

## Burnout syndrome in psychiatric and emergency nurses: Association with organizational climate and coping with stress

Síndrome de Burnout en enfermeras psiquiátricas y de urgencias:  
Asociación con el clima organizacional y el afrontamiento del estrés

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### Abstract

Nurses are among the professionals most likely to present Burnout Syndrome (BS), characterized by low personal accomplishment, high depersonalization, and high emotional exhaustion. Although the relationship between BS and coping with stress has been documented, less is known about the role of organizational characteristics. This study aimed to assess burnout syndrome in psychiatric and emergency nurses in Mexico and examine its associations with coping strategies and organizational climate. An exploratory, cross-sectional, correlational study was conducted with 168 nurses working in a psychiatric hospital and two emergency rooms in central Mexico. Participants completed a self-administered questionnaire including the Maslach Burnout Inventory (MBI), the Organizational Climate Questionnaire (OCQ), and the Coping with Stress Questionnaire (CSQ). Multiple linear regression analyses were performed separately for each hospital type, using MBI dimensions as dependent variables and OCQ and CSQ dimensions

as independent variables. BS was present in 3.0% of nurses, with no differences between psychiatric and emergency settings. The prevalence of emotional exhaustion, depersonalization, and low personal accomplishment was 16.2%, 16.2%, and 18.0%, respectively. In psychiatric nurses, positive reappraisal predicted higher personal accomplishment and better workplace climate was associated with lower emotional exhaustion. In emergency nurses, negative self-focus predicted lower personal accomplishment, while problem-solving predicted higher personal accomplishment; additionally, lower hierarchical interaction and higher workplace tension were linked to greater emotional exhaustion, and better workplace climate predicted lower depersonalization and higher personal accomplishment. These findings highlight opportunities to develop preventive programs aimed at fostering healthy workplace environments for nursing professionals.

**Keywords:** Burnout syndrome, nursing, workplace, organizational climate, coping strategies.

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## Resumen

Las enfermeras se encuentran entre las profesionales con mayor probabilidad de presentar Síndrome de Burnout (SB), caracterizado por baja realización personal, alta despersonalización y alto agotamiento emocional. Aunque se ha documentado la relación entre el SB y el afrontamiento del estrés, se conoce menos sobre el papel de las características organizacionales. Este estudio tuvo como objetivo evaluar el SB en enfermeras de hospitales psiquiátricos y servicios de urgencias en México y examinar sus asociaciones con estrategias de afrontamiento y clima organizacional. Se realizó un estudio exploratorio, transversal y correlacional con 168 enfermeras que laboraban en un hospital psiquiátrico y dos servicios de urgencias en el centro de México. Las participantes respondieron un cuestionario autoadministrado que incluyó el Maslach Burnout Inventory (MBI), el Cuestionario de Clima Organizacional (CCO) y el Cuestionario de Afrontamiento del Estrés (CAE). Se realizaron análisis de regresión lineal múltiple por tipo de hospital, utilizando las dimensiones del MBI como variables dependientes y las del CCO y CAE como

variables independientes. El SB estuvo presente en el 3.0% de las enfermeras, sin diferencias entre entornos psiquiátricos y de urgencias. La prevalencia de agotamiento emocional, despersonalización y baja realización personal fue de 16.2%, 16.2% y 18.0%, respectivamente. En enfermeras psiquiátricas, la reevaluación positiva predijo mayor realización personal y un mejor clima laboral se asoció con menor agotamiento emocional. En enfermeras de urgencias, la focalización negativa predijo menor realización personal, mientras que la resolución de problemas predijo mayor realización personal; adicionalmente, una menor interacción jerárquica y mayor tensión laboral se vincularon con mayor agotamiento emocional, y un mejor clima laboral predijo menor despersonalización y mayor realización personal. Estos hallazgos destacan oportunidades para desarrollar programas preventivos orientados a promover entornos laborales saludables para el personal de enfermería.

**Palabras clave:** Síndrome de Burnout, enfermería, lugar de trabajo, clima organizacional, estrategias de afrontamiento.

## Introduction

Nurses are among the professions most exposed to stress in the workplace, since their work involves a high degree of personal commitment, as well as an intense and direct interaction with the people they serve (Cañadas-de la Fuente *et al.*, 2014; Gil-Monte, 2003; Manzano-García, 2007; Quesada-Puga *et al.*, 2024; Rincón, 2005). For this reason, if they do not have adequate strategies for coping with workplace stress, they can experience mental health problems (Lee *et al.*, 2016; Muñoz & Velásquez, 2016; Servian *et al.*, 2019).

Burnout syndrome (BS) is one important consequence of workplace stress, defined as a response to a chronic situation of workplace stress, occurring primarily in professions focused on caring for the needs or interests of clients, with direct contact with those clients (Gil-Monte & Peiró, 1996). BS has also been defined as a prolonged psychological state at work, with three dimensions: Emotional Exhaustion (EE), Depersonalization (D), and Personal Accomplishment (PA) (Maslach & Jackson, 1982; Maslach *et al.*, 2001). It is frequently found in nurses, and studies have found it to be associated with a lack of social recognition, working under pressure, lack of autonomy, conflict within working groups continual contact with suffering, and the constant demands of patients and family (Molina *et al.*, 2022; Sánchez-Jiménez *et al.*, 2018; Van Bogaert *et al.*, 2017).

Burnout among nurses is a public health concern because its consequences extend beyond individual well-being to the safety and performance of health systems. Higher burnout has been linked to increased clinical errors, lower patient satisfaction, absenteeism, turnover, and reduced productivity (Jun *et al.*, 2021; Mossburg & Himmelfarb, 2021). Prolonged exhaustion and depersonalization are also associated with mental and physical health problems among healthcare personnel, amplifying societal and system costs (Orrù *et al.*, 2021). Framing nurse burnout as a public health issue underscores the need to understand both individual coping and organizational factors that may be modifiable in real-world settings.

International research has identified several factors associated with BS in healthcare professionals. Individual factors include personality type (Geuens *et al.*, 2015) and demographic characteristics. Workplace factors include work overload, lack of social support, and poor communication (Adriaenssens, De Gucht, & Maes, 2015; Lee, Chiang, & Kuo, 2019; Van Bogaert *et al.*, 2017). Other predictors of BS in health providers are lack of emotional support, workload, and perception of a lack of resources (Albendín *et al.*, 2016; Meredith *et al.*, 2022; Wontorczyk *et al.*, 2023). Evidence also suggests that nurses working in high-demand settings, such as emergency rooms, mental health services, and intensive care units are more affected by BS (Adriaenssens *et al.*, 2015; Ahmadi *et al.*, 2014; Albendín *et al.*, 2016). These studies highlight the relevance of both organizational factors and individual coping strategies associated with BS.

Organizational climate, defined by Robbins and Judge (2009) as the personality of an organization, is comparable to organizational culture, since it allows for the strengthening of traditions, values, customs, and practices that are accepted within an organization. A healthy organizational climate is essential not only for workers' health, but also for enhancing productivity, motivation, work ethic, job satisfaction, and overall quality of life (OMS, 2010). In many developed countries, nursing practice is associated with dissatisfaction at work, low productivity, low quality of care, and uncertainty in patient care (in the administration of medication and the taking of vital signs, for example), and also with BS (Leiter & Maslach, 2009; Shirey, 2006).

Coping strategies also play a key role. Folkman and Lazarus (1980; Lazarus & Folkman, 1984) distinguish between direct coping (action aimed at the external source of stress) and indirect coping (palliative action aimed at managing one's own emotions). Active strategies, such as control, confrontation, or seeking information or social support, are generally more effective than emotional or avoidance strategies (Adriaenssens, De Gucht & Maes, 2015; Corrales *et al.*, 2012; Rendón-Montoya *et al.*, 2020).

The theoretical model developed by Winnubst (1993) for health care workers integrates these factors. It posits that organizational structure, culture, and climate, as well as the availability of social support, are precursors to BS. In this model, a system of social support at work significantly improves a worker's perception of the organizational structure (Gil-Monte, 2001; Leiter & Schaufeli, 1996; Martínez, 2010).

In Mexico, studies have found that 17.4% of nurses in Mexico City have a high level of EE, 1.1% a high degree of D, and 4.9% a low level of PA (Sánchez-Jiménez *et al.*, 2018). However, studies carried out in the northern border indicate that the prevalence of average BS reaches 65% and affects more women than men (Acosta-Ramos *et al.*, 2021).

Studies of nursing professionals in Mexico have described demographic variables, including age, sex, marital status, partner status, and employment variables such as work shift, length of employment, double shifts, break time allowed, and type of contract (Juárez *et al.*, 2014; Rendón Montoya *et al.*, 2020). These variables show important associations with each dimension of BS, although some studies, such as Martínez-López and López-Solache (2005) use different approaches to its evaluation. A systematic review identified that studies of BS in Mexico use different cutoffs and scoring criteria (Juárez *et al.*, 2014), making comparisons difficult. Some research has even reported no cases meeting BS criteria (Castillo-Barrera *et al.*, 2016). In contrast, Corrales *et al.* (2012) found higher BS scores in health care staff in a level 3 hospital than in a referral hospital, and observed that active coping strategies such as control, confrontation, or the search for information or social support reduce burnout symptoms. This variability in findings underscores the need for more consistent evidence on the manifestations of BS among nurses in Mexico.

The aim of this study was to explore BS among nursing professionals working in psychiatric hospitals and hospital emergency rooms in Mexico by comparing their sociodemographic and workplace characteristics, and identifying the prevalence and distribution of BS symptoms. Furthermore, it sought to analyze the associations of coping strategies and organizational climate dimensions with each BS component through multiple regression analyses. It was hypothesized that nurses meeting the criteria for BS would be more likely to employ ineffective coping strategies and perceive their work environment less favorably.

## Method

A cross-sectional, correlational study was carried out with nursing professionals who worked at a psychiatric hospital and in two hospital emergency rooms in central Mexico.

### Participants

A non-probabilistic convenience sample of 168 nursing professionals was recruited, 89 who worked in a psychiatric hospital in Mexico City and 79 who worked in two hospital emergency rooms in the neighboring state of Hidalgo. The sample size ( $n = 168$ ) corresponded to the total nursing staff available and eligible in the participating hospitals during the data collection period, in accordance with previously defined inclusion (active nursing staff) and exclusion criteria. The exclusion criteria were being in a temporary or substitute position, being on vacation, or having administrative responsibilities. The non-response rate was 9.35% from the psychiatric hospital and 23% from the hospital emergency rooms.

## Instruments

The questionnaire included a section for demographic data, length of employment, and number of patients cared for each day. It also included the following three scales for the variables of interest.

- *Maslach Burnout Inventory Human Services Survey* (MBI) (Maslach & Jackson, 1982). The MBI is a widely used self-administered inventory designed to assess work-related attitudes and emotional responses among professionals in human services. It includes 22 items, distributed across three subscales: 1) Emotional Exhaustion (EE) evaluates the feeling of being emotionally overextended and depleted by work demands, 2) Depersonalization (D) assesses an impersonal and unfeeling attitude toward the recipients of professional care, and 3) Personal Accomplishment (PA) measures the sense of competence and successful achievement in working with people. Items are rated on a 7-point Likert scale ranging from 0 (never) to 6 (every day). This study used the Spanish version validated for Mexican health professionals (Juárez, Idrovo & Camacho, 2014; Meda-Lara *et al.*, 2008), with internal consistency coefficients of  $\alpha = .86$  for EE,  $\alpha = .60$  for D, and  $\alpha = .75$  for PA.
- *Coping with Stress Questionnaire* (CSQ) (Sandin & Chorot, 2003). The CSQ assesses seven basic coping styles: Problem Solving (PS)  $\alpha = .69$ , which refers to active and structured efforts to resolve stressful situations; Negative Self-Focus (NSF)  $\alpha = .62$ , which involves self-blame and feelings of helplessness; Positive Reappraisal (PR)  $\alpha = .54$ , characterized by finding positive meaning or growth in adversity; Overt Emotional Expression (OEE)  $\alpha = .65$ , reflecting outward expressions of negative emotions; Avoidance (A)  $\alpha = .67$ , defined as attempts to distract oneself or disengage from the problem; Seeking Social Support (SS)  $\alpha = .76$ , which includes turning to others for advice or emotional support; and Religion (R)  $\alpha = .77$ , involving the use of faith or spiritual practices to cope. The 21-item short version validated by González-Ramírez and Landero-Hernández (2007) was used in the present study and showed good internal consistency ( $\alpha = .83$ ).
- *Organizational Climate Questionnaire* (OCQ) (Caraveo *et al.*, 1988). The OCQ is a self-report instrument based on the organizational diagnosis model of French and Bell (1996). It consists of 36 items ( $\alpha = .88$ ) that assess individual perceptions about workplace climate, using a 4-point Likert scale (1 = complete disagreement to 4 = total agreement). The items are grouped into six subscales: 1) motivation (M, 11 items,  $\alpha = .79$ ), which evaluates perceptions of personal drive; 2) hierarchical interaction (HI, 7 items,  $\alpha = .86$ ), assessing the quality of communication and relations between employees and superiors; 3) workplace tension (WT, 8 items,  $\alpha = .52$ ), which captures the presence of conflict, stress, or emotional strain in the work environment; 4) workplace climate (WC, 4 items,  $\alpha = .78$ ), reflecting the overall atmosphere of trust, support, and collaboration; 5) group

interactions (GI, 3 items,  $\alpha = .76$ ), examining the quality of relationships and cooperation among peers; and 6) image of the institution (II, 3 items,  $\alpha = .42$ ) referring to how employees perceive the organization's public reputation and internal coherence. Although the internal consistency of the image of the institution subscale was low, this dimension was retained in the analyses. Its exclusion would have reduced comparability with previous studies using the same version of the instrument; therefore, all OCQ dimensions were included.

## Procedure

Data were collected. In the psychiatric hospital, the questionnaires were administered in a group, with the assistance of the head of nursing and the shift supervisor, with whom a date, time, and place were arranged. Participants were gathered in a meeting room, and informed of the study objectives, the confidentiality of the data, and the risks and benefits. The average time for completing the questionnaire was 30 minutes. The emergency nurses were given the questionnaire individually when they had time to complete it.

## Statistical analyses

Descriptive statistics were calculated for sociodemographic and workplace variables. Differences between psychiatric and emergency nurses in categorical variables were assessed using chi-square ( $X^2$ ) tests, while differences in continuous variables were examined with Mann–Whitney U tests, as the data did not have a normal distribution. Burnout syndrome (BS) levels were determined according to the established cut-off points for each of the three Maslach Burnout Inventory (MBI) subscales (EE, P and PA), and the distribution of the number of BS symptoms was compared between hospital types using chi-square tests. Median scores for BS subscales, coping strategies, and organizational climate dimensions were compared between groups using Mann–Whitney U tests. To examine associations between coping strategies and BS dimensions, and between organizational climate dimensions and BS dimensions, multiple linear regression analyses were conducted separately for each nursing specialty, using the introduction method and entering each set of predictors simultaneously. All analyses were performed using SPSS version 21, with a significance level set at  $p < .05$ .

## Ethical considerations

The Research Ethics Committees of each of the participating hospitals reviewed and approved the research protocol. Participants were told of the purpose of the study, were informed that their participation was voluntary, and provided written informed consent. To safeguard the confidentiality of the information provided, questionnaires were identified only with an alphanumeric code.

## Results

### Demographic and Workplace Characteristics

Women represented 73.8% of the total sample. Of all participants, 52.9% worked in the psychiatric hospital and 47.1% in hospital emergency rooms (Table 1). Among psychiatric nurses, 41.6% were aged 40-50 years, while emergency nurses were significantly younger: 82.3% aged 18-39. Consistent with these age differences, 46.1% of the psychiatric nurses reported 16-25 years of employment, compared to 46.8% of emergency nurses who reported 2-5 years reported. Regarding educational level, 37% of psychiatric nurses held a bachelor's degree or higher, compared to 49.4% of the emergency nurses. Workload also differed: 84% of psychiatric nurses reported caring for an average of 8-15 patients per shift, whereas 57% of emergency nurses reported caring for 1-7 patients (Table 1).

*Table 1*  
*Sociodemographic Characteristics of the Participants*

| Variables           | Psychiatric Nurses<br>(n = 89) |      | Emergency Nurses<br>(n = 79) |      | Total<br>(n = 168) |      |
|---------------------|--------------------------------|------|------------------------------|------|--------------------|------|
|                     | F                              | %    | f                            | %    | f                  | %    |
| Sex                 |                                |      |                              |      |                    |      |
| Male                | 24                             | 27.0 | 20                           | 25.3 | 44                 | 26.2 |
| Female              | 65                             | 73.0 | 59                           | 74.7 | 124                | 73.8 |
| Age (years)         |                                |      |                              |      |                    |      |
| 18-28               | 16                             | 18.0 | 33                           | 41.8 | 49                 | 29.2 |
| 29-39               | 31                             | 34.8 | 32                           | 40.5 | 63                 | 37.5 |
| 40-50               | 37                             | 41.6 | 11                           | 13.9 | 48                 | 28.6 |
| 51-60               | 5                              | 5.6  | 3                            | 3.8  | 8                  | 4.8  |
| Children            |                                |      |                              |      |                    |      |
| Yes                 | 80                             | 89.9 | 62                           | 78.5 | 142                | 84.5 |
| No                  | 9                              | 10.1 | 17                           | 21.5 | 26                 | 15.5 |
| Marital Status      |                                |      |                              |      |                    |      |
| Single              | 23                             | 25.8 | 42                           | 53.2 | 65                 | 38.7 |
| Married             | 39                             | 43.8 | 23                           | 29.1 | 62                 | 36.9 |
| Partnered           | 20                             | 22.5 | 9                            | 11.4 | 29                 | 17.3 |
| Divorced or Widowed | 7                              | 7.8  | 5                            | 6.3  | 12                 | 7.2  |
| Shift               |                                |      |                              |      |                    |      |

|                              |    |      |     |      |     |      |
|------------------------------|----|------|-----|------|-----|------|
| Morning                      | 16 | 18.0 | 20  | 25.3 | 36  | 21.4 |
| Afternoon                    | 15 | 16.9 | 12  | 15.2 | 27  | 16.1 |
| Night                        | 28 | 31.5 | 26  | 32.9 | 54  | 32.1 |
| Special                      | 30 | 33.7 | 21  | 26.6 | 51  | 30.4 |
| Length of Employment (years) |    |      |     |      |     |      |
| 2-5                          | 10 | 11.2 | 37  | 46.8 | 47  | 28.0 |
| 6-15                         | 30 | 33.7 | 20  | 25.3 | 50  | 29.8 |
| 16-25                        | 41 | 46.1 | 14  | 17.7 | 55  | 32.7 |
| 26-35                        | 5  | 5.6  | 8   | 10.1 | 13  | 7.7  |
| 36-45                        | 3  | 3.4  | 0   | 0.0  | 3   | 1.8  |
| Other Employment             |    |      |     |      |     |      |
| Yes                          | 8  | 9.1  | 29  | 36.7 | 37  | 22.0 |
| No                           | 81 | 90.9 | 50  | 63.3 | 131 | 78.0 |
| Patients per Shift           |    |      |     |      |     |      |
| 1-7                          | 3  | 3.4  | 45  | 57.0 | 48  | 28.7 |
| 8-15                         | 75 | 84.3 | 20  | 25.3 | 95  | 56.3 |
| 15-22                        | 2  | 2.2  | 5   | 6.3  | 7   | 4.2  |
| 23 or more                   | 9  | 10.1 | 9   | 11.4 | 18  | 10.8 |
| Position                     |    |      |     |      |     |      |
| Chief of Service             | 1  | 1.1  | 4   | 5.1  | 5   | 3.0  |
| Specialist                   | 10 | 11.2 | 6   | 7.6  | 16  | 9.6  |
| General Nurse                | 37 | 41.6 | 34  | 43.0 | 71  | 41.9 |
| Nursing Assistant            | 39 | 43.8 | 35  | 44.3 | 74  | 44.3 |
| Other                        | 2  | 2.2  | 0.0 | 0.0  | 2   | 1.2  |
| Educational Level            |    |      |     |      |     |      |
| Doctorate                    | 1  | 1.1  | 0   | 0.0  | 1   | 0.6  |
| Master's Degree              | 5  | 5.6  | 3   | 3.8  | 8   | 4.8  |
| Bachelor's Degree            | 27 | 30.3 | 36  | 45.6 | 63  | 37.7 |
| High School                  | 23 | 25.8 | 29  | 36.7 | 52  | 30.5 |
| Technical School             | 33 | 37.2 | 11  | 13.9 | 44  | 26.3 |

## Burnout Syndrome Evaluation by type of Hospital

Burnout syndrome (BS) was assessed using the established cut-off points proposed by Maslach and Jackson (1986) for the three subscales. Overall, 16.2% of participants scored high in EE, 16.2% in D, and 18.0% had low PA (Table 2). No statistically significant differences were observed between psychiatric (EE: 15.9%; D: 17.0%; PA: 21.6%) and emergency nurses (EE: 16.5%; D: 15.2%; PA: 13.9%) in any of the BS dimensions.

When considering the combination of symptoms, 63.1% of the sample showed no BS symptoms, 26.8% presented one symptom, 7.1% had two symptoms, and 3.0% met the criteria for BS (high EE and D with low PA). The distribution of the number of symptoms did not differ significantly between hospital types.

*Table 2*

*Burnout Syndrome by Type of Hospital*

|                                     | Psychiatric<br>( <i>n</i> = 89) |      | Emergency<br>( <i>n</i> = 79) |      | Total<br>( <i>n</i> = 168) |      | Statistical test                   |
|-------------------------------------|---------------------------------|------|-------------------------------|------|----------------------------|------|------------------------------------|
|                                     | <i>n</i>                        | %    | <i>n</i>                      | %    | <i>n</i>                   | %    |                                    |
| Emotional Exhaustion (EE)           | 14                              | 15.9 | 13                            | 16.5 | 27                         | 16.2 | $\chi^2 = 0.000, df = 1, p = 1.00$ |
| Depersonalization (D)               | 15                              | 17.0 | 12                            | 15.2 | 27                         | 16.2 | $\chi^2 = 0.013, df = 1, p = .90$  |
| Low Personal Accomplishment<br>(PA) | 19                              | 21.6 | 11                            | 13.9 | 30                         | 18.0 | $\chi^2 = 1.141, df = 1, p = .285$ |
| No BS symptoms                      | 54                              | 60.7 | 52                            | 65.8 | 106                        | 63.1 |                                    |
| One symptom                         | 24                              | 27.0 | 21                            | 26.6 | 45                         | 26.8 |                                    |
| Two symptoms                        | 9                               | 10.1 | 3                             | 3.8  | 12                         | 7.1  | $\chi^2 = 0.844, df = 3, p = .837$ |
| Three symptoms                      | 2                               | 2.2  | 3                             | 3.8  | 5                          | 3.0  |                                    |

## Comparison of Burnout, Coping Strategies, and Organizational Climate by type of Hospital

A comparison of BS, coping strategies, and organizational climate scores between psychiatric and emergency nurses revealed no significant differences in emotional exhaustion, depersonalization, or personal accomplishment. Similarly, most coping strategy scores did not differ significantly between groups. However, psychiatric nurses scored significantly higher in overt emotional expression (OEE;  $U = 2438.5, p = .026$ ), indicating a greater tendency to outwardly express negative emotions.

Regarding organizational climate, psychiatric nurses reported significantly higher levels of motivation (M;  $U = 2529.0$ ,  $p = .002$ ) and workplace tension ( $U = 1952.5$ ,  $p = .027$ ), whereas emergency nurses reported significantly higher scores in hierarchical interaction (HI;  $U = 2442.0$ ,  $p = .001$ ) and perceived institutional image ( $U = 2838.5$ ,  $p = .039$ ). No significant differences were found in the remaining coping or organizational climate subscales (Table 3).

**Table 3**

*BS, Coping Strategies, and Organizational Climate scores, by Type of Hospital*

|                                     | Psychiatric<br>Hospital<br>( $n = 89$ )<br>Mdn (Range) | Hospital<br>EmergencyRooms<br>( $n = 79$ )<br>Mdn (Range) | Statistical<br>test |      |
|-------------------------------------|--|---|---------------------|------|
|                                     |  |   | U                   | p    |
| <b>Burnout Syndrome</b>             |  |   |                     |      |
| Emotional Exhaustion (EE)           | 8.00(48)   | 8.00(31)  | 3422.0              | .862 |
| Depersonalization (D)               | 2.00(17)   | 2.00(12)  | 3169.0              | .316 |
| Low Personal Accomplishment<br>(PA) | 41.00(40)  | 42.00(38)   | 3289.5              | .549 |
| <b>Coping</b>                       |  |   |                     |      |
| Problem Solving (PS)                | 21.00(22)  | 21.00(24)   | 2977.5              | .744 |
| Negative Self-focus (NSF)           | 12.00(18)  | 11.00(16)   | 2768.5              | .288 |
| Positive Reappraisal (PR)           | 20.00(22)  | 19.00(24)   | 3018.0              | .854 |
| Over Emotional Expression (OEE)     | 11.00(17)  | 10.00(16)   | 2438.5              | .026 |
| Avoidance (A)                       | 16.00(21)  | 15.00(21)   | 3062.5              | .978 |
| Seeking Social Support (SS)         | 18.00(24)  | 17.00(24)   | 2850.5              | .439 |
| Religion (R)                        | 12.00(24)  | 14.00(22)   | 2788.5              | .322 |
| <b>Organizational Climate</b>       |  |   |                     |      |
| Motivation (M)                      | 37.50(25)  | 35.00(31)   | 2529.0              | .002 |
| Hierarchical Interaction (HI)       | 21.00(21)  | 22.00(19)   | 2442.0              | .001 |
| Workplace Tension (WT)              | 21.00(17)  | 19.00(17)   | 1952.5              | .027 |
| Workplace Climate (WC)              | 14.00(10)  | 15.00(11)   | 3043.0              | .157 |
| Group Interactions (GI)             | 10.00(9)   | 11.00(9)  | 3025.0              | .138 |
| Image of the Institution (II)       | 8.00(9)  | 9.00(7)   | 2838.5              | .039 |

### Association between Coping Strategies and Burnout Dimensions

Multiple linear regression analyses were conducted separately for psychiatric and emergency nurses to examine whether coping strategies predicted Emotional Exhaustion (EE), Depersonalization (D), and Personal Accomplishment (PA) (Table 4).

For both specialties, no coping strategy significantly predicted EE. Among psychiatric nurses, D was positively predicted by negative self-focus (NSF;  $\beta = 0.291$ ,  $t = 2.042$ ,  $p = .044$ ); however, the overall model was not statistically significant ( $F = 1.327$ ,  $df = 7$ ,  $R^2 = .104$ ,  $p = .248$ ). For emergency nurses, religion was positively associated with D ( $R$ ;  $\beta = 0.304$ ,  $t = 2.068$ ,  $p = .043$ ), although the overall model was likewise not significant ( $F = 1.609$ ,  $df = 7$ ,  $R^2 = .156$ ,  $p = .150$ ).

Regarding PA, psychiatric nurses scored higher when using positive reappraisal (PR;  $\beta = 0.367$ ,  $t = 2.657$ ,  $p = .010$ ), which explained 23% of variance ( $F = 3.422$ ,  $df = 7$ ,  $R^2 = .233$ ,  $p = .003$ ). Among emergency nurses, PA was negatively predicted negative self-focus (NSF;  $\beta = -0.333$ ,  $t = -2.369$ ,  $p = .021$ ) and positively predicted by problem solving (PS;  $\beta = 0.378$ ,  $t = 2.438$ ,  $p = .018$ ), jointly explaining 42% of the variance ( $F = 6.137$ ,  $df = 7$ ,  $R^2 = .417$ ,  $p < .001$ ).

### Association between Coping Strategies and Burnout Dimensions

Multiple linear regression analyses were conducted separately for psychiatric and emergency nurses to examine whether dimensions of organizational climate predicted EE, D, PA.

For psychiatric nurses, EE was negatively predicted by workplace climate (WC;  $\beta = -0.407$ ,  $t = -2.039$ ,  $p = .046$ ), explaining 24.7% of the variance ( $F = 3.006$ ,  $df = 6$ ,  $R^2 = .247$ ,  $p = .013$ ), indicating that a more favorable perception of the workplace climate was associated with lower EE.

For emergency nurses, EE was negatively predicted by hierarchical interaction (HI;  $\beta = -0.455$ ,  $t = -2.208$ ,  $p = .030$ ) suggesting that poorer communication, lack of collaboration, or unsatisfactory treatment from supervisors was associated with higher EE. EE was also positively predicted by workplace tension (WT;  $\beta = 0.249$ ,  $t = 2.178$ ,  $p = .033$ ), meaning that perceptions of interpersonal conflict, bureaucratic obstacles, and unsafe working conditions were linked to greater EE. Together, these predictors explained 19.9% of the variance ( $F = 2.980$ ,  $df = 6$ ,  $R^2 = .199$ ,  $p = .012$ ).

Regarding D, no significant predictors emerged for psychiatric nurses. In emergency nurses, D was positively predicted by HI ( $\beta = 0.536$ ,  $t = 2.656$ ,  $p = .010$ ), indicating that poor supervisor relationships were associated with greater depersonalization; and negatively predicted by WC ( $\beta = -0.557$ ,  $t = -3.080$ ,  $p = .003$ ), suggesting that a better workplace climate was linked to lower depersonalization. This model explained 23.1% of the variance ( $F = 3.615$ ,  $df = 6$ ,  $R^2 = .231$ ,  $p = .003$ ).

For PA, the model was significant only for emergency nurses, where WC was a positive predictor ( $\beta = 0.594$ ,  $t = 3.632$ ,  $p = .001$ ), indicating that a favorable perception of workplace climate was associated with higher personal accomplishment. This model explained 37.4% of the variance ( $F = 7.083$ ,  $df = 6$ ,  $R^2 = .374$ ,  $p < .001$ ).

Table 4. Association of Strategies for Coping with Stress and Burnout Syndrome, by Nursing Specialty

| Dependent Variable    | Psychiatric Hospital<br>(n = 89) 88 |        |      |        |        |                |      | Hospital Emergency Rooms<br>(n = 79) 69 |        |        |      |        |                |          |      |      |
|-----------------------|-------------------------------------|--------|------|--------|--------|----------------|------|---|--------|--------|------|--------|----------------|----------|------|------|
|                       | β                                   | t      | p    | CI     | F(df)  | R <sup>2</sup> | p    | β                                       | t      | p      | CI   | F(df)  | R <sup>2</sup> | p        |      |      |
| Independent Variables |                                     |        |      |        |        |                |      |   |        |        |      |        |                |          |      |      |
| Constant              |                                     | 0.887  | .378 | -5.881 | 15.334 | 567.965(7)     | .090 | .355                                    |        | 3.478  | .001 | 5.176  | 19.182         | 2.059(7) | .191 | .062 |
| NSF                   | 0.010                               | 0.071  | .943 | -0.580 | 0.623  |                |      |   | 0.257  | 1.537  | .129 | -0.129 | 0.990          |          |      |      |
| PR                    | -0.143                              | -0.956 | .342 | -0.806 | 0.283  |                |      |   | -0.130 | -0.604 | .548 | -0.747 | 0.401          |          |      |      |
| OEE                   | 0.256                               | 1.615  | .110 | -0.148 | 1.420  |                |      |   | 0.004  | 0.025  | .980 | -0.643 | 0.659          |          |      |      |
| A                     | 0.080                               | 0.608  | .545 | -0.344 | 0.646  |                |      |   | -0.041 | -0.232 | .817 | -0.539 | 0.427          |          |      |      |
| SS                    | 0.095                               | 0.606  | .546 | -0.342 | 0.641  |                |      |   | 0.254  | 1.589  | .117 | -0.074 | 0.648          |          |      |      |
| R                     | -0.163                              | -1.315 | .192 | -0.659 | 0.135  |                |      |   | -0.038 | -0.265 | .792 | -0.374 | 0.286          |          |      |      |
| PS                    | 0.026                               | 0.179  | .858 | -0.465 | 0.557  |                |      |   | -0.354 | -1.959 | .055 | -0.829 | 0.009          |          |      |      |
| D                     | β                                   | t      | p    | CI     | F(df)  | R <sup>2</sup> | p    | β                                       | t      | p      | CI   | F(df)  | R <sup>2</sup> | p        |      |      |
| Constant              |                                     | 0.362  | .718 | -3.632 | 5.250  | 1.327(7)       | .104 | .248                                    |        | 4.222  | .000 | 3.786  | 10.600         | 1.609(7) | .156 | .150 |
| NSF                   | 0.291                               | 2.042  | .044 | 0.007  | 0.511  |                |      |   | -0.205 | -1.199 | .235 | -0.436 | 0.109          |          |      |      |
| PR                    | -0.227                              | -1.531 | .130 | -0.403 | 0.053  |                |      |   | -0.137 | -0.624 | .535 | -0.366 | 0.192          |          |      |      |
| OEE                   | -0.080                              | -0.509 | .612 | -0.412 | 0.244  |                |      |   | -0.001 | -0.005 | .996 | -0.317 | 0.316          |          |      |      |
| A                     | -0.010                              | -0.077 | .939 | -0.215 | 0.199  |                |      |   | -0.162 | -0.887 | .379 | -0.339 | 0.131          |          |      |      |
| SS                    | 0.278                               | 1.788  | .078 | -0.021 | 0.390  |                |      |   | 0.139  | 0.851  | .398 | -0.101 | 0.250          |          |      |      |
| R                     | -0.028                              | -0.225 | .823 | -0.185 | 0.147  |                |      |   | 0.304  | 2.068  | .043 | 0.006  | 0.327          |          |      |      |
| PS                    | 0.039                               | 0.274  | .785 | -0.184 | 0.243  |                |      |   | -0.186 | -1.00  | .317 | -0.306 | 0.101          |          |      |      |

| PA (+)          | $\beta$ | <i>t</i> | <i>p</i> | CI     | <i>F(df)</i> | <i>R</i> <sup>2</sup> | <i>p</i> | $\beta$ | <i>t</i> | <i>p</i> | CI    | <i>F(df)</i> | <i>R</i> <sup>2</sup> | <i>p</i> |       |
|-----------------|---------|----------|----------|--------|--------------|-----------------------|----------|---------|----------|----------|-------|--------------|-----------------------|----------|-------|
| <i>Constant</i> |         | 6.407    | .000     | 22.743 | 43.245       | 3.422(7)              | .233     | .003    | 5.577    | .000     | 14.61 | 30.968       | 6.137(7)              | .417     | <.001 |
|                 |         |          |          |        |              |                       |          |         |          |          |       |              |                       |          | 8     |
| NSF             | -0.257  | -1.944   | .055     | -1.150 | 0.014        |                       |          |         | -0.333   | -2.369   | .021  | -1.429       | -0.121                |          |       |
| PR              | 0.367   | 2.657    | .010     | 0.176  | 1.231        |                       |          |         | 0.318    | 1.729    | .089  | -0.090       | 1.238                 |          |       |
| OEE             | -0.111  | -0.752   | .454     | -1.050 | 0.474        |                       |          |         | 0.059    | 0.416    | .679  | -0.596       | 0.909                 |          |       |
| A               | 0.136   | 1.103    | .273     | -0.217 | 0.755        |                       |          |         | 0.082    | 0.539    | .592  | -0.410       | 0.713                 |          |       |
| SS              | -0.079  | -0.541   | .590     | -0.627 | 0.359        |                       |          |         | 0.015    | 0.112    | .911  | -0.395       | 0.442                 |          |       |
| R               | -0.042  | -0.366   | .715     | -0.455 | 0.314        |                       |          |         | -0.124   | -1.017   | .313  | -0.579       | 0.189                 |          |       |
| PS              | 0.012   | 0.091    | .928     | -0.471 | 0.516        |                       |          |         | 0.378    | 2.438    | .018  | 0.106        | 1.075                 |          |       |

Note: Multiple linear regression using the introduction method to predict Emotional Exhaustion (EE), Depersonalization (D), and Personal Accomplishment (PA+). Negative self-focus (NSF), Positive Reappraisal (PR), Overt Emotional Expression (OEE), Avoidance (A), Seeking Social Support (SS), Religion (R) y Problem Solving (PS).

Table 5. Association of Organizational Climate and Burnout Syndrome, by Nursing Specialty

| Dependent Variable   | Psychiatric Hospital (n = 87) |         |       |        |        |                |                |      | Dependent Variable   | Hospital Emergency Rooms (n = 79) |         |       |        |                |          |                |      |      |
|----------------------|-------------------------------|---------|-------|--------|--------|----------------|----------------|------|----------------------|-----------------------------------|---------|-------|--------|----------------|----------|----------------|------|------|
|                      | EE                            | $\beta$ | t     | p      | CI     | F(df)          | R <sup>2</sup> | p    |                      | EE                                | $\beta$ | t     | p      | CI             | F(df)    | R <sup>2</sup> | p    |      |
| Independent Variable |                               |         |       |        |        |                |                |      | Independent Variable |                                   |         |       |        |                |          |                |      |      |
| Constant             |                               |         | 2.913 | .005   | 7.859  | 42.506         | 3.006(6)       | .247 | .013                 | Constant                          |         | 2.639 | .010   | 3.365          | 24.142   | 2.980(6)       | .199 | .012 |
| M                    | 0.220                         | 1.211   | .231  | -0.232 | 0.942  |                |                |      | M                    | 0.020                             | 0.112   | .911  | -0.370 | 0.414          |          |                |      |      |
| HI                   | 0.142                         | 0.939   | .352  | -0.232 | 0.640  |                |                |      | HI                   | -0.455                            | -2.208  | .030  | -1.357 | -0.069         |          |                |      |      |
| WT                   | 0.054                         | 0.417   | .678  | -0.409 | 0.624  |                |                |      | WT                   | 0.249                             | 2.178   | .033  | 0.040  | 0.912          |          |                |      |      |
| WC                   | -0.407                        | -2.039  | .046  | -2.882 | -0.025 |                |                |      | WC                   | 0.041                             | 0.221   | .826  | -0.891 | 1.113          |          |                |      |      |
| GI                   | -0.250                        | -1.347  | .184  | -2.500 | 0.490  |                |                |      | GI                   | -0.096                            | -0.464  | .644  | -1.636 | 1.018          |          |                |      |      |
| II                   | -0.176                        | -1.275  | .208  | -1.447 | 0.322  |                |                |      | II                   | 0.105                             | 0.799   | .427  | -0.560 | 1.309          |          |                |      |      |
| D                    | $\beta$                       | t       | p     | CI     | F(df)  | R <sup>2</sup> | p              | D    | $\beta$              | t                                 | p       | CI    | F(df)  | R <sup>2</sup> | p        |                |      |      |
| Constant             |                               | 3.069   | .003  | 5.206  | 24.791 | 2.103(6)       | .187           | 0.68 | Constant             |                                   | 3.620   | .001  | 3.973  | 13.713         | 3.615(6) | .231           | .003 |      |
| M                    | -0.129                        | -0.683  | .498  | -0.445 | 0.219  |                |                |      | M                    | -0.181                            | -1.027  | .308  | -0.278 | 0.089          |          |                |      |      |
| HI                   | 0.115                         | 0.733   | .467  | -0.156 | 0.337  |                |                |      | HI                   | 0.536                             | 2.656   | .010  | 0.100  | 0.704          |          |                |      |      |
| WT                   | -0.031                        | -0.229  | .820  | -0.325 | 0.259  |                |                |      | WT                   | -0.026                            | -0.234  | .816  | -0.228 | 0.180          |          |                |      |      |
| WC                   | -0.414                        | -1.995  | .051  | -1.611 | 0.004  |                |                |      | WC                   | -0.557                            | -3.080  | .003  | -1.195 | -0.256         |          |                |      |      |
| GI                   | 0.008                         | 0.043   | .966  | -0.827 | 0.863  |                |                |      | GI                   | -0.158                            | -0.778  | .439  | -0.865 | 0.379          |          |                |      |      |
| II                   | 0.158                         | 1.096   | .278  | -0.227 | 0.773  |                |                |      | II                   | 0.119                             | 0.930   | .356  | -0.234 | 0.642          |          |                |      |      |

| PA (+)          | $\beta$ | <i>t</i> | <i>p</i> | CI      | <i>F(df)</i> | <i>R</i> <sup>2</sup> | <i>p</i> | PA (+)          | $\beta$ | <i>t</i> | <i>p</i> | CI     | <i>F(df)</i> | <i>R</i> <sup>2</sup> | <i>p</i> |       |
|-----------------|---------|----------|----------|---------|--------------|-----------------------|----------|-----------------|---------|----------|----------|--------|--------------|-----------------------|----------|-------|
| <i>Constant</i> |         | -0.345   | .731     | -22.811 | 16.103       | 4.538(6)              | .331     | <i>Constant</i> |         | 0.768    | .445     | -7.495 | 16.883       | 7.083(6)              | .374     | <.001 |
| M               | 0.327   | 1.907    | .062     | -0.032  | 1.287        |                       |          | M               | -0.024  | -0.148   | .883     | -0.494 | 0.426        |                       |          |       |
| HI              | -0.152  | -1.064   | .292     | -0.750  | 0.230        |                       |          | HI              | -0.061  | -0.333   | .740     | -0.881 | 0.629        |                       |          |       |
| WT              | 0.129   | 1.060    | .294     | -0.273  | 0.887        |                       |          | WT              | 0.065   | 0.643    | .522     | -0.346 | 0.676        |                       |          |       |
| WC              | 0.305   | 1.619    | .111     | -0.308  | 2.901        |                       |          | WC              | 0.594   | 3.632    | .001     | 0.964  | 3.313        |                       |          |       |
| GI              | -0.090  | -0.515   | .609     | -2.110  | 1.248        |                       |          | GI              | 0.022   | 0.118    | .907     | -1.463 | 1.647        |                       |          |       |
| II              | 0.123   | 0.942    | .350     | -0.526  | 1.460        |                       |          | II              | 0.087   | 0.750    | .456     | -0.686 | 1.514        |                       |          |       |

Note: Multiple linear regression using the introduction method to predict Emotional Exhaustion (EE), Depersonalization (D), and Personal Accomplishment (PA+), Motivation (M), Hierarchical Interaction (HI), Workplace Tension (WT), Workplace Climate (WC), Group Interactions (GI) Image of the Institution (II).

## Discussion

The objective of this study was to analyze the relationship between coping strategies, organizational climate, and BS among nursing staff working in a psychiatric hospital in Mexico City and in two hospital emergency rooms in the state of Hidalgo.

The Maslach Burnout Inventory (MBI) was used to evaluate BS symptomatology. This instrument has shown adequate characteristics in other studies (Corrales *et al.*, 2012; Martínez-López & López-Solache, 2005; Ramirez-Baena *et al.*, 2019). In the present study, none of the participants met the three MBI cutoffs proposed by its creators ( $EE \geq 27$ ,  $D \geq 10$ , and  $PA \leq 33$ ) (Maslach & Jackson, 1982). This may reflect the need to determine different cutoff scores for the Mexican population (Castillo-Barrera *et al.*, 2016; Juárez-García *et al.*, 2014), as suggested by another study that also found no participants meeting the full criteria (Geuens *et al.*, 2020). Therefore, in this study, high scores for each dimension were defined as the mean plus one standard deviation. Using this criterion, 3% of the participants met all three criteria, with no significant differences between psychiatric and emergency nurses. This contrasts with findings from other studies summarized by Albendín *et al.* (2016), which have reported higher levels of BS among emergency nurses.

For the overall sample, regression analyses showed that two coping strategies were the strongest predictors of BS: Negative self-focus, which increased BS symptoms, and positive reappraisal, which reduced them. When analyzing each specialty separately, psychiatric nurses with NSF reported greater depersonalization (10% explained variance), whereas those who used more PR reported greater PA (23% explained variance). Among emergency nurses, NSF predicted lower PA, while PS predicted greater personal accomplishment. The latter model had the highest explained variance (42%). These findings are consistent with previous studies in healthcare personnel showing the protective role of active coping strategies (Corrales *et al.*, 2012). Overall, the results underscore the need to train nursing personnel in coping strategies, such as PR and PS, and to discourage passive strategies like NSF, which increase D and reduce PA.

Regarding the organizational climate, in the overall sample, a better workplace climate was an essential predictor for reducing BS. In the specialty-specific models, psychiatric nurses who perceived a better workplace climate reported lower EE, though no associations with D or PA were observed. In emergency nurses, lower HI and higher WT were linked to greater EE, while a better WC predicted both lower D (23% explained variance) and greater PA (37% explained variance). Although the reliability of the image of the institution dimension was low, it was retained to preserve comparability with previous studies using the same instrument version, which should be considered when interpreting these results. These patterns suggest that targeted improvements in specific aspects of the work environment may help mitigate BS.

The present findings highlight two main preventive avenues: (1) promoting proactive coping strategies, and (2) improving the organizational climate, through actions such as clarifying team goals and responsibilities, reducing workplace tension, and ensuring adequate workload distribution and rest periods. Similar conclusions have been reported in previous research (Adriaenssens, De Gucht, & Mae, 2015; Muñoz-Seco *et al.*, 2006; Van Bogaert *et al.*, 2017).

## Strengths and limitations

### Strengths

The study identifies risk factors for BS among nurses and suggests areas for preventive programs that can help to promote healthier workplace environments. It emphasizes continuous preventive measures across multiple workplace dimensions, including leadership training to improve the workplace climate, reduction of workplace tension, optimal workload distribution, and rest time allocation. It supports the development of self-care practices (break times, vacations, healthy eating and sleep habits) and aggression self-regulation strategies to reduce patient-provider conflicts.

### Limitations

The main limitation is the sample size, as some invited participants declined due to time constraints. This limits the generalization of the results. The verification of univariate and multivariate normality, as well as the calculation of skewness, kurtosis, and the Shapiro–Wilk test for the evaluated subscales, was not performed due to the exploratory nature of the study and the available sample size. We acknowledge that including these analyses would have added methodological rigor, and we recommend their incorporation in future studies with larger samples. The regression models did not include sociodemographic variables. Although descriptive comparisons by demographic and workplace characteristics were conducted, their absence from the regression models means that potential confounding or moderating effects could not be assessed.

### Future research should

Increase the number of participants to allow more complex analyses of variable interactions. Evaluate the suitability for the Mexican population of the cutoff scores recommended by the creators of the MBI, given the discrepancies between different studies, as well as that of the depersonalization subscale (Adriaenssens *et al.*, 2015; Cañadas-de la Fuente *et al.*, 2014; Falgueras *et al.*, 2015; Juárez, Idrovo & Camacho, 2014; Merino-Soto & Calderón-De la Cruz, 2018). Include sociodemographic and workplace characteristics in regression models to identify their role in BS development. Given that BS develops over time, future longitudinal studies should examine the long-term effects of training in active coping strategies, self-care, and workplace improvements on the prevention and reduction of BS symptoms.

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None

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

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## References

- Adriaenssens, J., De Gucht, V., & Maes, S. (2015). Determinants and prevalence of burnout in emergency nurses: a systematic review of 25 years of research. *International journal of nursing studies*, 52(2), 649-661. <https://doi.org/10.1016/j.ijnurstu.2014.11.004>
- Albendín, L., Gómez, J. L., Cañadas-de la Fuente, G. A., Cañadas, G. R., San Luis, C., & Aguayo, R. (2016). Prevalencia bayesiana y niveles de burnout en enfermería de urgencias. Una revisión sistemática. *Revista Latinoamericana de Psicología*, 48(2), 137-145. <https://doi.org/10.1016/j.rlp.2015.05.004>
- Ahmadi, O., Azizkhani, R., & Basravi, M. (2014). Correlation between workplace and occupational burnout syndrome in nurses. *Advanced Biomedical Research*, 3(1), 44. <https://doi.org/10.4103/2277-9175.125751>
- Cañadas-de la Fuente, G. A., San Luis, C., Lozano, L. M., Vargas, C., García, I., & de la Fuente, E. I. (2014). Evidencia de validez factorial del Maslach Burnout Inventory y estudio de los niveles de burnout en profesionales sanitarios. *Revista Latinoamericana de Psicología*, 46(1), 44-52. [https://doi.org/10.1016/S0120-0534\(14\)70005-6](https://doi.org/10.1016/S0120-0534(14)70005-6)
- Caraveo, J., Ruíz, R. G., Villatoro, J. V., Richerand, G. A., & Escobar, A. R. (1988). Diagnóstico de necesidades en el ámbito laboral. En S. Pick de Weiss, R. Díaz Lovín, & P. Andrade Palos (Eds.), *La Psicología Social en México II*. Asociación Mexicana de Psicología Social.
- Castillo-Barrera, B., Solano-Pérez, C. T., Solano-Solano, G., Pérez, L. D., Busto-Villarreal, J. M., & Barrera-Gálvez, R. (2016). Personal de enfermería con cansancio emocional: Una muestra del Hospital General de Tulancingo, México. *Educación y Salud Boletín Científico Instituto de Ciencias de la Salud Universidad Autónoma del Estado de Hidalgo*, 4(8). <https://doi.org/10.29057/icsa.v4i8.279>

- Corrales, F. A., Valdes, B. C., Kienhelger, L. H., & Hernández, J. S. (2012). Relaciones estructurales entre estrategias de afrontamiento y síndrome de Burnout en personal de salud: un estudio de validez externa y de constructo. *Universitas Psychológica*, 11(1), 197-206. <https://doi.org/10.11144/Javeriana.upsy11-1.reea>
- Dai, J. M., Collins, S., Yu, H. Z., & Fu, H. (2008). Combining job stress models in predicting burnout by hierarchical multiple regressions: a cross-sectional investigation in Shanghai. *Journal of Occupational and Environmental Medicine*, 50(7), 785-790. <https://doi.org/10.1097/JOM.0b013e318167750a>
- Embriaco, N., Papazian, L., Kentish-Barnes, N., Pochard, F., & Azoulay, E. (2007). Burnout syndrome among critical care healthcare workers. *Current Opinion in Critical Care*, 13(5), 482-488. <https://doi.org/10.1097/MCC.0b013e3282efd28a>
- Falgueras, M. V., Munoz, C. C., Pernas, F. O., Sureda, J. C., López, M. P. G., & Miralles, J. D. (2015). Burnout y trabajo en equipo en los profesionales de Atención Primaria. *Atención Primaria*, 47(1), 25-31. <https://doi.org/10.1016/j.aprim.2014.01.008>
- Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*, 219-239. <https://doi.org/10.2307/2136617>
- Lazarus, R. S. (1984). *Stress, appraisal, and coping* (Vol. 464). Springer.
- French, W. L., & Bell, C. (1996). *Desarrollo organizacional: Aportaciones de las ciencias de la conducta para el mejoramiento de la organización* (5a ed.). Prentice Hall.
- Geuens, N., Braspenning, M., Van Bogaert, P., & Franck, E. (2015). Individual vulnerability to burnout in nurses: The role of Type D personality within different nursing specialty areas. *Burnout Research*, 2(2-3), 80-86. <https://doi.org/10.1016/j.burn.2015.05.003>
- Gil-Monte, P. (2001). El síndrome de quemarse por el trabajo (síndrome de burnout): Aproximaciones teóricas para su explicación y recomendaciones para la intervención. *Revista Psicología Científica*, 3(5), 1-5.
- Gil-Monte, P. (2003): El síndrome de quemarse por el trabajo (síndrome de burnout) en profesionales de enfermería, *Revista Eletrônica Inter Ação Psy*,1(1):19-33. <https://gepeb.wordpress.com/wp-content/uploads/2011/12/pedrogil-monte.pdf>
- Gil-Monte, P., & Peiró J.M. (1996). Un estudio sobre antecedentes significativos del Síndrome de quemarse por el trabajo (burnout) en trabajadores de centros ocupacionales para discapacitados psíquicos. *Psicología del Trabajo y las Organizaciones*, 12(1), 67-80. <https://dialnet.unirioja.es/servlet/articulo?codigo=109523>
- González, M. T., & Landero, R. (2007). Cuestionario de Afrontamiento del Estrés (CAE): validación en una muestra mexicana. *Revista de Psicopatología y Psicología Clínica*, 12(3), 189-198. <https://doi.org/10.5944/rppc.vol.12.num.3.2007.4044>

- Juárez-García, A., Idrovo, Á. J., Camacho-Ávila, A., & Placencia-Reyes, O. (2014). Síndrome de burnout en población mexicana: Una revisión sistemática. *Salud Mental*, 37(2), 159-176. <https://doi.org/10.17711/SM.0185-3325.2014.020>
- Jun, J., Ojemeni, M. M., Kalamani, R., Tong, J., & Crecelius, M. L. (2021). Relationship between nurse burnout, patient and organizational outcomes: Systematic review. *International Journal of Nursing Studies*, 119, 103933. <https://doi.org/10.1016/j.ijnurstu.2021.103933>
- Lee, H. F., Chiang, H. Y., & Kuo, H. T. (2019). Relationship between authentic leadership and nurse's intent to leave: The mediating role of work environment and burnout. *Journal of Nursing Management*, 27(1), 52-65. <https://doi.org/10.1111/jonm.12648>
- Lee, H. F., Kuo, C. C., Chien, T. W., & Wang, Y. R. (2016). A meta-analysis of the effects of coping strategies on reducing nurse burnout. *Applied Nursing Research*, 31, 100-110. <https://doi.org/10.1016/j.apnr.2016.01.001>
- Leiter, M. P., & Schaufeli, W. B. (1996). Consistency of the burnout construct across occupations. *Anxiety, Stress, & Coping*, 9(3), 229-243. <https://doi.org/10.1080/10615809608249404>
- Leiter, M. P., & Maslach, C. (2009). Nurse turnover: the mediating role of burnout. *Journal of Nursing Management*;17(3):331-339. <https://doi.org/10.1111/j.1365-2834.2009.01004.x>
- Manzano-Garcia, G. (2007). Síndrome de burnout y riesgos psicosociales en personal de enfermería. Prevalencia e intervención. *Información Psicológica*, (91-92), 23-31. <https://www.informaciopsicologica.info/revista/article/view/261>
- Martínez-López, C., & López-Solache, G. (2005). Características del síndrome de burnout en un grupo de enfermeras mexicanas. *Archivos en Medicina Familiar*, 7(1), 6-9. <https://www.redalyc.org/articulo.oa?id=50770103>
- Martínez, P. A. (2010). El síndrome de burnout. Evolución conceptual y estado actual de la cuestión. *Vivat Academia*, (112), 42-80. <https://doi.org/10.15178/va.2010.112.42-80>
- Maslach, C., & Jackson, S. E. (1982). Burnout in health professions: A social psychological analysis. In G. S. Sanders & J. Suls (Eds.), *Social psychology of health and illness* (pp. 97-113). Erlbaum.
- Maslach, C., & Jackson, S. E. (1986). *Maslach Burnout Inventory manual* (2<sup>nd</sup> ed.). Consulting Psychologists Press.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52(2001), 397-422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Meda-Lara, R. M., Moreno-Jiménez, B., Rodríguez-Muñoz, A., Morante-Benadero, M.E. & Ortiz-Viveros, G.R. (2008). Análisis factorial confirmatorio del MBI-HSS en una muestra de psicólogos mexicanos. *Psicología y Salud*, 18(1), 107-116. <https://www.redalyc.org/pdf/291/29118112.pdf>

- Meredith, L. S., Bouskill, K., Chang, J., Larkin, J., Motala, A., & Hempel, S. (2022). Predictors of burnout among US healthcare providers: A systematic review. *BMJ Open*, 12(8), e054243. <https://doi.org/10.1136/bmjopen-2021-054243>
- Merino-Soto, C., & Calderón-De La Cruz, G. A. (2018). Validez de estudios peruanos sobre estrés y burnout. *Revista Peruana de Medicina Experimental y Salud Pública*, 35(2), 353. <https://doi.org/10.17843/rpmesp.2018.352.3521>
- Mossburg, S. E., & Himmelfarb, C. D. (2021). The association between professional burnout and engagement with patient safety culture and outcomes: a systematic review. *Journal of Patient Safety*, 17(8), e1307-e1319. <https://doi.org/10.1097/PTS.0000000000000519>
- Muñoz-Seco, E., Coll-Benejam, J.M., Torrent-Quetglas, M. y Linares-Pou, L. (2006). Influencia del clima laboral en la satisfacción de los profesionales sanitarios. *Atención Primaria* 37(4), 209-2014. <https://doi.org/10.1157/13085951>
- Muñoz, A. I., & Velásquez, M. S. (2016). Síndrome de quemarse por el trabajo en profesionales de enfermería, Bogotá, Colombia. *Revista Facultad Nacional de Salud Pública*, 34(2), 202-211. <https://doi.org/10.17533/udea.rfnsp.v34n2a09>
- Norlund, S., Reuterwall, C., Höög, J., Lindahl, B., Janlert, U., & Birgander, L. S. (2010). Burnout, working conditions and gender-results from the northern Sweden MONICA Study. *BMC Public Health*, 10(1), 326. <https://doi.org/10.1186/1471-2458-10-326>
- Organización Mundial de la Salud [OMS]. (2010). Entornos Laborales Saludables Fundamentos y modelos de la OMS. *World Health Organization*, 15-23. <https://iris.who.int/handle/10665/44466>
- Orrù, G., Marzetti, F., Conversano, C., Vaghegini, G., Miccoli, M., Ciacchini, R., Panait, E., Gemignani, A. (2021). Secondary Traumatic Stress and Burnout in Healthcare Workers during COVID-19 Outbreak. *International Journal of Environment Research and Public Health*, 18(1), 337. <https://doi.org/10.3390/ijerph18010337>
- Peisah, C., Latif, E., Wilhelm, K., & Williams, B. (2009). Secrets to psychological success: why older doctors might have lower psychological distress and burnout than younger doctors. *Aging and Mental Health*, 13(2), 300-307. <https://doi.org/10.1080/13607860802459831>
- Quesada-Puga, C., Izquierdo-Espin, F. J., Membrive-Jimenez, M. J., Aguayo-Estremera, R., Cañadas-De La Fuente, G. A., Romero-Bejar, J. L., & Gomez-Urquiza, J. L. (2024). Job satisfaction and burnout syndrome among intensive-care unit nurses: A systematic review and meta-analysis. *Intensive and Critical Care Nursing*, 82, 103660. <https://doi.org/10.1016/j.iccn.2024.103660>
- Ramirez-Baena, L., Ortega-Campos, E., Gómez-Urquiza, J. L., Cañadas-De la Fuente, G.R., De la Fuente-Solana, E. & Cañadas-De la Fuente, G.A. (2019). A Multicentre Study of Burnout Prevalence and Related Psychological Variables in Medical Area Hospital Nurses. *Journal of Clinical Medicine*, 8(1), 92. <https://doi.org/10.3390/jcm8010092>

- Rendón Montoya, M. S., Peralta Peña, S. L., Hernández Villa, E. A., Hernández, R. I., Vargas, M. R., & Favela Ocaño, M. A. (2020). Síndrome de burnout en el personal de enfermería de unidades de cuidado crítico y de hospitalización. *Enfermería Global*, 19(59), 479-506. <https://doi.org/10.6018/eglobal.398221>
- Robbins, S. P., & Judge, T. A. (2009). *Comportamiento organizacional* (13a ed.). Pearson Educación.
- Sánchez-Jiménez, B., Flores-Ramos, M., Sámano, R., Rodríguez-Ventura, A. L., & Chinchilla Ochoa, D. (2018). Factores relacionados a la presencia del síndrome de burnout en una muestra de enfermeras del sector salud, Ciudad de México. *Revista Salud Pública y Nutrición*, 17(3), 1-8. <https://doi.org/10.29105/respyn17.3-1>
- Sandín, B., & Chorot, P. (2003). Cuestionario de Afrontamiento del Estrés (CAE): Desarrollo y validación preliminar. *Revista de Psicopatología y Psicología Clínica*, 8(1), 39-53. <https://doi.org/10.5944/rppc.vol.8.num.1.2003.3941>
- Serván, M. A., Vera, L. R., Britez, B., & Rodríguez, P. (2019). Relación de la salud mental y el síndrome de burnout en profesionales de enfermería en un hospital regional. *NURE Investigación: Revista Científica de enfermería*, 16(100), 4. <http://www.nureinvestigacion.es/OJS/index.php/nure/article/view/1594>
- Shirey, M. R. (2006). Authentic leaders creating healthy work environments for nursing practice. *American Journal of Critical Care*, 15(3), 256-267. <https://doi.org/10.4037/ajcc2006.15.3.256>
- Van Bogaert, P., Peremans, L., Van Heusden, D., Verspuy, M., Kureckova, V., Van de Cruys, Z., & Franck, E. (2017). Predictors of burnout, work engagement and nurse reported job outcomes and quality of care: a mixed method study. *BMC Nursing*, 16(1), 5. <https://doi.org/10.1186/s12912-016-0200-4>
- Winnubst, J. (1993). Organizational structure, social support, and burnout. En W. B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 151–162). Taylor & Francis.
- Wontorczyk, A., Izydorczyk, B., & Makara-Studzińska, M. (2023). Burnout and stress in a group of psychiatrists: Workload and non-professional-social predictors. *International Journal of Occupational Medicine and Environmental Health*, 36(3), 379. <https://doi.org/10.13075/ijom.1896.02147>