

## Síndrome de burnout en médicos y personal de enfermería Hospital Básico de Limones – Ecuador

*Burnout syndrome in doctors and nursing staff Basic Hospital of Limones – Ecuador*

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**Palabras claves:**

Síndrome de Burnout, Estrés laboral, Cansancio emocional, Despersonalización, Realización personal

**Resumen**

**Introducción.** El síndrome de Burnout es un padecimiento ocupacional producido como respuesta a presiones prolongadas que una persona sufre ante factores estresantes emocionales e interpersonales relacionados directamente con el trabajo y que afecta de manera especial al personal de salud por las implicaciones propias de la profesión como son largas jornadas de trabajo, presiones organizacionales, convivencia con el sufrimiento y la muerte y entre otros. **Objetivo:** el propósito del presente estudio es evaluar la presencia del Síndrome de Burnout en médicos y personal de enfermería del Hospital Básico de Limones- Ecuador. **Metodología.** Mediante la aplicación del cuestionario de Maslach Burnout Inventory (MBI). Para esto se identifica el estudio cualitativo, descriptivo, transversal que incluyó a 33 profesionales de la salud (18 de enfermería y 15 médicos) de emergencia, hospitalización y quirófano a quienes se les aplicó un cuestionario de datos sociodemográficos y características laborales y el Maslach Burnout Inventory (MBI). **Resultados.** Los resultados que proporciona el estudio es que el cansancio emocional fue predominantemente bajo (45,8%), la despersonalización fue baja en el 37,5% y alta en el 33,3%, la realización personal fue baja en el 70,8%. **Conclusión.** En conclusión, el síndrome de burnout estuvo presente en los profesionales de la salud sobre todo en aquellos de género femenino, edad 31-40 años, estado civil soltero- divorciado, personal sin hijos, ser médico, tener contrato ocasional, menor experiencia laboral y mayor cantidad de carga laboral (horas de trabajo). **Área de estudio general:** Medicina ocupacional. **Área de estudio específica:** Salud ocupacional. **Tipo de estudio:** Artículo original

**Keywords:**

Burnout, Work stress, Emotional exhaustion, Depersonalization, Personal fulfillment

**Abstract**

**Introduction.** Burnout syndrome is an occupational condition produced as a response to prolonged pressures that a person suffers from emotional and interpersonal stressors directly related to work and that especially affects health personnel due to the implications of the profession, such as long working hours, organizational pressures, coexistence with suffering and death, among others. **objective.** The purpose of this study is to

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evaluate the presence of Burnout Syndrome in physicians and nursing personnel of the Basic Hospital of Limones, Ecuador. Methodology. Through the application of the Maslach Burnout Inventory (MBI) questionnaire. For this purpose, a qualitative-quantitative, descriptive, cross-sectional study was identified, which included 33 health professionals (18 nurses and 15 physicians) from the emergency, hospitalization, and operating rooms to whom a questionnaire of sociodemographic data and work characteristics and the Maslach Burnout Inventory (MBI) were applied. Results. The results provided by the study are that emotional exhaustion was predominantly low (45.8%), depersonalization was low in 37.5% and high in 33.3%, personal fulfillment was low in 70.8%. Conclusion. In conclusion, burnout syndrome was present in health professionals especially in those of female gender, age 31-40 years, marital status single-divorced, staff without children, being a physician

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## Introduction

Burnout syndrome, also known as burnout syndrome, is a health disorder that tends to appear when compensatory mechanisms for adaptation to work situations with sustained stress are broken (1). This term was first described by Freudenberg in 1971, but it gained greater value until Maslach defined its bases in 1982: personal fatigue, depersonalization and low personal achievement that follows the presentation of work stress for a prolonged period of time (2).

Currently, the World Health Organization officially includes burnout syndrome in the eleventh edition of its International Classification of Diseases Manual (ICD-11) in its chapter 24, which concerns the factors that influence health status as an occupational burnout syndrome (3).

Burnout causes a biological activation that is accompanied by unpleasant emotions (anxiety, sadness, irritation) and physiological modifications of the adaptive subsystems (automatic and neuroendocrine activation and immune and behavioral inhibition) that decreases the capacity to maintain homeostasis (4).

The characteristic symptoms are lack of motivation or enthusiasm for work, physical and mental exhaustion that does not improve with rest, poor work performance, absenteeism, turnover, abandonment, feelings of frustration and discontent, in addition to physical symptoms such as insomnia, gastrointestinal disorders, tachycardia, high blood pressure, headache and others (5, 6).

Based on the above, it was necessary to address the Burnout syndrome in medical and nursing staff given that health workers are exposed to work overload, high emotional demands, excessive effort and reduced rewards, as well as conditions of job insecurity (lack of supplies, medications, beds, personnel, institutional conditions, etc.) (7).

Furthermore, the work environment in hospital institutions exposes professionals to greater occupational risks due to being subjected to intense work rhythms, coexistence with suffering and death, high patient demand, shift work, conflicts in interpersonal relationships and low recognition and professional devaluation (8).

This syndrome is recognized as a significant factor at the work level because it directly harms the performance of workers, affects mental health and increases the probability of generating unsafe situations that may compromise the physical integrity of the person who suffers from it (9). In addition, it should be noted that burnout in health professionals also harms the care provided to patients and family members in the different healthcare services at a time when humanization in care is not an option but a priority (10).

Hence, interest in the study of this syndrome has increased significantly in recent years and the need to make diagnoses with the aim of achieving greater biopsychosocial well-being in healthcare workers is increasingly recognized (11).

Burnout has been addressed in several investigations where its high prevalence is demonstrated. In the study by Alqahtani et al (12) of transversal methodology carried out in hospitals of the public system of the cities of Abha and Khamis Mushait in Saudi Arabia, in which 95 doctors and 187 nurses participated and to whom the Maslach Inventory was applied, it was found that 87% presented high emotional exhaustion, 20.6% high depersonalization and 41.1% low personal accomplishment, the overall prevalence of burnout was 16.3%.

An African study developed by Ben (13), with cross-sectional methodology, which included 149 participants from hospitals located in the governorates of Tunisia and who were administered the Maslach inventory, reported that 17.14% presented severe burnout, resident physicians in the emergency area presented higher rates of emotional exhaustion and depersonalization, which was associated with poor working conditions ( $p = 0.031$ ), poor workplace conditions ( $p = 0.046$ ), relationship problems in the workplace ( $p = 0.001$ ) and labor conflicts ( $p = 0.001$ ).

Similarly, in an observational, descriptive, cross-sectional study developed by Rendón et al. (14), in a population of 90 Mexican nurses through the application of the Maslach inventory, it was found that burnout syndrome was present in 82.2% at a medium level, high emotional exhaustion in 18.9%, high depersonalization in 21.1% and low personal accomplishment in 40%. Burnout was correlated with work shift ( $p=0.001$ ), double shift per month ( $p=0.007$ ), vacation periods per year ( $p=0.046$ ) and workload ( $p=0.001$ ).

In turn, in the research of Alvarez et al. (15), in which the prevalence of burnout was evaluated through the Maslach inventory in a sample of 241 nurses and physicians from public health institutions in São Luis- Brazil, a prevalence of this syndrome of 0.41% was found, those over 35 years of age were less likely to develop emotional exhaustion ( $OR=32$ ) and depersonalization ( $OR=0.06$ ), long working hours were associated with low personal accomplishment ( $OR=1.13$ ).

In the Ecuadorian research developed by Vinueza et al. (16), with a cross-sectional observational methodology in which 224 doctors and nurses from establishments of the Ecuadorian comprehensive health network participated, to whom the Maslach Burnout Inventory was applied, it was found that more than 90% of the medical and nursing staff presented burnout in a moderate-severe state and this was related to age and sex, in addition to the fact that medical staff was affected more frequently than nursing staff, both globally and in the subscales of emotional exhaustion and depersonalization.

In this sense, it was considered important to delve deeper into Burnout in health professionals, since understanding this syndrome would serve as a basis for finding strategies to prevent it. Based on the above, the main objective of the research was to evaluate the presence of Burnout Syndrome in doctors and nursing staff at the Basic Hospital of Limones- Ecuador, by applying the Maslach Burnout Inventory (MBI) questionnaire.

## Methodology

### Type of study

This is a qualitative-quantitative, descriptive and cross-sectional study, focused on Burnout Syndrome in doctors and nursing staff at the Limones Basic Hospital - Ecuador during the period January-June 2023.

### Population and selection criteria

The population was made up of all doctors and nursing staff from the Basic Hospital of Limones - Ecuador.

The selection criteria considered for the study were:

**Inclusion criteria:** Doctors and nurses from the emergency, hospitalization and operating room areas who are actively working at the healthcare level, who have worked at the institution for at least 1 year and who have signed the informed consent.

**Exclusion criteria:** staff from other areas who have provided contradictory or non-objective information or who have not answered the instruments within the pre-established period.

Once the inclusion and exclusion criteria were applied, the sample consisted of 33 medical and nursing professionals.

### Techniques

The following techniques were used to gather information:

1. Sociodemographic data and work characteristics questionnaire: information was collected regarding sex, age, marital status, presence of children, occupation, employment status, years of service and hours worked per month.
2. Maslach Burnout Inventory (MBI): questionnaire consisting of 22 items scored from 0 to 6 points that measure three dimensions of the Burnout syndrome: emotional exhaustion consisting of 9 items, depersonalization with 5 items and personal accomplishment with 8 items.

The cut-off points used were for emotional exhaustion: low <19, moderate between 19-26 and high >26. For depersonalization: low <6, moderate 6-9 and high >9. For personal accomplishment: low >39, moderate 39-34, high <34 (17).

### Procedure and ethical considerations

For the development of the research, contact was made with the health institution to present the topic, objectives, and explain the implications of the research to the institutional director. Subsequently, an authorization letter was sent to formalize the intervention, which was accompanied by the informed consent and the data collection instruments. Once the approval of the health institution was received, dates and times were coordinated for the collection of information. The instruments were sent to the participants virtually by email to avoid interrupting their activities.

### Results

1. Sociodemographic and employment information Relevant results are highlighted without repeating information.

**Table 1.** Sociodemographic information

Indicators/sex	Frequency	Percentage
Female	20	60.6%
Male	13	39.4%
Age	Frequency	Percentage
21 and 30	7	20.8%
31-41	15	45.8%
41-50	8	25.0%
> 51	3	8.3%
Marital status	Frequency	Percentage
Single	14	41.7%
Married	12	37.5%
Divorced	4	12.5%
Free union	3	8.3%
Presence of children	Frequency	Percentage
Yeah	19	58.3%
No	14	41.7%
<b>TOTAL</b>	<b>33</b>	<b>100%</b>

Source: Application of collection instruments

As can be seen in Table 1, the highest proportion of health personnel participating in the study were female 60.6% (n=20) and to a lesser extent male 39.4% (n=13). The predominant age was between 31 and 41 years 45.8% (n=15), followed by 41 to 50 years 25% (n=8), 21 to 30 years 20.8% (n=7) and only 8.3% were older than 51 years (n=3). Regarding marital status, there was a higher prevalence of singles 41.7% (n=14) and married 37.5% (n=12) over divorced 12.5% (n=4) and in free union 8.3% (n=3). And the majority 58.3% (n=19) of the staff have children, while 41.7% (n=14) do not.

**Table 2.** Employment information

Indicators Occupation	Frequency	Percentage
Doctor	15	45.5%
Nursing	18	54.5%
Employment status	Frequency	Percentage
Appointment	21	62.5%

Temporary contract	12	37.5%
<b>Years of service</b>		
1-5 years	17	51.5%
6-10 years	10	30.3%
11-15 years	5	15.2%
> 15	1	3%
<b>Working hours/month</b>	<b>Frequency</b>	<b>Percentage</b>
120 hours	1	4.2%
160 hours	29	87.5%
Greater than 160 hours	3	8.3%
<b>TOTAL</b>	<b>33</b>	<b>100%</b>

Source: Application of collection instruments

As can be seen in Table 2, 54.5% (n= 18) correspond to nursing staff, while 45.5% (n= 15) have a temporary contract. The employment status of the majority of healthcare staff 62.5% (n=21) is under low appointment and 37.5% (n=12) is under temporary contract. Regarding years of service, 51.5% (n=17) is between 1-5 years, 30.3% (n=10) between 6-10 years, 15.2% (n=5) between 11-15 years and 3% (n=1) is over 15 years. Finally, regarding monthly working hours, the largest proportion of staff work 160 hours (87.5% (n=29), 8.3% (n=3) work more than 160 hours, while 4.2% (n=1) work 120 hours.

## 2. Burnout Syndrome

**Table 3.** Burnout Syndrome in its dimensions

Dimensions	Low		Moderate		High	
	F	%	F	%	F	%
Emotional exhaustion	15	45.8%	8	25%	10	29.2%
Depersonalization	12	37.5%	10	29.2%	11	33.3%
Personal fulfillment	23	70.8%	4	12.5%	6	16.7%

Note: Application of collection instruments

As can be seen in Table 3, of the 33 participating professionals, 45.8% (n=15) of the health personnel have low emotional exhaustion, however, it can be seen that 29.2% (n=10) are at a high level and 25% (n=8) are at a moderate level.

Regarding depersonalization, a significant group of health professionals is observed at a low level 37.5% (n=12), but also 33.3% (n=11) at a high level and 29.2% (n=10) at a moderate level.

Finally, the personal achievement of the professionals was affected, since in the majority (70.3% (n=23) it was low, while in 16.7% (n=6) it was high and in 12.5% (n=4) it was moderate.

3. Demographic and work variables with Burnout dimensions

**Table 4:**Demographic and work variables with Burnout dimensions

Dimensions	Emotional exhaustion			Depersonalization			Personal fulfillment			
	Low	Mod.	High	Low	Mod.	High	Low	Mod.	High	
Sex	Man	20.8%	12.5%	4.2%	12.5%	12.5%	12.5%	29.2%	4.2%	4.2%
	Women	25.0%	12.5%	25.0%	25.0%	16.7%	20.8%	41.7%	8.3%	12.5%
Age	21-30 years	12.5%	0.0%	8.3%	12.5%	0.0%	8.3%	16.7%	0.0%	20.8%
	31-40 years	12.5%	20.8%	12.5%	12.5%	12.5%	20.8%	29.2%	12.5%	4.2%
	41-50 years	12.5%	4.2%	8.3%	8.3%	12.5%	4.2%	16.7%	0.0%	8.3%
Marital status	>51 years	8.3%	0.0%	0.0%	4.2%	4.2%	0.0%	8.3%	0.0%	0.0%
	Single	16.7%	12.5%	12.5%	12.5%	12.5%	16.7%	33.3%	0.0%	8.3%
	Married	20.8%	12.5%	4.2%	16.7%	12.5%	8.3%	20.8%	8.3%	8.3%
Contract	Divorced	4.2%	0.0%	8.3%	4.2%	4.2%	4.2%	12.5%	0.0%	12.5%
	Free union	4.2%	0.0%	4.2%	4.2%	0.0%	4.2%	4.2%	4.2%	0.0%
	Yeah	33.3%	8.3%	16.7%	25.0%	25.05	8.3%	37.5%	8.3%	12.5%
Post	No	12.5%	16.7%	12.5%	12.5%	4.2%	25.0%	33.3%	4.2%	4.2%
	Doctor	16.5%	16.7%	16.7%	12.5%	20.8%	16.7%	37.5%	4.2%	8.3%
Contract	Nursing	29.2%	8.3%	12.5%	25.0%	8.3%	16.7%	33.3%	8.3%	8.3%
	Appointment	29.2%	20.8%	12.5%	20.8%	25.0%	16.7%	45.8%	8.3%	8.3%
Experience	Occasional	16.7%	4.2%	16.7%	16.7%	4.2%	16.7%	25.0%	4.2%	8.3%
	1-5 years	20.8%	12.5%	16.7%	20.8%	8, 3%	20.8%	37.5%	4.2%	8.3%
	6-10 years	12.5%	8.3%	8.3%	12.5%	8.3%	8.3%	20.8%	8.3%	0.0%
	11-15 years	8.3%	4.2%	4.2%	0.0%	12.5%	4.2%	8.3%	0.0%	8.3%
Hours per month	>15 years	4.2%	0.0%	0.0%	4.2%	0.0%	0.0%	4.2%	0.0%	0.0%
	120 hours	4.2%	0.0%	0.0%	4.2%	0.0%	0.0%	0.0%	4.2%	0.0%
	160 hours	41.7%	20.8%	25.0%	33.3%	29.2%	25.0%	62.5%	8.3%	16.7% %
	>160 hours	0.0%	4.2%	4.2%	0.0%	0.0%	8.3%	8.3%	0.0%	0.0%

Source: Application of collection instruments

As can be seen in Table 4, the health professionals participating in the study are affected by burnout syndrome, especially women who present higher levels of emotional

exhaustion and depersonalization, as well as low personal fulfillment. Regarding age, greater affectation was observed between 31-40 years. In the single or divorced marital status, greater affectation was observed in contrast to those married or in a free union. The presence of children was indicative of less emotional exhaustion and depersonalization compared to those who do not have children.

As for the occupational variables, a greater impact was observed in medical staff, both in terms of emotional exhaustion and depersonalization, compared to nursing staff. Temporary contracts led to greater emotional exhaustion and depersonalization compared to appointments. Less work experience showed more emotional exhaustion and depersonalization, as well as low personal fulfillment and working longer hours (160 or more) also had a greater impact.

### Discussion

The results found show that health professionals present professional burnout since when analyzing each of the Burnout dimensions, an affectation was found. In the first dimension that corresponds to emotional exhaustion, no significant damage was observed since the majority, that is, 45.8% of health professionals were located at a low level, results that agree with those reported in a study developed in Peru at the San José University Hospital in Popayán by Muñoz et al. (18), where 55% of health personnel presented a low level of emotional exhaustion, which is positive because it shows that despite the fact that health personnel experience emotional overload in the performance of their duties due to daily and sustained contact with patients, there has not yet been a decrease or deficiency in emotional resources.

In the depersonalization dimension, a considerable impact was observed in 33.3% of health personnel who were placed at a high level, which denotes that a large part of the professionals participating in the current study already present a negative response to their tasks, obligations and interaction with the environment that could be perceived as apathy, indifference and even a dehumanized attitude in patient care. However, these results contrast with those observed in an Ecuadorian study developed in the public sector by Vergara & Moreno (7), where it was found that the highest proportion of professionals were located in the medium (48.5%) and low (45.5%) scale.

The third dimension of Burnout showed the greatest impact, since 70.3% of the professionals presented low personal accomplishment, which is worrying because it shows the impact of work stress on the perception of work accomplishment, work self-evaluation and feeling of success. This result is consistent with that found in the Mexican study developed by Cobos et al. (19), with a sample of 46 healthcare professionals where 53% presented low personal accomplishment.

The results presented allow us to assume that Burnout Syndrome is present in the sample of professionals that was analyzed, especially in the dimension of depersonalization and lack of personal fulfillment, which shows that work stress is affecting the physical and psychological health, well-being and productivity of health personnel.

As part of the study, it was found that Burnout is related to certain demographic and work variables. Regarding gender, a greater impact was observed in terms of emotional exhaustion, depersonalization, as well as low personal achievement. These results are conclusive with those found in the Spanish study developed around Burnout in medical and nursing professionals by García et al. (20), where women were the most affected compared to men (60.7% vs 47.2%), this could be due to the fact that culturally women fulfill more roles both at a professional level and at home. But there is a discrepancy regarding age, since in the present study the greatest impact was seen between 31-40 years, while according to García et al. (20), at an age greater than 50 years, assuming that the older the age, the greater the impact.

Regarding marital status, being single or divorced was indicative of greater affectation in contrast to those married or in a free union. This result is supported by a Paraguayan study developed by Vittale et al. (21), where single marital status or the lack of a stable home was considered a risk factor for Burnout (OR=2.6) due to the lack of emotional support that the filial bond supposes. Finally, the presence of children was indicative of less emotional exhaustion and depersonalization compared to those who do not have them, where medium and high levels were observed in these dimensions. This, in the words of Sifuentes (22), is due to the fact that having a child provides emotional support and allows for better problem solving, therefore, it constitutes a protective factor against Burnout.

The work environment also showed an impact on the presence of Burnout in health professionals. A greater impact was observed in medical personnel, both in terms of emotional exhaustion and depersonalization, compared to nursing personnel. This result is consistent with that reported in an Ecuadorian study developed by Vinueza et al. (16), where physicians presented 5.17 points more than nursing personnel in emotional exhaustion and 2.11 more in depersonalization. Similarly, in a Mexican study developed by García et al. (23), a greater impact of Burnout was found in physicians than in nursing personnel, especially in terms of depersonalization, where the average was 68.72 in physicians and 54.35 in nurses, where higher levels of coldness, distance and instability towards patients were recognized.

The type of contract also influenced the presence of Burnout, since having a temporary contract showed higher levels of emotional exhaustion and depersonalization compared to a permanent contract. These results are related to those observed in the study by Párraga et al. (24), in which professionals without a permanent contract (interim/eventual) showed greater affectation compared to permanent ones (24.0 vs 21.8). Similarly, Rendón et al.

(14) found that substitute staff presented greater emotional exhaustion than permanent staff, however, there is a discrepancy regarding the lack of personal fulfillment observed in those with a permanent contract.

Less work experience showed more emotional exhaustion and depersonalization, as well as low personal fulfillment. This result is supported by that presented by Jurado et al. (25), where it is stated that inexperience or fewer years of professional practice generate greater professional burnout due to uncertainty about the future and the stress generated by facing the health and emotional problems of patients at the beginning of the professional career. Similarly, in the study by Saavedra et al. (26), it was found that having one and a half years of work experience was associated with emotional exhaustion and depersonalization ( $p=0.002$ ), this is because young personnel have lower problem-solving skills and resilience, which leads to greater frustration and job burnout compared to personnel with more years of experience who have greater expertise to cope with the work demand.

Finally, in the current study it was found that working for more than 8 hours a day, that is, more than 160 hours a month, also caused a greater impact. This result is conclusive to that observed in an Ecuadorian study developed by Cerón (27), in Guayaquil in both public and private health institutions, which shows that working for more than 12 hours a day leads to greater emotional fatigue, depersonalization and lack of personal fulfillment compared to those who work for 8 or less hours a day.

### Conclusions

- Through the study, it was concluded that health professionals are affected by Burnout, especially in the depersonalization dimension where 33.3% presented a high level and 70.8% a lack of personal fulfillment, which suggests a significant impact, especially at an emotional level, and which could be perceived by patients, coworkers or superiors as a negative attitude towards their tasks and obligations.
- There are personal variables (age, gender, marital status, children) as well as work-related variables (position, type of contract, experience and workload) that influence health professionals to present alterations such as physical exhaustion, depersonalization or low personal fulfillment because they precipitate states of stress that are difficult to cope with on a daily basis both at an occupational and personal level.
- This study is a contribution to the understanding of burnout syndrome in health professionals. However, further research is considered necessary to determine how this syndrome behaves with reference to the sociodemographic and work variables analyzed and others not considered in this research work and, based on

the findings, establish strategies aimed at generating organizational changes to improve working conditions and prevent professional risks in a timely manner.

#### **Conflict of interest**

The authors declare that there is no conflict of interest.

#### **Authors' contribution statement**

Author 1: Data processing, writing and synthesis of the manuscript

Author 2: Application of statistical analysis, review and final validation of the manuscript

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