



## Intralaboral psychosocial risks and occupational stress in health professionals

### Riesgos psicosociales intralaborales y el estrés laboral en profesionales de la salud

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#### ABSTRACT

The objective of this study was to analyze intralabor psychosocial risks and work stress in health professionals at the Macas General Hospital. Methodologically, the research was descriptive with a non-experimental design in a total population of 76 people. It was observed that the stress levels of the workers are low, but if we add the high and very high levels where they show stress, we obtain a percentage of 20% for doctors, 21% for nurses and 24% in nursing assistants, so it could be said that there is stress in the workers, but it is not manifested in an excessive way, because there are very few causes.

**Descriptors:** mental stress; psychological effects; emotions. (Source: UNESCO Thesaurus).

#### RESUMEN

Se tiene por objetivo analizar los riesgos psicosociales intralaborales y el estrés laboral en profesionales de la salud en el Hospital General Macas. La investigación metodológicamente fue descriptiva con diseño no experimental en una población total de 76 personas. Se observó que los niveles de estrés que manejan los trabajadores son bajos, pero que, si se suman los niveles alto y muy alto donde muestran estrés, obtiene un porcentaje del 20% para los médicos, el 21% para enfermería y el 24% en auxiliares de enfermería, por lo que podría decirse que existe estrés en los trabajadores, pero no se manifiesta de manera excesiva, por cuanto son muy pocas las causas.

**Descriptores:** estrés mental; efectos psicológicos; afectividad. (Fuente: Tesauro UNESCO).

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Research articles section



## INTRODUCTION

Stressful working conditions manage to interfere with the employee's potential to work safely, which favors to create accidents and diseases at work (Ramírez-Velázquez, 2019). In this sense; (Suárez-Duarte, *et al.* 2020), point out that work in hospitals or health centers have been qualified as a stressful source, due to the approach with pain and often with death, in addition to the work overloads and tensions to which the worker is subjected (Kim, *et al.* 2020),

A similar situation arises (Serrano-Gisbert, 2002), stating that the generators of stress in the professional environment are mainly organizational factors, specific to the job. In addition, it shows that stress in health personnel is a serious problem for health institutions, as it directly affects staff with sick leave, insufficient motivation at work, low performance, low willingness to care for patients, depersonalization, emotional exhaustion (Scanlan, & Hazelton, 2020), (Devery, *et al.* 2019).

The SARS/Cov2-Covid-19 virus pandemic, worsened the symptoms of job stress, mainly for health care workers. In addition to the uneasiness about catching the virus at work and spreading the virus to family, friends and others in the workplace, especially if adequate protective measures were not used. Aspects such as salary cuts, layoffs and reduced benefits caused many workers to view their future with insecurity, causing a serious shake-up in mental health.

Observing the importance of this issue, this research was conducted at the Macas General Hospital, which belongs to the Ministry of Public Health; it is a type B, level 2 health center, located in the province of Morona Santiago, in the center-south of the country and is within the Amazon region of Ecuador. As far as mental health is concerned, there are no previous research studies recorded that indicate the situation of the hospital staff in terms of occupational stress or presence of psychosocial risk factors, for this reason the present research was developed with the purpose of determining the relationship between intralaboral psychosocial risk factors and occupational stress perceived by health professionals in the hospitalization area of this health center for their recognition and assertive preventive measures for their control.

Based on the above, the objective is to analyze the intralaboral psychosocial risks and occupational stress in health professionals at the Macas General Hospital.

## METHOD

Methodologically, the research was descriptive with a non-experimental design, supported by a correlational statistical analysis, since the degree of relationship between two variables, intralaboral psychosocial risk factors and work stress, was analyzed.

The study population is made up of medical, nursing and auxiliary nursing personnel of the hospitalization area of the Macas General Hospital, for the collection of information it was not necessary to apply any sampling technique, the evaluation was carried out on all health professionals in the hospitalization area, However, we found that, of the nursing personnel, 1 was on medical leave, 2 auxiliary nurses were on vacation, 2 did not wish to participate in the study, 1 physician did not wish to participate, a total of 6 people who did not help in the study, establishing a total population of 76 people.

As for the data collection technique, the survey was used. Instruments were used to measure the level of work stress by means of the ILO-WHO Work Stress Evaluation Questionnaire, and to measure the psychosocial risk factors, the battery of instruments for the evaluation of psychosocial risk factors developed by the Colombian Ministry of Social Protection was used.

Descriptive statistics and Pearson's correlation were used, an adequate data analysis for this type of study.

## RESULTS

The sociodemographic characteristics of the study population were analyzed, showing that 75% belong to the female sex, 51% of the population is married, with an average age of 37 years with a standard deviation of ( $\pm 8.7$ ), the minimum age was 27 years and the maximum age was 63



years.

Regarding the occupational characteristics of the population evaluated in the hospitalization area, it is observed that 45% are nurses, 33% physicians and 22% nursing assistants. The average time in the unit is 6 years with a standard deviation of ( $\pm 3.8$ ), with a minimum of one year and a maximum of sixteen years. 66% have a permanent appointment in the unit. Sixty-six percent have a permanent appointment in this area.

The intralabor psychosocial risk factors were evaluated according to the occupation of the study population because each group has different functions and therefore the results vary accordingly, it is identified that in physicians, nursing staff and nursing assistants the domain with considerable presence is that of work demands with a very high risk of 92%, 85.3% and 94.1% respectively.

For the domain of leadership and social relations, the dimensions most affected were: for physicians, the dimension of relationship with collaborators presented a very high risk of 56%, for nursing personnel, feedback of unemployment acquired a medium risk of 38.2%, and auxiliary nursing personnel obtained a very high risk in social relations at work with 76.5%.

Regarding the dimensions of the domain control over work, for medical and nursing personnel the dimension control and autonomy over work presents a high and very high risk, with 52% and 52.9% respectively, while for auxiliary nurses they show a high risk in 3 dimensions with 47.1%, the affected ones being the following, role clarity, training and participation in addition to change management.

**Table 1.** Dimensions of the job demands domain by occupation of the population.

| Dimensiones  | Riesgo     | Médicos | %    | Enfermería | %    | Aux. Enfermería | %    |
|--|------------|---------|------|------------|------|-----------------|------|
| Demandas ambientales y de esfuerzo físico            | Muy alto   | 23      | 92,0 | 31         | 91,2 | 12              | 70,6 |
|  | Alto       | 1       | 4,0  | 1          | 2,9  | 1               | 5,9  |
|  | Medio      | 0       | 0,0  | 1          | 2,9  | 3               | 17,6 |
|  | Bajo       | 0       | 0,0  | 1          | 2,9  | 1               | 5,9  |
|  | Sin riesgo | 1       | 4,0  | 0          | 0,0  | 0               | 0,0  |
| Demandas emocionales                                 | Muy alto   | 21      | 84,0 | 25         | 73,5 | 15              | 88,2 |
|  | Alto       | 4       | 16,0 | 8          | 23,5 | 1               | 5,9  |
|  | Medio      | 0       | 0,0  | 1          | 2,9  | 1               | 5,9  |
|  | Bajo       | 0       | 0,0  | 0          | 0,0  | 0               | 0,0  |
|  | Sin riesgo | 0       | 0,0  | 0          | 0,0  | 0               | 0,0  |
| Demandas cuantitativas                               | Muy alto   | 17      | 68,0 | 18         | 52,9 | 7               | 41,2 |
|  | Alto       | 4       | 16,0 | 11         | 32,4 | 6               | 35,3 |
|  | Medio      | 3       | 12,0 | 3          | 8,8  | 3               | 17,6 |
|  | Bajo       | 0       | 0,0  | 2          | 5,9  | 0               | 0,0  |
|  | Sin riesgo | 1       | 4,0  | 0          | 0,0  | 1               | 5,9  |
| Influencia del trabajo sobre el entorno extralaboral | Muy alto   | 10      | 40,0 | 10         | 29,4 | 2               | 11,8 |
|  | Alto       | 4       | 16,0 | 4          | 11,8 | 3               | 17,6 |
|  | Medio      | 6       | 24,0 | 10         | 29,4 | 2               | 11,8 |
|  | Bajo       | 4       | 16,0 | 8          | 23,5 | 5               | 29,4 |
|  | Sin riesgo | 1       | 4,0  | 2          | 5,9  | 5               | 29,4 |
| Exigencias de responsabilidad del cargo              | Muy alto   | 5       | 20,0 | 8          | 23,5 |                 |      |
|  | Alto       | 7       | 28,0 | 8          | 23,5 |                 |      |
|  | Medio      | 7       | 28,0 | 13         | 38,2 |                 |      |
|  | Bajo       | 6       | 24,0 | 5          | 14,7 |                 |      |



|                                   |            |    |        |        |      |           |      |
|-----------------------------------|------------|----|--------|--------|------|-----------|------|
|                                   | Sin riesgo | 0  | 0,0    | 0      | 0,0  |           |      |
|                                   | Muy alto   | 6  | 24,0   | 10     | 29,4 | 0         | 0,0  |
|                                   | Alto       | 10 | 40,0   | 1      | 2,9  | 0         | 0,0  |
| Demandas de carga mental          | Medio      | 6  | 24,0   | 5      | 14,7 | 2         | 11,8 |
|                                   | Bajo       | 3  | 12,0   | 12     | 35,3 | 4         | 23,5 |
|                                   | Sin riesgo | 0  | 0,0    | 6      | 17,6 | 11        | 64,7 |
|                                   | Muy alto   | 11 | 44,0   | 12     | 35,3 |           |      |
|                                   | Alto       | 5  | 20,0   | 8      | 23,5 |           |      |
| Consistencia de rol               | Medio      | 4  | 16,0   | 5      | 14,7 | NO APLICA |      |
|                                   | Bajo       | 2  | 8,0    | 6      | 17,6 |           |      |
|                                   | Sin riesgo | 3  | 12,0   | 3      | 8,8  |           |      |
|                                   | Muy alto   | 23 | 92,0   | 31     | 91,2 | 8         | 47,1 |
|                                   | Alto       | 2  | 8,0    | 2      | 5,9  | 8         | 47,1 |
| Demandas de la jornada de trabajo | Medio      | 0  | 0,0    | 1      | 2,9  | 0         | 0,0  |
|                                   | Bajo       | 0  | 0,0    | 0      | 0,0  | 1         | 5,9  |
|                                   | Sin riesgo | 0  | 0,0    | 0      | 0,0  | 0         | 0,0  |
| TOTAL                             |            |    | (N=25) | (N=34) |      | (N=17)    |      |

Source: Own elaboration.

Table 1 shows that in the dimensions of work demands, the three occupational groups, physicians, nurses and nursing assistants, were most affected in the following dimensions: environmental demands and physical effort, workday demands and emotional demands with a very high risk.

Table 2. Correlation between the domains of intralaboral psychosocial risk factors and the level of occupational stress.

| Dominios                                     | Nivel de estrés laboral valor (r) |            |                 |
|--|-----------------------------------|------------|-----------------|
|  | Médicos                           | Enfermería | Aux. Enfermería |
| Liderazgo, relaciones sociales en el trabajo | 0,02                              | 0,19       | 0,67            |
| Control sobre el trabajo                     | 0,18                              | -0,09      | 0,20            |
| Demandas del trabajo                         | 0,68                              | 0,01       | 0,45            |
| Recompensa                                   | 0,07                              | -0,15      | -0,24           |
| TOTAL  | (N=25)                            | (N=34)     | (N=17)          |

Source: Own elaboration.

Within the correlation process using Pearson's correlation method, we show in Table 2, that in physicians there is a positive relationship between the level of work stress and the work demands domain, with a value ( $r=0.68$ ) interpreted as a high positive relationship, i.e., that medical professionals having greater work demands produces greater work stress.

As for the nursing staff, the most relevant calculated value is ( $r=0.19$ ) and indicates that there is a very low relationship between leadership and social relations at work and work stress, and that the effect on the professionals is low with respect to the work stress variable. Finally, the occupational group of nursing assistants presented a calculated value of ( $r=0.67$ ) indicating that there is a high positive relationship between leadership and social relations at work and work stress, i.e., the greater the leadership and social relations at work, the greater the stress for nursing assistants.



## DISCUSSION

Through the application of the questionnaire of the battery of instruments for the evaluation of psychosocial risk factors, in this case intralaboral, to a working population that is active as is the health personnel of the hospitalization area of the Macas General Hospital, it was possible to obtain significant information from the employees, such as sociodemographic and occupational data. The results confirm the existence of intralaboral psychosocial risk factors in this population; prior to this study this information was unknown.

It is also observed that most of the workers assessed present very high intralaboral risk, these results coincide with the research conducted by (Uribe-Rodríguez & Martínez-Rozo, 2014), where 76.06% of the population presented a very high psychosocial level, especially in job demands. Also (Sarsosa-Prowesk, *et al.* 2014), in a study to 156 workers who have a position directly related to health of five level III health institutions presented a high level of risk in intralaboral psychosocial risks, specifically in the dimensions job demands, as well as in leadership and social relations.

The domain of job demands had the highest presence, most of the workers presented a very high level of risk, specifically in the dimensions of environmental demands and physical effort, followed by workday demands and emotional demands. According to (Bobadilla-Suárez, *et al.* 2018), the environmental aspects in a work environment, includes the physical elements, i.e., light environment, thermal environment, chemical agents and biological agents, which are bordering the workplace and can generate dissatisfaction, dissatisfaction and harm the worker's health.

Regarding the work stress questionnaire, it was observed that the levels of stress handled by the workers are low, but if we add the high and very high levels where they show stress, it obtains a percentage of 20% for physicians, 21% for nurses and 24% in nursing assistants, Therefore, it could be said that there is stress in the workers but it does not manifest itself in an excessive manner, since there are very few causes, such as difficulty in personal relationships (lack of cohesion), alteration in organizational factors and the influence of the leader, which affect the worker's peace of mind and are the cause of their stress.

The correlation process was carried out separately by occupational groups, physicians, nurses and nursing assistants, taking into account that each group has different functions, responsibilities and level of difficulty in the process of their work, therefore, the results are different in each group. It was observed that for physicians there is a high positive correlation between work stress with the dimensions of the work demands domain (demands of responsibility of the position with a value ( $r=0.69$ ), mental workload demands ( $r=0.56$ ) and role consistency ( $r=0.58$ ); nursing personnel presented a moderate positive relationship in the relationship with collaborators domain ( $r=0.38$ ) and auxiliary nursing workers presented a moderate positive relationship in the relationship with collaborators domain ( $r=0.38$ ) and auxiliary nursing staff presented a high positive correlation between the level of work stress and the dimensions of leadership characteristics ( $r=0.59$ ) and participation and change management ( $r=0.52$ ); these results coincide with the research conducted by (Arce, *et al.* 2020), where they identified a positive relationship between intralaboral psychosocial risk factors and the level of work stress in each domain.

## CONCLUSION

It was observed that the levels of stress handled by the workers are low, but if the high and very high levels where they show stress are added, they obtain a percentage of 20% for physicians, 21% for nurses and 24% in nursing assistants, so it could be said that there is stress in the workers, but it does not manifest itself in an excessive manner, since the causes are very few. It was observed that for physicians there is a high positive correlation between work stress and the dimensions of the work demands domain (demands of responsibility of the position with a value ( $r=0.69$ ), mental load demands ( $r=0.56$ ) and role consistency ( $r=0.58$ ); nursing personnel presented a moderate positive relationship in the relationship with collaborators domain ( $r=0.38$ ) and auxiliary nursing workers presented a high positive correlation between work stress level and the leadership characteristics dimensions ( $r=0.59$ ) and participation and management of change ( $r=0.52$ ).



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## CONFLICT OF INTEREST

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