, 2013).

5 Methodology

5. 1 Study Design

This is a study resulting from field research, of a descriptive nature, as it allows the researcher to achieve a better understanding of the relationship between the factors that influence the fact studied; and a multi-pronged approach (quantitative and qualitative) based on data analysis after using an interview form, making it necessary to measure, among the team of health professionals, the elements for the reasons for the factors.

5. 2 Period and place

Data collection took place between the months March and April of 2021, from the submission of a link for the participants to answer the questionnaire.

The research was carried out in a private long-stay institution for the elderly, called Ashbury Nursing Home, located in Blackrock/Dublin, that has an average of 75 health professionals.

5.3 Sample and procedure

The participants were composed of health professionals, including nurses and care assistants from a private long-stay institution for the elderly, called Ashbury Nursing Home, located in Blackrock/Dublin. The sample was composed in a simple random way, contacting all the health professionals of the given institution. As it is a small institution, it was decided to send it to everyone, counting on a percentage of refusals to reach a significant sample for carrying out the study.

Of the 75 health professionals, 37 responding to the question sent via a link through an internal online media platform. The question was available for answer for 5 days and, shortly after finalizing the acceptance of the answers, the statistical section of the survey was started. The instrument used in the research was the Maslach Burnout Inventory (MBI), a question formulated by Christina Maslach and Susan Jackson, in 1978. The MBI has 22 items distributed in three syndrome dimensions, as follows: 9 items for Emotional Exhaustion (1, 2, 3, 6, 8, 13, 14, 16 and 20), 5 items for

depersonalization (5, 10, 11, 15 and 22) and Low Personal Performance 8 items (4, 7, 9, 12, 17, 18, 19 and 21), noting that Tamayo, in 1997, adapted the MBI, using a Likert scale (Tamayo & Troccoli, 2002).

Table 1 presents the Maslach Burnout Inventory questionnaire, which is composed of 22 items, with emphasis on the division of potential factors.

Table 1. MBI Questionnaire

Emotional exhaustion (EE)
I-1. Feel emotionally drained from work
I-2. I feel emotionally exhausted by my work?
I- 3. I feel tired when I get up in the morning and have to face another day of work?
I-6. Working with people all day long takes a lot of effort from me?
I- 8. Does my work exhaust me?
I-13. I feel frustrated with my work?
I-14. I think I am working too much?
I-16. Working directly with people causes me stress?
I-20. I feel at the limit of my possibilities.
Personal accomplishment (PA)
I-9. I feel that through my work, I have a positive influence on the lives of others?
I-12. I feel in a great mood.
I- 4. I can easily understand how people feel?
I-17. Can I easily create a relaxed atmosphere for people?
I-18. I feel stimulated after working in contact with people?
I-19. Have I achieved many accomplishments in my profession?
I- 7. I deal effectively with people's problems?
I-21. I feel that I know how to deal appropriately with emotional problems in my work?
Depersonalization (DP)
I-5. I think I treat some people as if they were objects?
I-10. Have I become more insensitive towards people?
I-11. I am worried that this work is hardening me emotionally?
I-15. I don't care about what happens to the people I serve?
I-22. I feel that people blame me in some way for their problems?

Six questions related to the SARS-CoV-2 pandemic were used with binary answers between "YES" and "NO", and 22 questions related to Burnout Syndrome that were classified on a Likert scale, in which: mean 1 (Never), 2 (Rarely), 3 (Sometimes), 4 (Often), 5 (Always). Sociodemographic information was collected with the following questions: sex, age, marital status, education level and whether they have children.

5.4 Type of analysis

Data were tabulated and analyzed descriptively in the Statistical Package for Social Science (SPSS) program, version 23.0 (2017), inferentially using Pearson's chi-square test and/or Fisher's exact test, and the level of accuracy was established significance in the statistical tests at 5% (p-value equal to 0.05).

Considerations for factor analysis are more conceptual than statistical. The lack of expectation or linearity of the data only diminishes the observed correlations. In addition, some degree of multilinearity is desired because the objective is to identify correlations between variables. However, it must be ensured that the data matrix has sufficient correlations to justify the factor analysis. One indication for factor analysis is that no correlation between items, out of a total of 231 relationships, is not significant at 0.001 (Hair et al, 1995).

Conceptually, factor analysis is a multivariate statistical technique that studies the correlations between a large number of variables by grouping them into factors. Exploratory factor analysis (EFS), unlike confirmatory analysis, does not define restrictions or the number of components to be extracted. Thus, once determined and interpreted, factors can describe data in a smaller number of concepts than individual variables (Hair et al, 1995).

It was addressed to them using the factor analysis technique as one of its main objectives to reduce the multivariate dimension of the problem, seeking to find a smaller number of latent variables, which preserve most of the original variance of the variables involved. in the problem, having to replace the initial set of determining characteristics by others in smaller numbers, but which have a significant original explanation of the problem, in order to raise the latent dimensions in the original variables of the phenomenon, aiming to give a more understandable interpretation according to standard instructions. The objective is to find a more direct interpretation of the calculated factors; they were rotated using the Varimax method, which allowed for a better quality of interpretation of their coefficients, which represent the correlations of each variable with each factor extracted.

The adequacy of the factor analysis was verified by the Kaiser-Meyer-olkim (KMO) measure and the Bartlett measure. The amenity test showed statistical significance (p = 1,141 x 10 -32) and rejected the null correlation hypothesis between the initial variables, which indicates that the factor analysis is adequate. The KMO test obtained a value of 0.760, just above 0.500, which also indicates the adequacy of the factor analysis model.

By the latent root criterion, three factors were extracted that explain 70.30% of the total variance of the dimension. This calculation is performed by the sum of the extracted values divided by the maximum number of possible factors to be extracted (22); that is, at the limit, each of the 22 items could be considered a factor. The extraction of 60% of variance is acceptable for exploratory and descriptive social research, as is the case in this study (Cabelo et al, 2012).

5.5 Ethical aspects

In order to comply with all ethical aspects involving research with human beings, this study was authorized by the Institutions and, before the participants started the questionnaire, there was the presentation of the Free and Informed Consent Term for reading and acceptance, guaranteeing the confidentiality of the information personal data, anonymity, guarantee of possession and protection of data for 05 years after the survey collection date. The questionnaire sent does not pose any risk to the health and well-being of the participants; and, at any time, the participant could claim to no longer participate without any prejudice whatsoever. The data from the questionnaires became information for dissemination through scientific studies published in journals and presentations at scientific events, of a non-commercial nature.

6 Results

The factor analysis of the Burnout questionnaire in its original version indicates three potential factors, which form 3 subscales, and most of these factors are positively correlated and based on the results of the factor analysis, and can be combined without losing precision or reliability.

The loadings of the items rotated by the Varimax criterion can be seen in Table 2. The loading indicates how much the item matches and the corresponding factor. The higher its module, the greater the representativeness of the item in the factor. Although it has no statistical emphasis, but rather practical, it is assumed that loads greater than the modulus of, 0.5 are significant and more extensive than the modulus of 0.3 are acceptable (Hair et al, 2005).

Table 2. Allocation of items, Factor loading, Commonality and Cronbach's Burnout Alpha

Factor loadings

	F1	**F2**	**F3**	**Commonality**	**Alfa Cronbach**
I1	0,806			0,780	0,7076
I2	0,780			0,687	0,6998
I3	0,734			0,689	0,7022
I4			-0,655	**0,444**	0,7480
I5			0,539	0,520	0,7142
I6	0,556			0,528	0,7037
I7		-0,502		0,512	0,7420
I8	0,864			0,834	0,6863
I9		-0,628		0,704	0,7498
I10			0,601	0,640	0,7034
I11	0,673			0,659	0,6863
I12		0,569		0,731	0,7826
I13	0,476			**0,457**	0,7125
I14	0,676			0,621	0,6850
I15			0,664	0,819	0,7169
I16	0,580			0,410	0,7103

I17		0,599		0,552	0,7477
I18		0,424		0,519	0,7620
I19		-0,580		0,748	0,7574
I20	0,729			0,622	0,7068
I21		-0,624		0,553	0,7503
I22			0,424	0,500	0,7058
variance	8,993	3,994	2,470	15,457	**0,7336**
% Where	0,409	0,182	0,112	0,7030	

Once the items are allocated to their individual factors, it is possible to check for similarities. Commonality is the proportion of the variability of each variable that is explained by the factors. The closer the commonality is to 1.00, the better the variable is explained by the factors, which indicates that all variables are essential in explaining the factors, as the commonalities represent the proportion of the variance of each variable shared with the factors. common. Values less than 0.5 are not adequate, showing that the solution did not extract the item variance enough to correctly ascertain it for a given factor. Table 2 shows that all items that had a commonality greater than 0.5, except for items I4 (0.444): "Can I easily understand how people feel?" and E13 (0.457): "Do I feel frustrated with my work?".

In the case of questionnaires, a statistic is also defined to measure internal consistency, which is the extent to which the questions measure the same construct – by measuring internal consistency, Lee J. Cronbach developed Cronbach's alpha coefficient. This statistic is easy to calculate, can be obtained even with the application of the questionnaire only once, and can be applied both to questionnaires with binary responses and to questionnaires with multiple response alternatives, with a Likert scale (Tang et al, 2014; Cronbach, 1951; Gliem et al, 2003; Galindo et al, 2018; Galindo et al, 2019; Rosas et al, 2019).

Cronbach's alpha was used to verify the internal consistency of the questionnaire and its items, obtaining the spearman correlation coefficient and the specific test for the null correlation hypothesis to assess the degree of relationship between the total score of the questionnaire and its items. The level of significance in the statistical tests was set at 5% (p-value equal to 0.05).

The maximum value for Cronbach's alpha is 1, and its minimum value is 0, although negative values may occasionally occur. In general, it is understood that the questionnaire has acceptable reliability if the alpha value is more significant than 0.7 (some say 0.6) and has good reliability if the alpha value is more significant than 0.8. However, it is not desirable that the alpha value be too high

(such as 0.95 or more), as this may be indicating redundancy of the questions, according to (Gliem et al, 2003).

Cronbach's alpha value was evaluated for the 22 items and obtained the coefficient of (0.7336), the sum of the scores ranged from 50 to 82, obtained a mean of 66.52, standard deviation equal to 8.60 and median equal to 66.50.

It was decided not to eliminate items I4 and I13, because despite item 4 "I can easily understand how people feel?" and item I13, "I feel frustrated with my work?" presented commonalities values below the recommended (0.444) and (0.457), if these were eliminated, Cronbach's alphas of the items would not increase significantly, being (0.7480) and (0.7590), respectively. Thus, the measurement instrument went through the internal validation process with acceptable reliability.

According to Table 3 (demography), the sociodemographic questionnaire expressed that the sample was composed of 37 interviewees, women (70.27%) and men (29.73%), mostly without children (72.97%), with an age group ranging from 30 - Fewer years (29.73%), 31 - 40 years (35.14%), 41 - 50 years (32.43%) and 51 - 60 years (2.70%), with a predominance of Single (62.16%), followed by Married (29.73%) and Divorced (8.11%), and evidencing educational levels with an emphasis on the degree (51.35%), followed by master's degree (27.03%), high school (21.62%) and no interviewer has the Doctorate level.

Table 3. Demography

	n	**%**
Gender		
Man	11	29,73%
Woman	26	70,27%
Age		
18 - 30	11	29,73%
31 - 40	13	35,14%
41 - 50	12	32,43%
51 - 60	1	2,70%
Educational level		
High School	8	21,62%
Degree	19	51,35%

Master's Degree	10	27,03%
Doctorate	0	0,00%
Marital status		
Single	23	62,16%
Married	11	29,73%
Divorced	3	8,11%
Children		
Yes	10	27,03%
No	27	72,97%

About the three potential factors related to the Likert scale, as shown in Table 4.

Table 4. Analysis of factors correlated with Burnout

		Never		Rarely		Sometimes		Many times		Always	
Factors	Items	n	%	n	%	n	%	n	%	n	%
FACTOR 1	I.1	1	2,70%	2	5,41%	9	24,32%	20	54,05%	5	13,51%
	I.2	2	5,41%	6	16,22%	8	21,62%	16	43,24%	5	13,51%
	I.3	2	5,41%	5	13,51%	12	32,43%	11	29,73%	7	18,92%
	I.6	6	16,22%	11	29,73%	9	24,32%	7	18,92%	4	10,81%
	I.8	2	5,41%	4	10,81%	12	32,43%	15	40,54%	4	10,81%
	I.11	7	18,92%	4	10,81%	14	37,84%	9	24,32%	3	8,11%
	I.13	5	13,51%	15	40,54%	12	32,43%	4	10,81%	1	2,70%
	I.14	4	10,81%	7	18,92%	11	29,73%	12	32,43%	3	8,11%
	I.16	9	24,32%	14	37,84%	8	21,62%	6	16,22%	0	0,00%
	I.20	8	21,62%	17	45,95%	5	13,51%	5	13,51%	2	5,41%
FACTOR 2	I.7	1	2,70%	3	8,11%	10	27,03%	18	48,65%	5	13,51%
	I.9	1	2,70%	0	0,00%	5	13,51%	18	48,65%	13	35,14%
	I.12	1	2,70%	7	18,92%	9	24,32%	17	45,95%	3	8,11%
	I.17	0	0,00%	3	8,11%	15	40,54%	16	43,24%	3	8,11%
	I.18	1	2,70%	5	13,51%	15	40,54%	12	32,43%	4	10,81%

	I.19	1	2,70%	4	10,81%	10	27,03%	16	43,24%	6	16,22%
	I.21	1	2,70%	9	24,32%	9	24,32%	14	37,84%	4	10,81%
FACTOR	I.4	1	2,70%	0	0,00%	6	16,22%	15	40,54%	15	40,54%
3	I.5	19	51,35%	14	37,84%	3	8,11%	1	2,70%	0	0,00%
	I.10	18	48,65%	10	27,03%	6	16,22%	3	8,11%	0	0,00%
	I.15	32	86,49%	3	8,11%	1	2,70%	1	2,70%	0	0,00%
	I.22	8	21,62%	13	35,14%	7	18,92%	7	18,92%	2	5,41%

6.1 Emotional Exhaustion factor

The analysis of the Emotional Exhaustion factor is about items 1, 2, 3, 6, 8, 11, 13, 14, 16 and 20 and present the following comments:

Item I.1 - "I feel exhausted at the end of my work?" Only 2.70% never feel exhausted at the end of the working day, while 54.05% often feel tired and 13.51% feel exhausted at the end of the day, with an average of ± 67% of respondents feels exhausted at the end of the working day.

Item I.2 – " I feel emotionally exhausted by my work? "Only 5.41% never feel exhausted at work, while 43.24% often feel exhausted and 13.51% always feel exhausted, with an average of ± 56% of respondents feels exhausted at work.

Item I.3 – " I feel tired when I get up in the morning and have to face another day of work? " Only 5.41% never felt tired, while 29.73% often feel tired and 18.92% always feel tired, with an average of ± 48% of respondents feel tired when getting up and need to face another day of work.

Item I.6 - "Working with people all day long takes a lot of effort from me?" 10.81% always understand that working with people all day long always exaggerate a lot of work, while 29.73% rarely have this feeling and 24.32% sometimes have this feeling, with a mean of ± 54%

Item I.8 – "My work exhausts me?" only 5.41% never felt that the work leaves them exhausted, while 32.43% sometimes have this feeling and 40.54% varying, with an average of ± 72% of respondents feel that the work leaves them exhausted.

Item I.11 – "I am worried that this work is hardening me emotionally?" Only 8.11% always worry about the fact that work hardens their feelings, 37.84% sometimes and 24.32% often worry, with an average of ± 62% of respondents are concerned that work will harden feelings.

Item I.13- "I feel frustrated with my work?" only 2.70% always feel frustrated with work, 40.54% rarely feel frustrated, and 32.43% sometimes feel frustrated, with an average of ± 72% of respondents sometimes feels frustrated at work.

Item I.14 – "I think I am working too much?" only 8.11% always work hard, while 32.43% think they often work hard and 29.73% sometimes work hard, with an average of ± 62% of respondents consider working hard.

Item I.16 - "Working directly with people causes me stress?" 16.22% often consider that direct work with people leaves them stressed, while 37.84% rarely have this type of feeling and 24.32% never assessed that working with people directly lead them to stress, with a mean of ± 62% do not consider direct work with people to be the cause of their stress.

Item I.20 - "I feel at the limit of my possibilities?" Only 5.41% always feel at the limit of their possibilities, while 45.95% rarely experience this feeling, and 21.62% never experienced this feeling, with an average of ± 67% rarely experienced this feeling.

6.2 Personal Accomplishment factor

The analysis of the Personal Accomplishment factor is about items 7, 9, 12, 17, 18, 19 and 21 and present the following comments:

Item I.7 –"I deal effectively with people's problems?" only 2.70% never deal with other people's problems, while 48.65% often deal with other people's problems and 27.03% sometimes deal with other people's problems, with an average of ± 75% deal considerably with other people's problems.

Item I.9 – "I feel that through my work, I have a positive influence on the lives of others?" Only 2.70% never feel a positive influence on other people's lives at work, while 48.65% believe that they are often a positive influence and 35.14% are always a positive influence, with an average of ± 83% feel like a positive influence.

Item I.12 - " I feel in a great mood? Only 2.70% never feel a good mood, while 45.95% often feel good, and 24.32% sometimes feel in a good mood, with an average of ± 70% feels relatively good in a good mood.

Item I.17 – "I can easily create a relaxed atmosphere for people?" only 8.11% can rarely create a relaxing atmosphere. In comparison, 43.24% often manage to create a relaxing atmosphere, and 40.54% can sometimes easily create a relaxing atmosphere among people, with an average of ± 83% can easily create a relaxing atmosphere.

Item I.18 – "I feel stimulated after working in contact with people?" only 2.70% never feel stimulated after working in contact with people, while 40.54% sometimes feel stimulated and 32.43% often feel, with an average of ± 73% of respondents feel stimulated after working in contact with people.

Item I.19 – "I have achieved many accomplishments in my profession?" only 2.70% never achieved achievements in their profession. In comparison, 43.24% often acquired achievements and 27.03% sometimes achieved achievements in their profession, with an average of ± 70% of respondents acquired achievements in their profession.

Item I.21 – "I feel that I know how to deal appropriately with emotional problems in my work?" only 2.70% never know how to deal with emotional problems in my work, whereas 37.84% often know how to deal adequately with emotional problems, obtaining here a similar percentage of 24.32% for rarely and the times of interviewees who know how to properly deal with emotional problems at work, with an average of ± 62% of the interviewees manages to manage their emotional problems adequately.

6.3 Depersonalization factor

The analysis of the Depersonalization factor is about items 4, 5, 10, 15 and 22, and present the following comments:

Item I.4 – "I can easily understand how people feel?" only 2.70% can never easily understand how people feel, while 40.54% can always easily understand how people feel and 40.54% can often easily understand people feel, with an average of ± 81% of respondents can quickly bury how people feel.

Item I.5 – "I think I treat some people as if they were objects?" only 2.70% often treat people as objects, while 51.35% never treat people as objects and 37.84% rarely feel that they treat some people as objects, with an average of ± 89% of respondents does not consider treating people as objects.

Item I.10 – " I have become more insensitive towards people? " only 8.11% often feel that they are insensitive to people, while 46.65% never feel insensitive towards people and 27.03% rarely feel insensitive, with an average of ± 73% of respondents does not feel insensitive towards people.

Item I.15 – "I don't care about what happens to the people I serve?" whereas 86.49% never knew not to care what is happening to the people they serve and 8.11% rarely experience this feeling, with an average of ± 94% of respondents instead care about what happens to the people they work for.

Item I.22 – "I feel that people blame me in some way for their problems?" whereas 35.14% rarely have this feeling and 21.62% never feel that people blame them for problems that do not belong to them, in an average of ± 56% of respondents do not feel that people blame them for problems that are not theirs.

6.4 COVID-19

Table 5 presents the answers of the six variables (23,24,25,26,27,28) referring to the evaluation of the COVID-19 chart, classified according to the questionnaire, showing that the respondents in the sample, in 51.35% of the interviewees answered "YES" for the question "23. Do you feel threatened by the possibility of contracting COVID-19?" and answered "No" at 48.65%. For question "24. Has your workload increased since the beginning of the COVID-19 pandemic?", most (n=32) answered "yes" in (86.49%), and 13.51% answered "no" (n=5), as well as obtained the same frequency similarities to question "25. Do you feel confident that the protective gear provided by your place of work will protect you from contracting COVID-19?". According to the question "26. Have you received specialized training regarding COVID-19? mostly 72.97% answered "Yes" and I feel it was sufficient.)", (Yes, but it was not enough.) at 18.92%, "No" at 5.41%, and "N/A" answered 2.70% with only one interviewer. For question "27. Overall, do you feel the pandemic has caused an increase in your stress levels?" mostly 91.89% answered "yes", and 8.11% answered "no". And for the question "28. Overall, do you feel the pandemic has negatively impacted the work environment?", respondents answered "yes" at 78.38% and said "no" at 21.62%.

Table 5. COVID-19

	I.23		I.24		I.25		I.26		I.27		I.28	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Yes, and I feel it was sufficient	19	51,35 %	32	86,49 %	32	86,49 %	27	72,97 %	34	91,89 %	29	78,38 %
No	18	48,65 %	5	13,51 %	5	13,51 %	2	5,41%	3	8,11%	8	21,62 %
Yes, but it was not enough							7	18,92 %				
N/A							1	2,70%				

To obtain an average of the answers, the positive answers (YES) of the COVID-19 factor were selected, which is the majority of the answers indicated by the interviewees; in the demographic factor, the highest percentage of each item was selected (age, gender, marital status, schooling and whether you have children), and two of the highest percentages of the three factors burnout syndrome, (Emotional exhaustion, Personal accomplishment and Depersonalization). After this stage, each Burnout factor was measured, and the Demography and COVID-19 factors were correlated. Six tables were made with their distinctions describes.

The analysis of the factors Demography and COVID-19 were analyzed below in the following Tables: each from Item 23 to Item 28 represents each question of the factor COVID-19 analyzed together with demographics. The research below shows on average a percentage of factors 1 and 2 of burnout correlated with factors characterized here, (Demographic and COVID-19), that the burnout level of the interviewees and moderated based on the MBI and when to factor 3 Depersonalize the percentage and considerably high, but the slope and the low level of depersonalization in the interviewees. For the proposition we are presenting, the highest media were added and thus classified the highest percentage, giving the percentage of cut-off that gave rise to the burnout level of the research performed here, below the examples.

6.5 Do you feel threatened by the possibility of contracting COVID-19?

Given the correction of factors, where this is the focus of this research, where we correlate the factors COVID-19 and demographics to burnout. In the table below, we see that of the 37 respondents,

19 answered that "Yes to, Do you feel threatened by the possibility of contracting COVID-19?" which represents 51.35% of respondents, being the majority of women aged ± 31-50 years, totaling 14, representing 73.68% of the "YES", 15 of the interviewees with their level of education between high school/degree, totaling ± 78.95, 15 of the interviewees are single, totaling ± 78.95% of the interviewees and 14 of the interviewees did not have children, totaling ± 73.78% of the interviewees.

The factor that links question N.23 to the Factor of Number 1 of Burnout EE (Emotional Exhaustion) has an average of ± 61.05% of the interviewees who sometimes felt threatened with the possibility of contracting COVID-19. The PA factor (Personal Achievement), with a mean of ± 75.19 of the interviewees, sometimes felt threatened and the DP factor (depersonalization) has a mean of ± 62.11% rarely feel threatened.

- Emotional exhaustion – 61.05%↑ (sum items 3 and 4 of the table below factor 1 that have the highest percentage that tilts the level of emotional exhaustion in burnout upwards, giving a high average).
- Personal accomplishment – 75.19%↑ (sum items 3 and 4 of the table below factor 2 that have the highest percentage that tilts the Level of Personal Achievement in burnout upwards, giving a high average).
- Depersonalization – 62.11%↓ (sum items 1 and 2 of the table below factor 3 that have the highest percentage that tilts the depersonalization level in burnout down, giving a low average)

Table 6. Correlation the factors Demographic x COVID-19 with Burnout Syndrome

	YES						
Answer: I23	**n**	**%**					
Interviewed	**19**	**51.35**		**Media Factor 1**			
Gender			**1**	**2**	**3**	**4**	**5**
Man	5	26.32					
Woman	14	73.68					
Age			5,26	23,16	25,27	35,79	10,53
18 - 30	5	26.32					
31 - 40	8	42.11					
41 - 50	5	26.32					
51 - 60	1	5.26					
				Media Factor 2			

			3,76	11,28	30,08	45,11	9,77
Educational Level							
High School	5	26.32					
Degree	10	52.63					
Master's Degree	4	21.05					
Doctorate	0	0		**Media Factor 3**			
			36,84	25,26	9,47	20,00	8,42
Marital status							
Single	12	63.16					
Married	5	26.32					
Divorced	2	10.53					
Children							
Yes	5	26.32					
No	14	73.68					

6.6 Has your workload increased since the beginning of the COVID-19 pandemic?

Table 7 shows 32 of the 37 interviewees answered "YES" to "Has your workload increased since the beginning of the COVID-19 pandemic?", resonating 86.49% of the interviewees, 23 of them totaling ± 71.88% of the interviewees. 31 of the interviewees aged less than 31-50, which totals ±96.88% of the interviewees, 16 of the interviewees with a degree level of education, totaling ± 50.00% of the interviewees, 19 of those who said "YES" are single, totaling ± 59.38% of the interviewees, and 23 of them are single, which totals ±71.88 of the interviewees who said "YES" that their work increased in the COVID-19 period.

The factor that interconnects the question of N.24 to the EE burnout factor (Emotional Exhaustion) has an average of ± 59.69% of the interviewees who often consider it has increased work in the covid pandemic period19. The PA factor (Personal Accomplishment), with an average of ± 75.45% of respondents, often consider the increase in work, and the DP factor (depersonalization) has an average of ± 63.13% rarely consider having increased work in the pandemic.

- Emotional exhaustion – 59.69% ↑ (the sum items 3 and 4 of the table below factor 1 that have the highest percentage that tilts the level of emotional exhaustion in burnout upwards, giving a high average).

- Personal Accomplishment – 75.45%↑ (the sum items 3 and 4 of the table below factor 2 that have the highest percentage that tilts the Level of Personal Achievement in burnout upwards, giving a high average).
- Depersonalization – 63.13%↓ (the sum items 1 and 2 of the table below factor 3 that have the highest percentage that tilts the depersonalization level in burnout down, giving a low average).

Table 7. Correlation the factors Demographic x COVID-19 with Burnout Syndrome

	YES						
Answers: I24	**n**	**%**					
Interviewed	**32**	**86.49**		**Media Factor 1**			
Gender			**1**	**2**	**3**	**4**	**5**
Man	9	28.13					
Woman	23	71.88					
Age			9,38	20,63	28,44	31,25	10,32
18 - 30	10	31.25					
31 - 40	11	34.38					
41 - 50	10	31.25					
51 - 60	1	3.13					
				Media Factor 2			
			2,68	10,27	29,91	40,18	11,61
Educational level							
High School	7	21.88					
Degree	16	50					
Master's Degree	9	28.13					
Doctorate	0	0		**Media Factor 3**			
			39,38	23,75	11,25	16,25	9,38
Marital status							
Single	19	59.38					
Married	10	31.25					
Divorced	3	9.38					
Children							
Yes	9	28.13					
No	23	71.88					

6.7 Do you feel confident that the protective gear provided by your place of work will protect you from COVID-19 infection?

Table 8 shows 32 of the 37 respondents who answered "YES" to "Do you feel confident that the protective gear provided by your place of work will protect you from contracting COVID-19?" representing 86.49% of respondents, 23 of the majority of women totaling ±71.88% of the interviewees aged 31-50 totaling ± 71.88%, 24 of the interviewees have a degree/masters totaling ±75.00% of the interviewees, 20 of those who said "YES" are single, totaling ± 62.50% of the interviewees and 22 of them do not have children, which totals ± 68.75 of the interviewees.

The factor that connects the question of N. 25 to the EE Burnout factor (Emotional Exhaustion) has an average of ± 55.32% of the interviewees feel confident about the equipment provided. The PA factor (Personal Accomplishment), with an average of ± 69.20% of respondents, often felt confident about the equipment provided, the DP factor (depersonalization) has a mean of ±65.00% rarely felt confident referencing the equipment provided during the pandemic.

- Emotional exhaustion – 55.32%↓ (The sum of items 3 and 4 has a high percentage, but their inclination to factor 1 emotional exhaustion is low when compared to item -25 the COVID-19 question item).
- Personal Accomplishment – 69.20% ↓ (The sum of items 3 and 4 has a high percentage, but its inclination to factor 2 Personal accomplishment is low when compared to item -25 the COVID-19).
- Depersonalization – 65.00%↑ (The sum of items 1 and 2 has a low percentage, but its inclination is high compared to Factor 3 Depersonalization is high compared to Item -25 COVID-19).

Table 8. Correlation the factors Demography x COVID-19 with Burnout Syndrome

	YES						
Answers: I25	**n**	**%**					
Interviewed	**32**	**86.49**		**Media Factor 1**			
Gender			**1**	**2**	**3**	**4**	**5**
Man	9	28.13					
Woman	23	71.88					
Age			13,44	23,13	26,25	29,07	8,13
18 - 30	8	25					

31 - 40	12	37.5					
41 - 50	11	34.38					
51 - 60	1	3.13					
				Media Factor 2			
			2,68	11,16	22,77	46,43	16,97
Educational level							
High School	8	25					
Degree	14	43.75					
Master's Degree	10	31.25					
Doctorate	0	0		**Media Factor 3**			
			43,75	21,25	11,25	14,38	9,38
Marital status							
Single	20	62.5					
Married	9	28.13					
Divorced	3	9.38					
Children							
Yes	10	31.25					
No	22	68.75					

6.8 Have you received specialized training regarding COVID-19?

Table 9 shows 27 of the 37 respondents who answered "YES" to "Have you received specialized training regarding COVID-19?" representing 72.97% of the participants in their entirety, 18 of whom were primarily women totaling ± 66.67 of those seen, 21 aged between 31-50 totaling ± 77.78 of those surveyed, 22 of them have a degree/masters totaling ±81.48% of the participants, 14 of those who said "YES" are primarily single, totaling 51.85% of the interviewees and 18 of them do not have children, which totals ± 66.67% of the interviewees.

The factor that interconnects the question of N. 26 to the EE Burnout factor (Emotional Exhaustion) has a mean of ± 52.18% of the interviewees who sometimes received specific training for COVID-19. The PA factor (Personal Accomplishment), with an average of ±67.14% of the mid-sighted ones, sometimes received specific training and the DP factor (depersonalization) has a mean of ± 62.96% of the interviewees rarely received specific training during the pandemic.

- Emotional exhaustion – 52.18% ↑ (The sum of items 3 and 4 has a high percentage, but its inclination is low for the factor 1 Emotional exhaustion and low when compared to the question of item -26 COVID-19).
- Personal Accomplishment – 67.14%↓ (The sum of items 3 and 4 has a high percentage, but its inclination is low regarding factor 2 Personal accomplishment and low when compared to the -26 COVID-19).
- Depersonalization – 62.96%↑ (The sum of items 1 and 2 has a low percentage, but its slope is high compared to Factor 3 Depersonalization and high compared to Item -26 COVID-19).

Table 9. Correlation the factors Demography x COVID-19 with Burnout Syndrome

I26	**n**	**%**					
Interviewed	**27**	**72.97**					
Gender				**Media Factor 1**			
Man	9	33.33	**1**	**2**	**3**	**4**	**5**
Woman	18	66.67					
Age							
18 - 30	5	18.52	13,69	22,20	25,90	26,28	11,84
31 - 40	11	40.74					
41 - 50	10	37.04					
51 - 60	1	3.7					
				Media Factor 2			
Educational level			3,17	13,74	30,66	36,49	15,86
High School	5	18.52					
Degree	14	51.85					
Master's Degree	8	29.63					
Doctorate	0	0					
				Media Factor 3			
			42,24	20,72	13,32	12,58	11,12
Marital status							
Single	14	51.85					
Married	10	37.04					
Divorced	3	11.11					

Children							
Yes	9	33.33					
No	18	66.67					

6.9 Overall, do you feel the pandemic has caused an increase in your stress levels?

Table 10 correlations factors, 34 of the 37 interviewees who answered "YES" to n 27 "Overall, do you feel the pandemic has caused an increase in your stress levels?" representing 91.89% of the interviewees, 24 of whom were women, totaling ± 70.59%, within this percentage 22 aged 30-40 years totaling ± 64.70% of the interviewees, 18 have a level of degree education totaling ± 52.82% of the interviewees, 20 of which said "YES" that overall the level of stress increased in the period of the COVID pandemic19 are single, totaling ± 5 8.82% of the interviewees and 24 of those who said "YES" do not have children, which totals ± 70.59% of the interviewees who consider having increased the level of stress in the pandemic.

The factor that interconnects the question of N. 27 to the EE Burnout factor (Emotional Exhaustion) has a mean of ±5 6.47% of the interviewees often feel overall the level of stress increased in the pandemic period. The PA factor (Personal Accomplishment), with a mean of ±72.69%, consider having increased the level of stress in this pandemic period of COVID19 and referring to the DP factor (depersonalization) has a mean of ± 62.94% who rarely considered their stress level to increase in the COVID-19 period.

- Emotional exhaustion – 56.47%↑ (sum items 3 and 4 of the table below factor 1 that have the highest percentage that tilts the level of emotional exhaustion in burnout upwards, giving a high average).
- Personal accomplishment – 72.69%↑ (sum items 3 and 4 of the table below factor 2 that have the highest percentage that tilts the Level of Personal Achievement in burnout upwards, giving a high average).
- Depersonalization – 62.94%↓ (sum items 1 and 2 of the table below factor 3 that have the highest percentage that tilts the depersonalization level in burnout down, giving a low average).

Table 10. Correlation the factors Demography x COVID-19 with Burnout Syndrome

	YES						
Answer: I27	**n**	**%**					

Interviewed	**34**	**91.89**		**Media Factor 1**			
Gender			**1**	**2**	**3**	**4**	**5**
Man	10	29.41					
Woman	24	70.59					
Age			9,12	24,71	28,53	27,94	9,71
18 - 30	11	32.35					
31 - 40	12	35.29					
41 - 50	10	29.41					
51 - 60	1	2.94					
				Media Factor 2			
			2,52	13,02	28,57	44,12	11,76
Educational Level							
High School	7	20.59					
Degree	18	52.94					
Master's Degree	9	26.47					
Doctorate	0	0		**Media Factor 3**			
			40,59	22,35	12,35	15,88	8,82
Marital status							
Single	20	58.82					
Married	11	32.35					
Divorced	3	8.82					
Children							
Yes	10	29.41					
No	24	70.59					

6.10 Overall, do you feel the pandemic has negatively affected the work environment?

Table 11 Correlation de factors Demographic x COVID-19 reflecting burnout syndrome shows 29 of the 37 participants who answered "YES" "Overall, do you feel the pandemic has negatively impacted the work environment?" representing 78.38 of the interviewees, 19 of whom were primarily women, totaling ± 65.62% of the survey, 13 aged between 31-40 totaling ± 44.83% of those seen, 17 of those who answered "YES" that the COVID-19 pandemic negatively impacted the work environment, which totals ± 58,62% of the interviewees, 19 of those who said "YES" are single, which totals ± 65.62% of the interviewees and 23 do not have children, which is a total of ± 79.31% of those surveyed.

The factor that interconnects the issue of N.28 to the EE Burnout factor (Emotional Exhaustion) has an average of ± 56.90 that often consider the environment of having work to have been impacted by the pandemic period. The PA factor (Personal Accomplishment), with an average of ±71.92% that consider the negative impact on the work environment due to the period of the COVID-19 and the DP factor (depersonalization), has a mean of ± 60.00% rarely felt the work environment negatively impacted during the pandemic.

- Emotional exhaustion – 56.90%↑ (sum items 3 and 4 of the table below factor 1 that have the highest percentage that tilts the level of emotional exhaustion in burnout upwards, giving a high average).
- Personal accomplishment – 71.92%↑ (sum items 3 and 4 of the table below factor 2 that have the highest percentage that tilts the Level of Personal Achievement in burnout upwards, giving a high average).
- Depersonalization – 60.00%↓ (sum items 1 and 2 of the table below factor 3 that have the highest percentage that tilts the depersonalization level in burnout down, giving a low average).

Table 11. Correlation the factors Demography x COVID-19 with Burnout Syndrome

	YES						
Answer: I28	**n**	**%**					
Interviewed	**29**	**78.38**		**Media Factor 1**			
Gender			**1**	**2**	**3**	**4**	**5**
Man	10	34.48					
Woman	19	65.52					
Age			10,69	20,69	27,24	29,66	11,72
18 - 30	8	27.59					
31 - 40	13	44.83					
41 - 50	7	24.14					
51 - 60	1	3.45					
				Media Factor 2			
			2,96	15,27	35,96	35,96	9,85
Educational level							
High School	5	17.24					
Degree	17	58.62					
Master's Degree	7	24.14					

Doctorate	0	0		**Media Factor 3**			
			40,00	20,00	14,48	16,55	25,52
Marital status							
Single	19	65.52					
Married	7	24.14					
Divorced	3	10.34					
Children							
Yes	6	20.69					
No	23	79.31					

6.11 Synthesis

In a total of 37 interviewees, 30 answered: "YES," which totals 81.08% of the interviewees, and 7 answered "NO" totaling 18.92% of the interviewees, with a predominance of the female respondents in the "YES" factor responses and 71.11% against 28.89% of the men interviewed, with a mean age between 18-30 to 50 years old with a small increase between 31-40 with a mean of 38.33% of the interviewees, the level of education mostly have a degree, thus representing 51.11% of those who answered "YES", these are mostly single with a final average of 61.67% of the interviewees, so 72.78% of the interviewees do not have children. From this way, were identified that in view of the demographic factor - COVID-19 and represented mainly through women between 31-50 years of age with a degree in their level of education, single and without children.

After analysing each category separately and individually, for a better understanding of the findings of this research, Tables 12, 13 and 14 are presented, which represent the synthesis of the results achieved after the quantitative analysis of the data collected.

Table 12. Factor - 1 Emotional Exhaustion

	LEVEL 1		***LEVEL 2***		***LEVEL 3***		***LEVEL 4***		***LEVEL 5***		***TOTAL***	***TOTAL***
FACTOR 1	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	37	**%**
Gender												
Man	1.5	13.64%	2.6	23.64%	3.4	**30.91%**	3.1	28.18%	0.4	3.64%	11	29.73%
Woman	3.1	11.92%	5.9	22.69%	6.6	25.38%	7.4	**28.46%**	3	11.54%	26	70.27%
Age												
18 - 30	1.1	10.00%	3.2	29.09%	2.5	22.73%	3.6	**32.73%**	0.6	5.45%	11	29.73%
31 - 40	1.2	9.23%	3.1	23.85%	2.7	20.77%	4.8	**36.92%**	1.2	9.23%	13	35.14%
41 - 50	1.8	15.00%	2	16.67%	4.6	**38.33%**	2	16.67%	1.6	13.33%	12	32.43%
51 - 60	0.5	**50.00%**	0.2	20.00%	0.2	20.00%	0.1	10.00%	0	0.00%	1	2.70%
Educational level												
High School	1.4	17.50%	3.1	**38.75%**	0.9	11.25%	2.5	31.25%	0.1	1.25%	8	21.62%
Degree	2	10.53%	3.6	18.95%	6.3	**33.16%**	5.3	27.89%	1.8	9.47%	19	51.35%
Master's Degree	1.2	12.00%	1.8	18.00%	2.8	**28.00%**	2.7	27.00%	1.5	15.00%	10	27.03%
Doctorate	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Marital status												
Single	3	13.04%	5	21.74%	5	21.74%	7.8	**33.91%**	2.2	9.57%	23	62.16%
Married	0.9	8.18%	2.8	25.45%	4.2	**38.18%**	1.9	17.27%	1.2	10.91%	11	29.73%
Divorced	0.7	23.33%	0.7	23.33%	0.8	**26.67%**	0.8	**26.67%**	0	0.00%	3	8.11%
Children												
Yes	1.3	13.00%	2.7	27.00%	3.6	**36.00%**	1.9	19.00%	0.5	5.00%	10	27.03%
No	3.3	12.22%	5.8	21.48%	6.4	23.70%	8.6	**31.85%**	2.9	10.74%	27	72.97%

Table 13. Factor - 2 Personal Accomplishment

	LEVEL 1		*LEVEL 2*		*LEVEL 3*		*LEVEL 4*		*LEVEL 5*		*TOTAL*	*TOTAL*
FACTOR 2	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	37	**%**
Gender												
Man	0	0.00%	1.71	15.55%	3.43	31.18%	4.86	**44.18%**	1	9.09%	11	29.73%
Woman	0.86	3.31%	2.71	10.42%	7	26.92%	11	**42.31%**	4.43	17.04%	26	70.27%
Age												
18 - 30	0.14	1.27%	1.43	13.00%	3.14	28.55%	5.57	**50.64%**	0.71	6.45%	11	29.73%
31 - 40	0	0.00%	2	15.38%	4.29	33.00%	5	**38.46%**	1.71	13.15%	13	35.14%
41 - 50	0.57	4.75%	0.71	5.92%	2.86	23.83%	5.29	**44.08%**	2.57	21.42%	12	32.43%
51 - 60	0.14	14.00%	0.29	29.00%	0.14	14.00%	0	0.00%	0.43	**43.00%**	1	2.70%
Educational level												
High School	0.29	3.63%	0.43	5.38%	0.43	5.38%	5.29	**66.13%**	1.57	19.63%	8	21.62%
Degree	0	0.00%	2.71	14.26%	7.71	**40.58%**	6.43	33.84%	2.14	11.26%	19	51.35%
Master's Degree	0.57	5.70%	1.29	12.90%	2.29	22.90%	4.14	**41.40%**	1.71	17.10%	10	27.03%
Doctorate	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Marital status												
Single	0	0.00%	3.71	16.13%	6.86	29.83%	8.86	**38.52%**	3.57	15.52%	23	62.16%
Married	0.71	6.45%	0.43	3.91%	2.71	24.64%	5.86	**53.27%**	1.29	11.73%	11	29.73%
Divorced	0.14	4.67%	0.29	9.67%	0.86	28.67%	1.14	**38.00%**	0.57	19.00%	3	8.11%
Children												
Yes	0.71	7.10%	0.57	5.70%	1.86	18.60%	5.14	**51.40%**	1.71	17.10%	10	27.03%
No	0.14	0.52%	3.86	14.30%	8.57	31.74%	10.71	**39.67%**	3.71	13.74%	27	72.97%

Table 14. Factor - 3 Depersonalization

	LEVEL 1		*LEVEL 2*		*LEVEL 3*		*LEVEL 4*		*LEVEL 5*		*TOTAL*	*TOTAL*
FACTOR 3	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	37	**%**
Gender												
Man	4.8	**43.64%**	1.8	16.36%	2.2	20.00%	1.2	10.91%	1	9.09%	11	29.73%
Woman	10.8	**41.54%**	6.2	23.85%	2.4	9.23%	4.2	16.15%	2.4	9.23%	26	70.27%
Age												
18 - 30	4.2	**38.18%**	2.6	23.64%	1.4	12.73%	2.4	21.82%	0.4	3.64%	11	29.73%
31 - 40	5	**38.46%**	3	23.08%	1.8	13.85%	2.4	18.46%	0.8	6.15%	13	35.14%
41 - 50	5.8	**48.33%**	2.2	18.33%	1.4	11.67%	0.6	5.00%	2	16.67%	12	32.43%
51 - 60	0.6	60.00%	0.2	20.00%	0	0.00%	0	0.00%	0.2	20.00%	1	2.70%
Educational level												
High School	4	**50.00%**	2	25.00%	0.4	5.00%	0.8	10.00%	0.8	10.00%	8	21.62%
Degree	7.8	**41.05%**	3.6	18.95%	3.2	16.84%	3.2	16.84%	1.2	6.32%	19	51.35%
Master's Degree	3.8	**38.00%**	2.4	24.00%	1	10.00%	1.4	14.00%	1.4	14.00%	10	27.03%
Doctorate	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Marital status												
Single	8.6	**37.39%**	5.4	23.48%	3.2	13.91%	4.2	18.26%	1.6	6.96%	23	62.16%
Married	5.4	**49.09%**	1.8	16.36%	1.4	12.73%	0.8	7.27%	1.6	14.55%	11	29.73%
Divorced	1.6	**53.33%**	0.8	26.67%	0	0.00%	0.4	13.33%	0.2	6.67%	3	8.11%
Children												
Yes	4.4	**44.00%**	2.4	24.00%	1	10.00%	1	10.00%	1.2	12.00%	10	27.03%
No	11.2	**41.48%**	5.6	20.74%	3.6	13.33%	4.4	16.30%	2.2	8.15%	27	72.97%

Table 12 represents factor 1 Emotional exhaustion from burnout; here we see the correlation between demographics, COVID-19 and the Emotional Exhaustion Factor represented by questions 1, 2, 3, 6, 8, 11, 13, 14, 16 and 20 of the MBI in Likert scale distribution, in which the variables are between levels 3 and 4, where 3 (few) and 4 (many times), the questions presented refer to the health professional and their level of emotional exhaustion. In order to know the average, the sum of these levels is performed, making a cut-off score, obtaining the highest percentage in the cases that lead to the EE level, so that we can understand the variables in the adopted scale. Moderate level for the EE factor for the development of Burnout Syndrome.

Table 13 represents the Personal Achievement Factor 2 of burnout, in which there is a correlation between demography, COVID-19 and the Personal Achievement Factor represented by questions 7, 9, 12, 17, 18, 19 and 21 of the MBI in the Likert scale distribution , in which the variables are between levels 3 and 4 on the issues presented in relation to the health professional and their level of Personal Fulfilment. Finding a moderate level to the PA factor for the development of Burnout Syndrome.

Table 14 represents factor 3 Depersonalization of burnout, here, different from the two tables that represent the factors Emotional exhaustion and Personal fulfilment, the correlation between demographics, COVID-19 and the Depersonalization Factor represented by questions 4, 5, 10, 15 and 22 of the MBI, in distribution on the Likert scale, we see that the variables are concentrated in the means of level 1 (never). Thus, it appears that the level of depersonalization of respondents is very low or almost non-existent for this factor when correlated with the development of Burnout Syndrome.

7 Discussion

The correlations between the Demographic and Pandemic factors of COVID-19 referring to Burnout Syndrome presented in the present research lead us to understand that the level of Burnout is moderate according to factors 1 Emotional Exhaustion and 2 Personal Fulfilment, in which the levels were similar results among groups of healthcare professionals who were on the front lines fighting SARS-CoV-2. Although the level of factor 3 is depersonalized and higher when referring to the number of health professionals who were not reached by this level within the burnout syndrome, the level was considered mild in relation to factors 1 and 2, as verified.

The present research showed that in the group of 37 health professionals, the vast majority were women, with higher education, most aged between 31 and 50 years, single and without children, corroborating the findings of several studies on the sociodemographic profile of SB involvement by health professionals; revealing 30 of the respondents, representing 81.08% of the professionals who answered that "YES" if the COVID-19 pandemic had a great influence on the appearance of symptoms that led them to have a moderate level of Burnout Syndrome in emotional exhaustion factors (Gonsalez et al, 2017; Guido, Silva, Goulart, Bolzan & Lopes, 2012).

The emotional exhaustion factor can be considered as a health problem, emotional exhaustion by work and stress and on a large number of absenteeism, turnover, drop in productivity and various medical expenses. In such a way that the health professional and the company end up paying the high emotional cost. Initially, the effect occurs on the psychological health and, consequently, affecting their professional career. Many of these professionals are talented, committed, available, well-trained, but the consequence leads to absenteeism, low commitment to work, tendency to change organizations, increased conflicts between colleagues and bosses, directly interfering with interpersonal relationships (Daruvala et al, 2019).

The factor 2 Personal Fulfillment (PA) among health professionals means a dissatisfaction that the professional has with himself, with the way he is at work, in other words, he considers himself useless, considers the way he is working wrong, considering himself incompetent for the role assigned to them, and with a high rate of low self-esteem (Núñez, Ramiro & García, 2020).

The Depersonalization (PD) factor was considered mild, with a high average percentage for rare when the correlation of factors was mentioned in the present study. The PD is seen as a typical proportion of BS, it is a sin that differentiates this syndrome from stress. It is purposely revealed in a professional way to protect from the emotional charge derived from the continuous contact with the other, consequently, the "cold and inhuman" behavior is automatic in dealing with people when the professional is performing his/her function, creating a block for the problems and sufferings of others do not influence your life. The professional in burnout acts with cynicism, inflexibility, even disregarding the suffering of others (Miranda, 2022).

The present study reported “median” exhaustion among health professionals in general. In particular, EE and DP were highlighted in parallel in the cut-off scores for the Burnout Inventory (MBI), while PD was at high values but with low significance regarding what was in question. Thus, it is inferred the lack of knowledge of previous research results, which revealed to have scores around the normative means according to the MBI, presenting similar levels of burnout in health professionals (Weisgerber, 1954; Devereux, Hastings & Noone, 2009).

An explanation for these types of prescriptions is those health professionals when they are directly involved in the fight against COVID-19, especially in intensive care or emergency sectors, where they experience an intense feeling of the “meaning of their work”, such as this meaning responsibility has a substantial impact on their lives and directly on the lives of others, resulting in a heightened sense of responsibility and accountability (Maslach & Jackson, 1981).

A vital way to support them at work during the COVID-19 pandemic period is to take some measures, such as: providing personal protective equipment in quantity for correct handling, so that it is adequate, always offering the leader's support regarding the guidelines , monitor the well-being of professionals and their families, as this is also a relevant factor for professionals, periodically updating knowledge about COVID-19 as science advances and studies are published (IPEA, 2020; Esperidião, Saidel & Rodrigues, 2020).

Although some studies confirm that the excessive workload can generate the exhaustion of the health professional, thus an adequate distribution of functions and scale would ease the pressure at work. The absence of work support also overloads the professional; in short, clarification on burnout and training in stress management are effective ways to contribute to the well-being of health professionals, as is the creation of indicators to monitor the occurrence and prevent its incidence.

8 Conclusion

The objective of the study was achieved by investigating the correlation of demographic variables and SARS-CoV-2 pandemic on Burnout Syndrome in its three-dimensionality, which is composed of emotional exhaustion, low personal fulfillment and depersonalization among health professionals. The correlations acquired between the immensities of the emotional exhaustion and the demographic factor and the COVID-19 pandemic denote the importance of variables between health professionals and their agents in the occurrence of episodes directly linked to mental health at work that directly influence the well-being and quality of life, unbalancing the biopsychosocial aspects.

It is expected that this study will contribute to the development of Health Sciences in terms of awakening the interest of the Academy to carry out further research, create new instruments and tools to assess and classify risk factors and the propensity to development of Burnout Syndrome by health professionals, providing subsidies for planning and creation of health management strategies and policies, enabling a better quality of life at work, reducing errors, absences and high turnover within health units and, for on the other hand, consequently, it directly influences the quality of care provided at the bedside.

This study provides the health professional with a better and greater understanding of the Burnout Syndrome and its three dimensions, allowing them to be more attentive to themselves, their signs and symptoms, as well as their co-workers.

Health professionals deserve a more in-depth look at their needs in the work environment to ensure their livelihood without illness, but support with quality of life and well-being, for that, in addition to human and material resource management policies, is essential. It is necessary to invest in permanent education in order to train and train employees as much as possible to be prepared for a possible new increase in cases of infected with SARS-CoV-2, as well as those infected with the new variant of smallpox.

It is essential that leaders begin to look at mental health not as a service that the health unit provides to society, but as part of the company's duty to take care of the mental health of its employees, as well as to create classification and monitoring indicators for intervention and prevention of aggravation of cases.

The limitations for the present study consist of the small sample of participants for data collection, considering that the research was carried out in a long-stay institution for small elderly people, with less than 100 health professionals; the fact that the research was carried out in only one institution, which directly influenced the findings, as, generally, people from the same professional class and working in the same position at the same institution have similar demographic characteristics; and the low adherence of the institution's professionals to participate in the research, considering that of the 75 professionals, only 37 participated, totaling less than half (49.3%).

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