Job stress and self-perception of health care personnel

Estrés laboral y autopercepción del personal de salud

Darwin Raúl Noroña-Salcedo
pg.docentedns@uniandes.edu.ec
Universidad Regional Autónoma de Los Andes. UNIANDES, Ambato - Ecuador.
https://orcid.org/0000-0002-0630-0456

ABSTRACT

The objective of this study was to determine the relationship between work stress and self-perception of health in physicians and nurses of the emergency area of the Hospital de Especialidades San Juan, in the city of Riobamba, Chimborazo, Ecuador, during the year 2020. A non-experimental, cross-sectional, descriptive design was applied. The population consisted of 51 professionals. A negative correlation of -0.837 was observed with a statistical significance given by a p-value of 0.01. This result shows that the higher the scores of the EL questionnaire, the lower the PHC scores and therefore the lower the health perception of the health personnel investigated. It is affirmed that there is sufficient evidence to suggest that the presence of work stress affects the self-perception of health. The results of the current study are consistent with the position that health professionals, particularly nurses, are considered a vulnerable group.
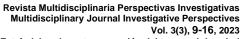
Descriptors: mental stress; occupational diseases; occupational safety. (Source: UNESCO Thesaurus).

RESUMEN

Se tiene por objetivo determinar la relación del estrés laboral y la autopercepción de salud en médicos y enfermeras del área de emergencia del Hospital de Especialidades San Juan, de la ciudad de Riobamba, Chimborazo, Ecuador durante el año 2020. Se aplicó un diseño no experimental, transversal, descriptivo. La población estuvo constituida por 51 profesionales. Se observa una correlación negativa de -0,837 con una significación estadística dada por valor de p 0,01. Este resultado evidencia que a medida que aumentan las puntuaciones del cuestionario de EL disminuyen las de APS y por ende es menor la percepción de salud del personal de salud investigado. Se afirma que existe suficiente evidencia para plantear que la presencia de estrés laboral afecta la autopercepción de la salud. Los resultados del actual estudio, concuerdan con la posición de que los profesionales de la salud, en particular las enfermeras, se consideran un grupo vulnerable.

Descriptores: estrés mental; enfermedad profesional; seguridad en el trabajo. (Fuente: Tesauro UNESCO).

Revista Multidisciplinaria Perspectivas Investigativas
Multidisciplinary Journal Investigative Perspectives
Vol. 3(3), 9-16, 2023
Estrés laboral y autopercepción del personal de salud
Job stress and self-perception of health care personnel
Darwin Raúl Noroña-Salcedo

INTRODUCTION

The rapid global economic growth demands from workers a greater effort to meet the established goals in terms of labor matters. This situation causes the appearance of different factors or conditions associated with the work environment that can have a negative impact on the worker's health; these factors have been called psychosocial factors and constitute a determining element in the appearance of occupational stress (Hofman, et al. 2017).

Occupational stress (EL) is conceptualized by (Zúñiga-Jara, & Pizarro-León, 2018), as the set of cognitive, behavioral, emotional and physiological reactions experienced by a worker in response to certain adverse or harmful aspects that are directly related to content, environment or work organization. It is a phenomenon, increasingly frequent, that affects the physical and psychological well-being of the worker and can cause deterioration of the business organizational climate (Chiang-Vega, et al. 2018).

Self-perception of health (APS) is conceptualized by (Sabando & Albala, 2019), as a subjective and individual conception resulting from the interrelation between social, psychological and biological factors. The joint analysis of these elements allows for a unique and adequate assessment of a person's general state of health from his or her own point of view. Occupational stress is considered to be a specific form of stress that is directly related to the work context. Different situations or factors may intervene in its occurrence, acting alone or together as stressors. The presence of occupational stress conditions different degrees of affectation of the worker's health.

This is an important issue to be taken into account in health care units; in Ecuador there are not enough correlational studies that try to establish the relationship between the presence of occupational stress and how it determines the PHC of workers; this study is the first of its kind in the context of research. Additionally, it is worth mentioning that no related data are collected in the Occupational Health and Safety Unit of the Hospital de Especialidades San Juan, in the city of Riobamba, Chimborazo, Ecuador, which would allow us to account for the level of exposure of workers in this health care unit to occupational stress, as well as the presence of diseases, alienation or other situations that prevent them from reaching their maximum level of mental health and work performance. For this reason, the research collaborates with important information that can be used for making initial decisions about the research problem posed or as a starting point for future studies that address this problem.

Based on the above, the objective is to determine the relationship between work stress and self-perception of health in physicians and nurses in the emergency area of the Hospital de Especialidades San Juan, in the city of Riobamba, Chimborazo, Ecuador, during the year 2020.

METHOD

A non-experimental, cross-sectional, descriptive and correlational research design was used. The population consisted of 57 health professionals (physicians and nurses).

The research was non-probabilistic. It was initially planned to use the entire universe; however, with the application of the selection criteria, a study population of 51 workers was formed.

All employees who at the time of the study had an employment relationship with a contract of more than 6 months of permanence were included; people who were in the process of termination of employment, medical leave, vacation leave or maternity leave were excluded from the study. Also excluded from the study were professionals who incompletely submitted the instruments applied.

Two research questionnaires were used during the study. The first was the International Labor Organization (ILO) work stress questionnaire. The second instrument used to identify self-perceived health was the Nottingham Health Profile.

The ILO work stress questionnaire:

Revista Multidisciplinaria Perspectivas Investigativas
Multidisciplinary Journal Investigative Perspectives
Vol. 3(3), 9-16, 2023
Estrés laboral y autopercepción del personal de salud
Job stress and self-perception of health care personnel
Darwin Raúl Noroña-Salcedo

Low level: scores below 90.2.

Intermediate level: scores between 90.3 and 117.2

Confirmed stress: scores between 117.3 and 153.2

High level: scores equal to or higher than 153.3

Nottingham Health Profile Instrument:

Consists of 45 questions with dichotomous response scale (yes, no) divided into two sessions. The first contains 38 items grouped into 6 domains: physical capacity (8 items), pain (8 items), sleep (5 items), social isolation (5 items), emotional reactions (9 items) and energy level (3 items); the second session is of optional application and is oriented towards the identification of handicap; it is composed of 7 items that inquire about the effect generated by health problems on occupation, housework, personal relationships, social life, sex life, hobbies and vacation enjoyment.

Once the data were obtained, they were processed on a data base with the intention of applying descriptive statistics and Pearson's Chi-square, supported by the SPSS V25 statistical package.

RESULTS

The results of the analysis carried out based on the general characteristics of the health professionals investigated. An average age of 36.82 years with a mean of 13.8 years was obtained. The analysis of sex showed a higher frequency and percentage of female persons (frequency of 34 and 66.67%) compared to the male sex (frequency of 17 persons and 33.33%). At the time of the study, 78.43% of the persons investigated were working as nurses, while 21.57% were working as physicians.

There was a predominance of professionals with time of service in the institution between 1 and 3 years (54.90%), followed by workers with less than one year of service (25.49%) and those who served for more than 3 years (19.61%). In the health personnel investigated, a predominance of the female sex was observed, the majority being nursing personnel, between 30 and 39 years of age, with a time of service in the institution of 1 and 3 years, which indicates that they meet the criteria to be part of the research.

The dimensions organizational climate (21.57%), influence of the leader (11.76%) and lack of cohesion (11.76%) were the dimensions that showed the highest percentage of workers with a high level of stress; also noteworthy is the 33.33% of workers with confirmed stress in relation to the dimension of lack of cohesion.

It can be seen that the factors "organizational climate", "leader influence" and "lack of cohesion" present the highest percentages, since they occur more frequently within the institution. Therefore, these factors could be considered as the main stress triggers for the study personnel, which indicates that most of the research personnel have an unfavorable perception of these wellbeing items related to occupational health, which, as well as related articles, are factors that influence the presence of stress in this type of professions and therefore present an unfavorable performance.

In the case of nursing professionals the picture obtained was different. In this sense, with very high exposure (greater than 85%), which includes the dimensions lack of cohesion (97.5% exposure), organizational territory (90.0%), territory (90.0%), leader influence (90.0%) and organizational climate (87.5%). In conclusion, it shows that health personnel, with a predominance of nursing personnel, are people more prone to suffer work stress, due to the nature of their positions, which imply a great workload, decision making and greater responsibilities.

The results of the analysis of the PHC of health professionals in the emergency area of the Hospital de Especialidades San Juan. In general, there is a predominance of workers with slight

Revista Multidisciplinaria Perspectivas Investigativas
Multidisciplinary Journal Investigative Perspectives
Vol. 3(3), 9-16, 2023
Estrés laboral y autopercepción del personal de salud
Job stress and self-perception of health care personnel
Darwin Raúl Noroña-Salcedo

health affectation (33.33%), followed by workers with acceptable health (25.49%) and equal percentages of people with adequate health and moderate health affectation (17.65%). However, when the analysis is carried out in relation to the presence or not of health impairment, the presence of affected PHC in the group of people investigated stands out as statistically significant (p=0.043). These results show that PHC in the health personnel investigated is significantly negative.

Table 1. Relationship between work stress variables and self-perceived health.

		Estrés laboral	Autopercepción de salud
Estrés laboral	**Sig. bilateral**	1,0	-0,837
	N	51	51
	P	----	0,01
Autopercepción de salud	**Sig. bilateral**	-0,837	1,0
	N	51	51
	P	0,01	----

Source: Own elaboration.

Table 1 shows a negative correlation of -0.837 with a statistical significance given by a p-value of 0.01. This result shows that the higher the scores of the EL questionnaire, the lower the PHC scores and therefore the lower the health perception of the health personnel investigated. The p-value result allows us to affirm that there is sufficient evidence to state that the presence of occupational stress affects the self-perception of health.
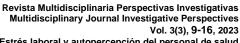
DISCUSSION

The results of the current study, are consistent with the position that healthcare professionals, particularly nurses, are considered a vulnerable group to experience acute stress disorder (ASD) and subsequent psychological distress in the midst of the COVID-19 pandemic. This study aims to establish the prevalence of acute stress disorder and predictors of psychological distress among Jordanian nurses (Shahrour, & Dardas, 2020).

Nursing leaders and managers are at the forefront of responding to the unique needs of their workforce during the COVID-19 crisis. They need to implement stress reduction strategies for nurses by providing consecutive days off, rotating complex patient assignments, arranging support services, and being accessible to staff. They also need to ensure the personal safety of nurses by ensuring and providing personal safety measures and conducting briefings to ensure the physical and mental well-being of their staff, in addition to referring them to appropriate psychological services (Shahrour, & Dardas, 2020).

In this sense; job stability is a determining factor in the occurrence of EL, mainly in healthcare workers. They point out that feeling secure from the point of view of job stability decreases the expression of stress manifestations. In the case of not having job stability, emotional instability is generated, which constitutes an additional stress factor with the presence of somatization and cognitive-behavioral manifestations that will undoubtedly affect the state of health.

Likewise, nurses are experiencing tremendous stress during the pandemic of the new coronavirus disease 2019 (COVID-19), especially intensive care nurses. This disease pandemic is a tragedy that can leave a catastrophic psychological imprint on nurses. Understanding nurses' mental distress may help when implementing interventions to mitigate the psychological harms nurses suffer, even relatively highly resilient nurses experienced some degree of mental distress, including symptoms of post-traumatic stress disorder and perceived stress. Our findings highlight

Revista Multidisciplinaria Perspectivas Investigativas
Multidisciplinary Journal Investigative Perspectives
Vol. 3(3), 9-16, 2023
Estrés laboral y autopercepción del personal de salud
Job stress and self-perception of health care personnel
Darwin Raúl Noroña-Salcedo

the importance of helping nurses cultivate resilience and reduce stress (Leng, et al. 2021).

Coronavirus-2019 disease, on the other hand, is a pandemic that has posed a public health emergency of international concern. The psychological well-being of frontline nurses is a major concern during the COVID-19 pandemic; in consideration, nurses who had less than two years of work experience were significantly associated with a high risk of developing post-traumatic stress disorder. Nurses who worked in inpatient wards with COVID-19 were significantly more likely to have PTSD (odds ratio [OR] = 21.9, 95 % confidence interval [CI]: 5.08, 94.5) than those who worked in other COVID-19-related units. Resilience was negatively associated with PTSD (OR = 0.96, 95 % CI: 0.93, 0.99) (Li, et al. 2021).

In consideration, in the study of (Moon, et al. 2021), 36.7% of nurses were at risk for PTSD and the factors related to PTSD were work department, nursing staff and experiencing COVID-19 symptoms. These results could be used to manage PTSD and provide psychological support to nurses during infectious disease epidemics, such as COVID-19; this being concomitant with the current results.

It is of note similar situation, that the existence of the Middle East Respiratory Syndrome (MERS) outbreak, in that (Jung, et al. 2020), confirm that after a fatal infectious disease outbreak such as MERS, nurses experience a high level of post-traumatic stress disorder and show a high intention to leave. Organizational strategies to help nurses cope with stress and prevent turnover intention, especially using supervisor support, would be beneficial. This agrees with the position of (Levi, et al. 2021), in indicating that post-traumatic stress in ICU nurses, are their stressful work environment, where they experience exposure to traumatic events, and lack of support from their manager, co-workers, and organization. Defining attributes of ICU nurses with PTSD included re-experiencing, avoidance, negative alterations in cognition and mood, and hyperexcitability. The consequences of PTSD

In complement, (Pappa, et al. 2020), explain that the COVID-19 pandemic has the potential to significantly affect the mental health of healthcare workers (HCWs), who are on the frontline of this crisis. Therefore, it is an immediate priority to monitor rates of mood, sleep, and other mental health problems to understand mediating factors and inform tailored interventions; therefore, a substantial proportion of HCWs experience mood and sleep disturbances during this outbreak, highlighting the need to establish ways to mitigate mental health risks and adjust interventions under pandemic conditions.

In this regard; (Machado, et al. 2020), state that the front line of the battlefield remains exposed to negative experiences and potentially morally damaging events. Moral harm, defined as psychological distress associated with actions or inactions that violate one's moral or ethical principles, has been associated with the development of depression, anxiety, and post-traumatic stress disorder. We must proceed with mental monitoring of healthcare personnel, confident that the support received before, during, and after the COVID-19 pandemic influences the impact at both the individual and team levels.

Importantly, when psychological support measures were taken, staff supported initiatives offered by hospitals and health services, and some interventions were more appreciated (e.g., staff rest areas). Rapid, local and culturally appropriate workplace responses can counteract the negative impact on staff mental health; but a tiered response is required for smaller numbers of staff at risk of mental illness or those with pre-existing mental illness (Branjerdporn, et al. 2022). Considering this action of paramount importance, as the pandemic has contributed to an evolving source of distress: workload challenges are exacerbated as health human resources have declined in tandem with increasing demand for clinical services, caused in part by a combination of pandemic-related illness, delays in care, and increased medical complexity in community settings. This confluence of factors further accentuates the barriers for health workers to access support for their own needs (Berkhout, et al. 2023).

Revista Multidisciplinaria Perspectivas Investigativas
Multidisciplinary Journal Investigative Perspectives
Vol. 3(3), 9-16, 2023
Estrés laboral y autopercepción del personal de salud
Job stress and self-perception of health care personnel
Darwin Raúl Noroña-Salcedo

CONCLUSION

A negative correlation of -0.837 was observed, with a statistical significance given by a p-value of 0.01. This result shows that the higher the scores of the EL questionnaire, the lower the PHC scores and, therefore, the lower the health perception of the health personnel investigated. The result of the p allows us to affirm that there is sufficient evidence to state that the presence of occupational stress affects the self-perception of health. The results of the current study agree with the position that health professionals, particularly nurses, are considered a vulnerable group to experience acute stress disorder (ASD) and subsequent psychological distress in the midst of the COVID-19 pandemic, requiring health institutions to apply psychological and moral support programs to health personnel as a strategy to contribute to the prevention of mental health, as well as to control in time possible emotional disturbances that lead to existential exhaustion.

REFERENCES

Azemi, Sonia, Dianat, Iman, Abdollahzade, Faranhnaz, Bazazan, Ahmad, & Afshari, Davood. (2022). Work-related stress, self-efficacy and mental health of hospital nurses. *Work (Reading, Mass.)*, *72*(3), 1007–1014. https://doi.org/10.3233/WOR-210264

Berkhout, Suze, Abbey, Susan, & Sheehan, Kathleen. (2023). Burnout and Distress Among Health Care Workers During COVID-19: Can We Offer More Than Band-Aid Solutions? *The Canadian journal of cardiology*, *39*(6), 761–763. https://doi.org/10.1016/j.cjca.2023.01.027

Branjerdporn, Grace, Bowman, Candice, Kenworthy, Sean, & Stapelberg, Nicolás. (2022). Interventional Response of Hospital and Health Services to the Mental Health Effects of Viral Outbreaks on Health Professionals. *Frontiers in psychiatry*, *13*, 812365. https://doi.org/10.3389/fpsyt.2022.812365

Chen, Juan, Li, Jiping, Cao, Bingrong, Wang, Feng, Luo, Li, & Xu, Jiajun. (2020). Mediating effects of self-efficacy, coping, burnout, and social support between job stress and mental health among young Chinese nurses. *Journal of advanced nursing*, *76*(1), 163–173. https://doi.org/10.1111/jan.14208

Chiang-Vega, María Margarita, Riquelme-Neira, Gabriel Rodrigo, & Rivas-Escobar, Pedro Alfonso. (2018). Relationship between job satisfaction, work stress and its results in workers of a charity institution of the Province of Concepción. *Ciencia & trabajo*, *20*(63), 178-186. https://dx.doi.org/10.4067/S0718-24492018000300178

Hofman, André, Mas, Matilde, Aravena, Claudio, & Fernández-de-Guevara, Juan. (2017). Crecimiento económico y productividad en Latinoamérica. El proyecto LA-KLEMS [Economic growth and productivity in Latin America. The LA-KLEMS project]. *El Trimestre Económico*, *84*(334), 259–306. https://doi.org/10.20430/ete.v84i334.302

Jung, Heeja, Jung, Sun, Lee, Mi, & Kim, Mi. (2020). Assessing the Presence of Post-Traumatic Stress and Turnover Intention Among Nurses Post-Middle East Respiratory Syndrome Outbreak: The Importance of Supervisor Support. *Workplace health & safety*, *68*(7), 337–345. https://doi.org/10.1177/2165079919897693

Revista Multidisciplinaria Perspectivas Investigativas
Multidisciplinary Journal Investigative Perspectives
Vol. 3(3), 9-16, 2023
Estrés laboral y autopercepción del personal de salud
Job stress and self-perception of health care personnel
Darwin Raúl Noroña-Salcedo

Leng, Min, Wei, Lili, Shi, Xiaohui, Cao, Guorong, Wei, Yuling, Xu, Hong, Zhang, Xiaoying, Zhang, Wenwen, Xing, Shuyun, & Wei, Holly. (2021). Mental distress and influencing factors in nurses caring for patients with COVID-19. *Nursing in critical care*, 26(2), 94–101. https://doi.org/10.1111/nicc.12528

Levi, Paula, & Moss, Jacqueline. (2022). Intensive Care Unit Nurses' Lived Experiences of Psychological Stress and Trauma Caring for COVID-19 Patients. *Workplace health & safety*, 70(8), 358–367. https://doi.org/10.1177/21650799211064262

Levi, Paula, Patrician, Patricia, Vance, David, Montgomery, Aoyjai, & Moss, Jacqueline. (2021). Post-Traumatic Stress Disorder in Intensive Care Unit Nurses: A Concept Analysis. *Workplace health & safety*, 69(5), 224–234. https://doi.org/10.1177/2165079920971999

Li, Xiuchuan, Zhou, Ying, & Xu, Xiaoyue. (2021). Factors associated with the psychological well-being among front-line nurses exposed to COVID-2019 in China: A predictive study. *Journal of nursing management*, 29(2), 240–249. https://doi.org/10.1111/jonm.13146

Machado, Ana, Pereira, Eduardo, Grangeia, Rosa, & Norton, Pedro. (2020). Mental Health Support to Health Care Workers During COVID-19 Pandemic: Is the Front Line Necessarily the Priority Line? *Journal of occupational and environmental medicine*, 62(11), e677–e678. https://doi.org/10.1097/JOM.0000000000002011

Moon, Da-Jeong, Han, Mi Ah, Park, Jong, & Ryu, So. (2021). Post-traumatic Stress and Related Factors Among Hospital Nurses during the COVID-19 Outbreak in Korea. *The Psychiatric quarterly*, 92(4), 1381–1391. https://doi.org/10.1007/s11126-021-09915-w

Pappa, Sofía, Ntella, Vasiliki, Giannakas, Timoleon, Giannakoulis, Vassilis , Papoutsi, Eleni, & Katsaounou, Paraskevi. (2020). Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. *Brain, behavior, and immunity*, 88, 901–907. https://doi.org/10.1016/j.bbi.2020.05.026

Sabando, Vezna, & Albala, Cecilia. (2019). Quality of Life Related to Oral Health and Self-Perception of Health: National Survey of Quality of Life and Health 2015-2016 in Chile. *International journal of odontostomatology*, 13(3), 338-344. https://dx.doi.org/10.4067/S0718-381X2019000300338

Shahrour, Ghada, & Dardas, Latefa. (2020). Acute stress disorder, coping self-efficacy and subsequent psychological distress among nurses amid COVID-19. *Journal of nursing management*, 28(7), 1686–1695. https://doi.org/10.1111/jonm.13124

Zúñiga-Jara, Sergio, & Pizarro-León, Víctor. (2018). Measurements of Labor Stress in Teachers of a Regional Public High School. *Información tecnológica*, 29(1), 171-180. https://dx.doi.org/10.4067/S0718-07642018000100171