

## **QUALITY OF LIFE AT WORK AND OCCUPATIONAL STRESS OF NURSING IN AN EMERGENCY CARE UNIT**

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### **ABSTRACT**

**Objective:** to evaluate and relate quality of life at work and occupational stress in the nursing team in the Emergency Care Unit.

**Method:** a cross-sectional, correlational study conducted with 109 nursing workers working in the Emergency Care Unit of Minas Gerais, Brazil. A questionnaire with demographic and labor profile was used; the occupational stress was verified by the *Job Stress Scale*, and the quality of life at work by the Walton model.

**Results:** Among the 109 workers, 34.9% were nurses, 53.2% nursing technicians and 11.9% nursing assistants. In analyzing the *Job Stress Scale*, 14.7% characterize work with high demand, 8.3% active work, 40.4% passive work and 36.7% work with low demand. In assessing quality of life at work, 39.5% are dissatisfied and 60.5% satisfied. The factors associated with dissatisfaction with work, according to the global scale quality of life at work, were female gender, nurse, low support at work, high demand or active work and longer time in the position held.

**Conclusion:** it was found that most nursing workers in the Emergency Care Unit are satisfied with their quality of life at work and exposed to moderately occupational stress, and those most exposed to this stress were dissatisfied with their quality of life at work.

**DESCRIPTORS:** Nursing. Worker's health. Working conditions. Professional burnout. Emergencies. Public health.

**HOW CITED:** Teixeira GS, Silveira RCP, Mininel VA, Moraes JT, Ribeiro IKS. Quality of life at work and occupational stress of nursing in an emergency care unit. *Texto Contexto Enferm* [Internet]. 2019 [cited YEAR MONTH DAY]; 28:e20180298. Available from: <http://dx.doi.org/10.1590/1980-265X-TCE-2018-0298>

# QUALIDADE DE VIDA NO TRABALHO E ESTRESSE OCUPACIONAL DA ENFERMAGEM EM UNIDADE DE PRONTO ATENDIMENTO

## RESUMO

**Objetivo:** avaliar e relacionar qualidade de vida no trabalho e o estresse ocupacional na equipe de enfermagem em Unidade de Pronto Atendimento.

**Método:** estudo transversal, correlacional, realizado com 109 trabalhadores de enfermagem atuantes na Unidade de Pronto Atendimento de Minas Gerais, Brasil. Foi utilizado um questionário com perfil demográfico e laboral; o estresse ocupacional foi verificado pela *Job Stress Scale* e a qualidade de vida no trabalho pelo modelo de Walton.

**Resultados:** dentre os 109 trabalhadores, 34,9% enfermeiros, 53,2% técnicos de enfermagem e 11,9% auxiliares de enfermagem. Na análise da *Job Stress Scale*, 14,7% caracterizam o trabalho com alta exigência, 8,3% trabalho ativo, 40,4% trabalho passivo e 36,7% trabalho com baixa exigência. Na avaliação da qualidade de vida no trabalho, 39,5% estão insatisfeitos e 60,5% satisfeitos. Os fatores associados à insatisfação com o trabalho, segundo escala global qualidade de vida no trabalho, foram gênero feminino, enfermeiro, baixo apoio no trabalho, alta exigência ou trabalho ativo e maior tempo no cargo exercido.

**Conclusão:** identificou-se que a maioria dos trabalhadores de enfermagem da Unidade de Pronto Atendimento está satisfeita com a qualidade de vida no trabalho e exposta ao estresse ocupacional moderadamente, e os mais expostos a esse estresse se encontravam insatisfeitos com a qualidade de vida no trabalho.

**DESCRITORES:** Enfermagem. Saúde do trabalhador. Condições de trabalho. Esgotamento profissional. Emergências. Saúde pública.

# CALIDAD DE VIDA EN EL TRABAJO Y ESTRÉS OCUPACIONAL EN EL ÁREA DE ENFERMERÍA DE UNA UNIDAD DE EMERGENCIA

## RESUMEN

**Objetivo:** evaluar y relacionar la calidad de vida en el trabajo y el estrés ocupacional en el equipo de enfermería de una Unidad de Emergencia.

**Método:** estudio transversal y correlacional realizado con 109 trabajadores de enfermería que se desempeñan en la Unidad de Emergencia de Minas Gerais, Brasil. Se utilizó un cuestionario con perfil demográfico y laboral; el estrés ocupacional se verificó con la Escala de estrés laboral (*Job Stress Scale*) y la calidad de vida por medio del modelo de Walton.

**Resultados:** de los 109 trabajadores, el 34,9% eran enfermeros, el 53,2% técnicos de enfermería y el 11,9% auxiliares de enfermería. En el análisis de la Escala de estrés laboral (*Job Stress Scale*), el 14,7% caracterizaron el trabajo como de alta exigencia, el 8,3% como trabajo activo, el 40,4% como trabajo pasivo y el 36,7% como trabajo con poca exigencia. Al evaluarse la calidad de vida en el trabajo, el 39,5% no están satisfechos y el 60,5% sí lo están. Los factores asociados a la insatisfacción con el trabajo, de acuerdo con la escala global de la calidad de vida en el trabajo, fueron pertenecer al sexo femenino, ser enfermero, contar con poco apoyo en el trabajo, alta exigencia o trabajo activo y mayor tiempo en el puesto.

**Conclusión:** se identificó que la mayoría de los trabajadores de enfermería de la Unidad de Emergencia están satisfechos con la calidad de vida en el trabajo y que se ven expuestos moderadamente al estrés ocupacional, y que las personas más expuestas a dicho estrés se encontraban insatisfechos con la calidad de vida en el trabajo.

**DESCRITORES:** Enfermería. Salud del trabajador. Condiciones de trabajo. Agotamiento profesional. Emergencias. Salud pública.

## INTRODUCTION

Work is an integral and essential part of the human being's life. It is through it that the human being gets his livelihood and interacts in the productive society. However, the changes that have taken place in recent decades have caused changes in the work environment and, depending on how the work has been performed, may be directly associated with the wear generator and determinants in the disease process.<sup>1-3</sup>

As a result of these changes in the work environment, the concern with the workers' quality of life at work (QOLW) has been shown, which is defined by factors and characteristics found in the work environment that aim to ensure and make possible the workers' needs, when performing their work activities in order to acquire more satisfied, productive workers and better quality services.<sup>1,4-5</sup>

Nursing, a profession inserted in this historical and social context, faces precarious working conditions and is exposed to a variety of psychosocial, environmental and organizational elements that generate occupational stress and strain that contribute to changes in the health of these workers and worsen their QOLW.<sup>4-5</sup>

Nursing fields are diverse, but the emergency services have characteristics that cause greater tension for the professionals who work there, exposing them to a higher level of occupational stress that can compromise their health and favor a poor QOLW.<sup>6-7</sup>

The Emergency Care Unit described by Ordinance GM/MS No. 342/2013, is an example of this emergency service and is characterized by being a fixed pre-hospital occupation that is linked to other health services, including Mobile Emergency Care, hospital units, diagnostic and therapeutic support units. This articulation among the health services occurs through logical and effective flows that promote referral and counter-referral.<sup>8</sup>

In addition to the articulation among the services, the Emergency Care Unit also has a commitment to implement the risk classification in the reception of users at their gateway according to recognized national and/or international references.<sup>8</sup>

The literature describes that Emergency Care Units are marked by lack of human and material resources, lack of recognition by managers, institutional political intervention at work, work overload, high turnover, overcrowding, inadequate physical space, direct and indirect patient care, seriously ill and at risk of imminent death, divided labor process, power conflicts and asymmetries, exclusion of users at the entry door, disrespect to their rights, among others.<sup>7-8</sup>

Such reality, experienced in the workplace, causes stress, favors occupational stress, resulting in a low QOLW for workers, and, consequently, can generate changes in physical and mental health, contributing directly to the growth of absenteeism at work, sick leaves, job readjustment demand, decreased productivity and possible loss of quality of services offered.<sup>3,9-10</sup>

The safety, accessibility and efficiency provided to the health service users are subjected to the systematization of the involved processes and the management of the therapeutic plan,<sup>5</sup> that is, occupational stress and workers' QOLW is directly related to the quality of care provided to the users.<sup>1-2,11</sup>

For this reason, QOLW and occupational stress are issues of growing interest, since their relations with the workers' health-illness process can directly interfere with absenteeism and the quality

of care provided. Thus, this study aimed to evaluate and relate QOLW and occupational stress in the nursing team working in the Emergency Care Unit.

## METHOD

This is a quantitative, cross-sectional, and descriptive-correlational study conducted with nursing professionals working in the Emergency Care Unit of a medium-sized city that represents the Greater Western Region of Minas Gerais, Brazil. The study sample consisted of nurses, nursing technicians and nursing assistants who worked in the Emergency Care Unit of the mentioned city. According to the diverse information obtained by the National Register of Health Facilities, during the period of data collect, the unit had a total of 161 workers. All the professionals who agreed to answer the questionnaires by signing the Free and Informed Consent Form, and who met the inclusion criteria stated below, took part in the study: admitted to the institution for at least six months and not being away, on vacation or sick leave at the time of data collect.

Thirty-six professionals with less than six months of admission, on vacation or on leave (health or other) were excluded, leaving 125 eligible workers. Of these 125 professionals, 16 refused to take part in the study, ultimately resulting in a total of 109 nursing professionals who participated in this research.

Data collect took place between March and May 2017. The workers were approached at the place and time of work and invited to take part in the study by filling in self-applicable instruments, being a questionnaire containing demographic and labor variables, the QOLW assessment instrument developed and validated in Brazil<sup>12</sup> and the scale referring to the reduced version of the *Job Stress Scale* (JSS), translated and validated in Brazil.<sup>13</sup>

The QOLW assessment instrument assesses the factors influencing in the QOLW through eight conceptual categories: fair and adequate compensation, working conditions, capacity utilization, growth and security opportunities, social integration, constitutionalism, work and life, social relevance. The evaluation of the response scores obtained in the instrument was performed by a Likert scale with values from 0 to 100, having the following definitions: very dissatisfied, dissatisfied, neither satisfied/nor dissatisfied, satisfied and very satisfied.<sup>12</sup>

The short version of the JSS is composed by a questionnaire containing 17 questions, in a Likert-type answer scale with values from 1 to 4, subdivided into five questions that assess psychological demand, six to assess control over the activities in the work and six for social support. After analyzing the continuous scores for the three dimensions, the classification suggesting that workers exposed to a combination of high demand and low control (high exigency) are considered as the group with the highest exposure to occupational stress, was used; those exposed to high demand but having high control (active work) or low control and low demand (passive work) are considered as intermediate exposure group for the occupational stress; and those with high control and low demand (low exigency) are classified as not exposed to stress at work.<sup>13</sup>

The collected data were analyzed from the construction of a database in the program *Statistical Package for the Social Science*® version 21.0. The variables of this study were displayed using frequency distribution tables and measures of central tendency and variability.

In the univariate analysis, to evaluate the factors associated with the results of the global QOLW scale, categorized as dissatisfied and satisfied, and the comparison of categorical variables, the *Pearson* or *Fisher* exact tests were performed. In the comparison of the numerical variables, the nonparametric *Mann-Whitney* test was used, since the variables displayed asymmetric distribution. *Kolmogorov-Smirnov* was used to test normality.

In the multivariate analysis, the binary logistic regression model was used. To enter the predicting variables in the model, a p-value less than 0.20 was considered in the univariate analysis. The *backward* criterion was used for variables entry into the model and for the permanence of the variables in the final model, adopting a 5% significance level. After adjusting the final model, the estimate of the adjusted *OddsRatio* (OR) with a respective 95% Confidence Interval (95% CI). The adjustment of the model was estimated by the *Hosmer-Lemeshow* test.

It is noteworthy that the proposed model showed a good adjustment according to the *Hosmer-Lemeshow* ( $p>0.05$ ) test. However, it is important to highlight that due to the small sample size, for some categories, there was an increase in the standard error of multivariate model estimates, generating wider confidence intervals.

This study followed all the Brazilian recommendations on ethical precepts in research involving human beings, contained in National Health Council Resolution N. 466/2012.

## RESULTS

The sample of 109 professionals evaluated was marked by the prevalence of females (75.2%), with a median age of 37 years old, consisting of 34.9% of nurses, 53.2% of nursing technicians and 11.9% of nursing assistants.

Regarding labor-related activities, the mean training time was 12 years and the working time in the Emergency Care Unit was 4 years. Of the participating professionals, 89.9% had a 30-hour workweek, 53.2% were effective civil servants, 54.1% worked the night shift and 39.4% workers reported having another nursing job.

The descriptive analysis of the JSS scores showed that 14.7% of the professionals participating in the study can be classified as high-demand, 8.2% having active work, 40.4% passive work and 36.7% low-demand. Regarding the social support from the boss and colleagues at work, 52.3% reported having low social support (Table 1).

**Table 1** – Descriptive analysis of the Job Stress Scale scores for the nursing workers in an emergency unit. Divinópolis, MG, Brazil, 2017. (N=109)

|                    | Frequency | Percentage % |
|--------------------|-----------|--------------|
| Demand             |           |              |
| Low                | 84        | 77.1         |
| High               | 25        | 22.9         |
| Control            |           |              |
| Low                | 60        | 55.0         |
| High               | 49        | 45.0         |
| Social support     |           |              |
| Low                | 57        | 52.3         |
| High               | 52        | 47.7         |
| Demand and control |           |              |
| High demand        | 16        | 14.7         |
| Active work        | 9         | 8.2          |
| Passive work       | 44        | 40.4         |
| Low demand         | 40        | 36.7         |

The final result on the global QOLW scale showed that 54.1% of the nursing staff are satisfied, 6.4% very satisfied, 38.6% dissatisfied and only 0.9% of the respondents are very dissatisfied; and,

in the comparison of the professional categories, nurses (55.3%) showed greater dissatisfaction with QOLW when compared to nursing technicians and assistants (approximately 30% in both categories).

Regarding the QOLW, a higher median for the work space in life category (66.7) was found, a lowest median for the opportunities domain (37.5) and the overall score was a median of 54.3 (Table 2).

The association of the QOLW and JSS scales is represented in Tables 3 and 4.

**Table 2** – Descriptive analysis of the scores on the Quality of life at work scale for the nursing workers in an emergency care unit. Divinópolis, MG, Brazil, 2017.

| Categories                | Mean        | Standard deviation | Minimum     | Maximum     | Percentile 25 | Median      | Percentile 75 |
|---------------------------|-------------|--------------------|-------------|-------------|---------------|-------------|---------------|
| Compensation              | 45.0        | 18.2               | 0.0         | 87.5        | 31.3          | 43.8        | 56.3          |
| Working conditions        | 50.9        | 15.1               | 16.7        | 87.5        | 41.7          | 50.0        | 58.3          |
| Use of the capacities     | 62.7        | 16.2               | 20.0        | 100.0       | 55.0          | 65.0        | 75.0          |
| Opportunities             | 41.7        | 18.5               | 12.5        | 81.3        | 31.3          | 37.5        | 56.3          |
| Social integration        | 64.0        | 14.8               | 25.0        | 100.0       | 56.3          | 62.5        | 75.0          |
| Constitutionalism         | 50.2        | 19.6               | 12.5        | 100.0       | 31.3          | 50.0        | 68.8          |
| Space of work in the life | 63.7        | 19.7               | 0.0         | 100.0       | 50.0          | 66.7        | 75.0          |
| Social relevance          | 55.6        | 17.3               | 15.0        | 90.0        | 45.0          | 55.0        | 65.0          |
| <b>Global score</b>       | <b>54.0</b> | <b>13.4</b>        | <b>25.0</b> | <b>88.6</b> | <b>45.4</b>   | <b>54.3</b> | <b>62.9</b>   |

**Table 3** – Comparison between the categories of the Quality of Life at Work scale and the results of the *Job Stress Scale* for the nursing workers in an emergency care unit. Divinópolis, MG, Brazil, 2017.

|                    | Compensation   |                  | Work conditions |                  | Use of the capacities |                  | Opportunities  |                  |
|--------------------|----------------|------------------|-----------------|------------------|-----------------------|------------------|----------------|------------------|
|                    | Satisf* (n=42) | Dissatis† (n=67) | Satisf* (n=47)  | Dissatis† (n=62) | Satisf* (n=84)        | Dissatis† (n=25) | Satisf* (n=30) | Dissatis† (n=79) |
| Social support     | $p=0.243^‡$    |                  | $p=0.011^‡$     |                  | $p=0.007^‡$           |                  | $p=0.893^‡$    |                  |
| Low (%)            | 33.3           | 66.7             | 31.6            | 68.4             | 66.7%                 | 33.3             | 28.1           | 71.9             |
| High (%)           | 44.2           | 55.8             | 55.8            | 44.2             | 88.5%                 | 11.5             | 26.9           | 73.1             |
| Demand and control | $p=0.067^§$    |                  | $p<0.001^§$     |                  | $p<0.001^§$           |                  | $p<0.001^§$    |                  |
| High demand (%)    | 18.8           | 81.3             | 0.0             | 100.0            | 31.3                  | 68.8             | 0.0            | 100.0            |
| Active work (%)    | 11.1           | 88.9             | 33.3            | 66.7             | 66.7                  | 33.3             | 11.1           | 88.9             |
| Passive work (%)   | 43.2           | 56.8             | 43.2            | 56.8             | 81.8                  | 18.2             | 20.5           | 79.5             |
| High demand (%)    | 47.5           | 52.5             | 62.5            | 37.5             | 92.5                  | 7.5              | 50.0           | 50.0             |

\*Satisf - Satisfied; †Dissatisf - Dissatisfied; ‡*p-value* referring to *Pearson's* chi-square test; §*p-value* regarding *Fisher's* exact test

**Table 4** – Comparison between the categories of the Quality of Life at Work scale and the results of the *Job Stress Scale* for the nursing workers in an emergency care unit. Divinópolis, MG, Brazil, 2017.

|                    | Social integration   |                      | Constitutionalism    |                      | Space of work in the life |                      | Social relevance     |                      |
|--------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------------------|----------------------|----------------------|
|                    | Satisf*<br>(n=85)    | Dissatisf†<br>(n=24) | Satisf*<br>(n=46)    | Dissatisf†<br>(n=63) | Satisf*<br>(n=78)         | Dissatisf†<br>(n=31) | Satisf*<br>(n=62)    | Dissatisf†<br>(n=47) |
| Social support     | $p=0.012^{\ddagger}$ |                      | $p=0.050^{\ddagger}$ |                      | $p<0.001^{\ddagger}$      |                      | $p=0.004^{\ddagger}$ |                      |
| Low (%)            | 68.4                 | 31.6                 | 33.3                 | 66.7                 | 54.4                      | 45.6                 | 43.9                 | 56.1                 |
| High (%)           | 88.5                 | 11.5                 | 51.9                 | 48.1                 | 90.4                      | 9.6                  | 71.2                 | 28.8                 |
| Demand and control | $p<0.001^{\S}$       |                      | $p=0.017^{\S}$       |                      | $p=0.001^{\S}$            |                      | $p<0,001^{\S}$       |                      |
| High demand (%)    | 50.0                 | 50.0                 | 18.8                 | 81.3                 | 31.3                      | 68.8                 | 25.0                 | 75.0                 |
| Active work (%)    | 55.6                 | 44.4                 | 11.1                 | 88.9                 | 55.6                      | 44.4                 | 11.1                 | 88.9                 |
| Passive work (%)   | 77.3                 | 22.7                 | 45.5                 | 54.5                 | 79.5                      | 20.5                 | 63.6                 | 36.4                 |
| High demand (%)    | 95.0                 | 5.0                  | 55.0                 | 45.0                 | 82.5                      | 17.5                 | 72.5                 | 27.5                 |

\*Satisf - Satisfied; †Dissatisf - Dissatisfied; ‡*p-value* referring to *Pearson's* chi-square test. §*p-value* referring to *Fisher's* exact test.

No significant association was observed between the QOLW scale “Compensation” category and the “Social Support” or “Demand and Control” results according to the JSS ( $p>0.05$ ). The QOLW scale “Opportunities” category showed only a positive association with “Demand and control” ( $p<0.05$ ). There was also an association between the results of the global QOLW scale with both “Social support” and “Demand and control” according to the JSS ( $p<0.001$ ).

Most of QOLW scale categories displayed higher dissatisfaction when related to the low “Social support”, and in the “Demand and control” analysis, the workers classified as “high-demand” and “active work” also showed as most dissatisfied.

In the analysis of the factors associated with job dissatisfaction, according to the QOLW global scale, the following relationships were found: being a female nurse, having low job support, high-demand or active work and longer time in the position (Table 5).

**Table 5** – Factors associated with dissatisfaction at work according to a global scale of quality of life at the work of nursing workers in an emergency care unit. Divinópolis, MG, Brazil, 2017.

|                     | p-value*           | OR†  | 95% CI‡     |             |
|---------------------|--------------------|------|-------------|-------------|
|                     |                    |      | Lower Limit | Upper Limit |
| Gender              |                    |      |             |             |
| Male                |                    | 1.00 | -           | -           |
| Female              | 0.020 <sup>§</sup> | 5.60 | 1.32        | 23.80       |
| Degree of education |                    |      |             |             |
| Nursing assistant   |                    | 1.00 | -           | -           |
| Nursing technician  | 0.128 <sup>§</sup> | 5.53 | 0.61        | 50.13       |

**Table 5 – Cont.**

|                              | p-value* | OR†   | 95% CI‡     |             |
|------------------------------|----------|-------|-------------|-------------|
|                              |          |       | Lower Limit | Upper Limit |
| Nurse                        | 0.012§   | 31.54 | 2.16        | 460.26      |
| Social support               |          |       |             |             |
| High                         |          | 1.00  | -           | -           |
| Low                          | 0.000§   | 12.71 | 3.36        | 48.15       |
| Demand and control           |          |       |             |             |
| Low demand                   |          | 1.00  | -           | -           |
| High demand                  | 0.000§   | 55.32 | 6.65        | 459.96      |
| Active work                  | 0.004§   | 73.94 | 3.93        | 1391.10     |
| Passive work                 | 0.060§   | 3.80  | 0.95        | 15.28       |
| Time in the position (years) | 0.008§   | 1.12  | 1.03        | 1.23        |

\* p-value; †OR - OddsRatio; ‡CI - Confidence Interval; § Hosmer-Lemeshow test.

Female nursing workers were 5.6 times more likely to be dissatisfied than male nurses. No difference was observed between nursing assistants and technicians ( $p=0.128$ ); however, nurses are 31.5 times more likely to be dissatisfied with work than nursing assistants.

The professionals who had low “Social support” at work were almost 13 times more likely to be dissatisfied than those with high “Social support”. Regarding the “Demand and control” construct, the professionals with “high-demand” at work are 55.3 times more likely to be dissatisfied than those who have “low demand”. For those with “active work” this chance goes up to 73.9 times.

In the comparison between “passive work” and “low demand”, the significance was borderline ( $p=0.06$ ), with a trend to a greater chance of dissatisfaction among workers with “passive work”, when compared to those with “low demand”. Finally, as the position increases by one year, the chance of dissatisfaction increases by 1.12 times, i.e. By 12%.

## DISCUSSION

The demographic profile of this study corroborated the findings of others conducted abroad and in Brazil.

A survey of four hospitals in the Northeastern Ontario Region of Canada with midwifery nurses found that most participants were female (94.6%), with ages ranging from 24 to 64 years old, and a mean of 41.9 years old, with a mean of 16.3 years of experience in nursing and 11.6 years of experience in obstetric nursing.<sup>14</sup> A similar study conducted at a university hospital in the inland of Rio Grande do Sul, Brazil, with nurses working in the emergency room, found similar results to this investigation, with a predominance of female nurses (92.2%), married (65,1%), with children (69.5%) and a mean age of 39.47 years old ranging from 25 to 63.<sup>15</sup>

Regarding labor-related activity, in the working time and weekly workload of the nursing workers there were similarities with a Brazilian research conducted with the same population in Rondônia, which explained that, of the professionals interviewed, 44.5% have worked in the institution for over five years and 60.7% have a workload of 40 hours or less per week.<sup>9</sup>

Abroad, a Belgian study found that 87.6% of the participating nurses worked in rotating shifts, including night shifts, while 54.3% worked full-time, with a mean professional experience of 16.26 years as nurses and a mean working experience of 13.57 years as emergency nurses.<sup>4</sup>

The workday is considered one of the elements that propitiate wear and stress to workers. Federal Nursing Council Resolution 293/2004 regulates the elaboration of the monthly scale of nursing professionals and defines that the weekly workload should be 36 hours per week for care activities and 40 hours per week for administrative activities.<sup>6</sup>

Most nursing workers in the country work more than 30 hours per week, as shown in a study carried out in Emergency Care Units in the inland of the state of São Paulo, whose nursing workers had a workload of 36 hours per week,<sup>7</sup> and in a study conducted at a public hospital located in Ribeirão Preto, the mean weekly workload was 46.2 hours.<sup>6</sup>

Work hours may differ in intensity, resting breaks and repeating activity frequencies. The working conditions, involving psychosocial aspects and workload, determine how unfavorable the working day tends to be, so the relevance of this theme is exulted by the absence of a limit to the extension of the working day that is safe to health, both for the worker as well as for the patients to whom the professional provides care.<sup>16</sup>

Thus, the nursing staff's workload in this study refutes the national reality, which may have great influence on the other found results that showed the prevalence of moderate exposure to occupational stress and satisfaction with the QOLW. Indeed, factors such as working conditions and demand, safety, workload and social support have an influence on the QOLW and occupational stress.<sup>4,17</sup>

As for the results related to the labor-related bond, where the majority of the professionals were effective servants, corroborated the findings in the international study, conducted with the nursing staff of a public hospital in Spain, which obtained results showing that 72.09% of the professionals were employed as public civil servants,<sup>18</sup> as well as a research conducted in a municipality located in Bahia, Brazil, with the objective of analyzing the association between occupational stress and the QOLW of the nursing staff from a public hospital, where 90.2% of the workers had an effective labor-related bond.<sup>17</sup>

The effective labor-related bond is directly related to job stability and contributes to the permanence of workers in the sector for long periods, even if they are unmotivated and dissatisfied with their work.

In this context, it is clear that the "time in office" variable was a factor related to the QOLW dissatisfaction in this study. Older professionals were unmotivated by the work environment, showing that the increase of one year of work in the post at the evaluated Emergency Care Unit increased the chance of dissatisfaction with QOLW by 12%. However, the results of a study conducted in Iran showed that the longer the nursing profession is, the better the QOLW results are, and also showed unsatisfactory QOLW findings in professionals with lower educational attainment,<sup>19</sup> results that differ from those found in this investigation.

Another finding that should be highlighted was the prevalence of satisfaction with the QOLW between the nursing technicians and assistants and nurses' dissatisfaction (55.3%). International surveys that further evaluated QOLW of the nursing professionals in countries like Canada, Belgium, and Iran found moderate and satisfactory levels of QOLW among nurses.<sup>4,14,19-21</sup>

According to Walton, pioneer author of QOLW studies, dissatisfaction with work is the main problem faced by workers, regardless of their role. Its model can provide a very comprehensive look at QOLW, considering aspects such as physical conditions (work environment), indicators of satisfaction of primary needs of men, factors related to safety, health and remuneration, resulting in more productive workers.<sup>22</sup>

The analysis of occupational stress prevailed in those classified as "passive work" (40.4%). This result confirms the Demand-Control model assumption that workers classified as "passive work" are exposed at an intermediate level to occupational stress and, therefore, workers show a decline in their activities and ability to produce solutions for workers for the faced problems.<sup>23</sup>

The Demand-Control model, developed by Robert Karasek since the 1970s, emphasizes stress as a mismatch between working conditions and workers. Thus, occupational stress is seen as the unfavorable physical and emotional responses that occur when job demands are not in stability with the worker's capabilities, resources, or needs.<sup>23</sup>

However, the results found in this study differ from the results evidenced in other studies conducted with nursing workers in the country, in which the percentage of professionals who fit passive work was 19.2% in the state of Bahia<sup>17</sup> and 19.7% in Rio Grande do Sul, prevailing in both active and demanding work.<sup>24</sup>

The Emergency Care Units are mostly marked by the fragility and insufficiency of material and human resources, as well as inadequacies in the physical facilities, which are considered stressing factors for health workers, which generate improvisations and often compromise the excellence of the healthcare facility. care, besides wasting time, mental and physical fatigue.<sup>7</sup> Nevertheless, the professionals in this research were mostly exposed to occupational stress at an intermediate level.

Occupational stress and QOLW are key elements in a multidimensional and organizational work environment process that reaffirms worker participation as a key variable to achieve high levels of service quality, less worker illness and low turnover/absenteeism rates.<sup>4,14,20</sup>

Thus, the nursing workers evaluated in this study and who were most dissatisfied with the QOLW showed the associations to be a female nurse, to have high psychological and labor "demands" combined with low "social support".

These findings confirm the evidence that workers in the "high demand" profile have higher occupational stress and, consequently, this negatively reflects the professional's QOLW. Lack of "social support" by management and colleagues is a strong predictor of psychosomatic distress and also has an additional effect on the development of occupational stress in workers.<sup>4</sup>

A Canadian survey also confirmed the theory that professionals with low occupational stress exposure, that is, considered "low demand", associated with high "social support", had better QOLW and showed that nurses with high occupational stress were 5 times more susceptible to low QOLW.<sup>14</sup> Similarly, a Brazilian investigation identified a worse perception of QOLW in those nursing professionals who perceive low "social support" from colleagues and their boss (Prevalence Ratio (PR) = 1.84;  $p < 0.001$ ), besides those classified as "active work" (PR = 2.40;  $p < 0.001$ ) and "high demand" (PR = 3.36;  $p < 0.001$ ).<sup>17</sup>

Nursing requires teamwork to provide quality care, as peer support becomes a coping strategy often used by these workers. To have a healthy working relationship, it is also important to recognize the work performed by these professionals by the organization and managers. The perception that the organization supports and values the profession contributes to professional satisfaction and better QOLW.<sup>4,20-21</sup>

It is noteworthy, with regard to the prevalence of higher dissatisfaction found among nurses that this may be justified by the fact that higher-level professionals have greater autonomy to make decisions at work, but often are not able to suppress the negative aspects arising from high demand such as workload, scarcity of physical and human resources and absenteeism.

Another aspect to be considered that justifies dissatisfaction with QOLW among nurses is the crisis in the health sector, which directly influences workers, especially working conditions, which include wage discrepancy, requiring professionals to maintain other labor-related bonds, the devaluation of nurses regarding their profession, facing difficulties related to their professional performance, and the lack of recognition on the part of the society.<sup>7</sup>

The risk classification of patients at the doorstep is also an activity that often generates tension, because users who disagree with the classification made by nurses through institutional risk classification protocols are not uncommon, and act in accordance with violent manner with the

professional nurse, making the work environment quite tense, unsafe and stressful,<sup>25</sup> contributing to dissatisfaction with the QOLW.

This fact reaffirms the findings where no difference was observed between nursing assistants and technicians, however nurses are 31.5 times more likely to be dissatisfied with work than nursing assistants.

A work environment where there is social support, security, good salaries, adequate workload, recognition of professionals and growth opportunities is defined as an important aspect in nurses' decisions to remain in this work, thus preserving a qualified, satisfied and qualified team productive.<sup>3,20</sup>

The Emergency Care Unit of the municipality conducting this study has a high demand of patients, but due to the reality of health services in this region, there are flaws in the referral and counter-referral system, which contributes to its being unable to solve the health needs of the patients, often, showing overcrowding, work overload and poor patient care.

It is noteworthy that the effective reception interferes directly in the patient's prognosis; however, it is essential that the material and human resources, quantitatively and qualitatively, are in accordance with what is recommended, in addition to adequate facilities, technological and infrastructure resources that respect the needs, allowing timely and quality care needed.<sup>7</sup>

Finally, nursing workers have their routine marked by double or triple hours, overtime, frequent overwork practices, justified by the lack of staff, tight hours, pressure on care practices and, most of the times, with limited resources. All this has led to emerging feelings of emotional exhaustion, professional dissatisfaction and increased risk of becoming ill, resulting from the stress experienced in the workplace, causing damage to QOLW and even to the care practices provided to patients.<sup>1-2,25-26</sup>

## CONCLUSION

Stress is a dynamic phenomenon, and the way individuals perceive their work environment can change over time. For this reason, the cross-sectional design used represents the current perception of these workers regarding the context lived during the data collection period.

Through this research, it was concluded that nursing professionals with work of "high demand" and "passive work" were more likely to be dissatisfied with their QOLW, which proves the existence of the relationship between QOLW and occupational stress, that is, the increased stress level provides dissatisfaction with QOLW.

It was also possible to observe that the level of education, as well as the higher demand and job attributions, influenced the nursing workers' perceptions about the QOLW, as nurses were more dissatisfied with the working conditions than the nursing technicians, nursing and nursing assistants.

It is noteworthy that the present investigation does not claim to generalize the results found since they belong to a group of workers from a single institution. Nevertheless, the findings regarding QOLW and its relationship with occupational stress were consistent and should be analyzed by professionals and institutional managers, in order to know, reflect and identify the implications of these results on job performance and satisfaction, preservation, patient and worker safety.

Thus, the creation and implementation of strategies to improve working conditions and worker's health care programs could favor the reduction of occupational stress and provide improvements in QOLW, and as a consequence, would have a significant impact on absenteeism reduction and improvements of the quality of nursing care provided to patients.

## REFERENCES

1. Amaral J, Ribeiro JP, Paixão DX. Qualidade de vida no trabalho dos profissionais de enfermagem em ambiente hospitalar: uma revisão integrativa. *Espac Saúde* [Internet]. 2015 Jan/Mar [cited 10 Nov 2017]; 16(1):66-74. Available from: <https://dx.doi.org/10.22421/1517-7130.2015v16n1p66>
2. Van Bogaert P, Adriaenssens J, Dilles T, Martens D, Van Rompaey B, Timmermans O. Impact of role-, job- and organizational characteristics on Nursing Unit Managers' work related stress and well-being. *J Adv Nurs* [Internet]. 2014 [cited 2017 Dec 10]; 70(11):2622-33. Available from: <https://dx.doi.org/10.1111/jan.12449>
3. Lee YW, Dai YT, Park CG, McCreary LL. Predicting quality of work life on nurses' intention to leave. *J Nurs Scholarsh* [Internet]. 2013 [cited 2017 Nov 10]; 45(2):160-8. Available from: <https://dx.doi.org/10.1111/jnu.12017>
4. Adriaenssens J, Gucht V, Maes S. Causes and consequences of occupational stress in emergency nurses, a longitudinal study. *J Nurs Manag* [Internet]. 2015 [cited 2017 Dec 10]; 23(3):346-58. Available from: <https://dx.doi.org/10.1111/jonm.12138>
5. Nasirizade M, Amouzeshi Z, Unesi Z, Vagharseyyedin SA, Biabani F, Bahrami M. The Relationship Between Quality of Work Life and Organizational Effectiveness Among Hospital Nurses. *Mod Care J*. [Internet]. 2017 [cited 2017 Dec 10]; 14(1):e63815. Available from: <https://dx.doi.org/10.5812/modernc.63815>
6. Dalri RMB, Silva LA, Mendes AMOC, Robazzi MLCC. Nurses' workload and its relation with physiological stress reactions. *Rev Latino-Am Enferm*. [Internet]. 2014 Nov/Dec [cited 2017 Nov 10]; 22(6):959-65. Available from: <https://dx.doi.org/10.1590/0104-1169.3292.2503>
7. Trettene ADS, Ferreira JAF, Mutro MEG, Tabaquim MDLM, Razera APR. Stress in nursing professionals working in Emergency Care Units. *J Nurs UFPE* [Internet]. 2016 [cited 2017 Dec 10]; 36(91):243-61. Available from: <https://dx.doi.org/10.5205/reuol.9978-88449-6-ed1012201603>
8. Ministério da Saúde (BR). Portaria n.342, de 4 de março de 2013. Redefine as diretrizes para implantação do Componente Unidade de Pronto Atendimento (UPA 24h) em conformidade com a Política Nacional de Atenção às Urgências, e dispõe sobre incentivo financeiro de investimento para novas UPA 24h (UPA Nova) e UPA 24h ampliadas (UPA Ampliada) e respectivo incentivo financeiro de custeio mensal. Brasília, DF(BR): MS; 2013 [citado 14 Nov 2017]. Available from: [http://bvsmms.saude.gov.br/bvs/saudelegis/gm/2013/prt0342\\_04\\_03\\_2013.html](http://bvsmms.saude.gov.br/bvs/saudelegis/gm/2013/prt0342_04_03_2013.html)
9. Kogien M, Cedaro JJ. Public emergency department: the psychosocial impact on the physical domain of quality of life of nursing professionals. *Rev Latino-Am Enferm* [Internet]. 2014 Feb [cited 2018 Feb 19]; 22(1):51-8. Available from: <https://dx.doi.org/10.1590/0104-1169.3171.2387>.
10. Angelim R, Rocha G. Produção científica acerca das condições de trabalho da enfermagem em serviços de urgência e emergência. *J Res Fundam Care*. Online [Internet]. 2016 Jan [cited 10 Dec 2017]; 8(1): 3845-3859. Available from: <https://dx.doi.org/10.9789/2175-5361.2016.v8i1.3845-3859>
11. Schmidt DRC, Paladini MBC, Pais JD, Oliveira AR. Qualidade de vida no trabalho e burnout em trabalhadores de enfermagem de Unidade de Terapia Intensiva. *Rev Bras Enferm*. [Internet]. 2013 Jan/Feb [cited 19 Feb 2018]; 66(1):13-17. Disponível em: <https://dx.doi.org/10.1590/S0034-71672013000100002>
12. Timossi LS, Pedroso B, Pilatti LA, Francisco AC. Adaptação do modelo de Walton para avaliação da Qualidade de Vida no Trabalho. *J Phys Educ* [Internet]. 2009 [cited 10 Dec 2017]; 20(3):395-405. Disponível em: <https://dx.doi.org/10.4025/reveducfis.v20i3.5780>.
13. Alves MG, Chor D, Faerstein E, Lopes C de S, Werneck GL. Short version of the "job stress scale": a Portuguese-language adaptation. *Rev Saúde Pública* [Internet]. 2004 Apr [cited 2018 Feb 22]; 38(2):164-71. Available from: <https://dx.doi.org/10.1590/S0034-89102004000200003>

14. Nowrouzi B, Lightfoot N, Carter L, Lariviere M, Rukholm E, Schinke R, et al. The relationship between quality of work life and location of cross-training among obstetric nurses in urban northeastern Ontario, Canada: a population-based cross sectional study. *Int J Occup Med Environ Health* [Internet]. 2015 [cited 2017 Dec 10]; 28(3):571-86. Available from: <https://dx.doi.org/10.13075/ijomeh.1896.00443>
15. Umann J, Guido LA, Silva RM. Stress, coping and presenteeism in nurses assisting critical and potentially critical patients. *Rev Esc Enferm USP* [Internet]. 2014 Oct [cited 2018 Feb 19]; 48(5):891-8. Available from: <https://dx.doi.org/10.1590/S0080-6234201400005000016>
16. Neto JA daS, Torres CRD, Feitosa KVA, Gouveia MT de O, Torres JRD. Aspectos jurídicos da jornada de trabalho em enfermagem: reflexão teórica. *Rev Enferm UFPI* [Internet]. 2015 [cited 19 Feb 2018]; 4(3):95-8. Available from: <http://www.ojs.ufpi.br/index.php/reufpi/article/view/2368>
17. Azevedo BDS, Nery AA, Cardoso JP. Occupational stress and dissatisfaction with quality of work life in nursing. *Texto Contexto Enferm* [Internet]. 2017 [cited 2017 Dec 10]; 26(1):e3940015. Available from: <https://dx.doi.org/10.1590/0104-07072017003940015>
18. Portero SC, Vaquero AM. Professional burnout, stress and job satisfaction of nursing staff at a university hospital. *Rev Latino-Am Enferm* [Internet]. 2015 [cited 2018 Feb 19]; 23(3):543-52. Available from: <https://dx.doi.org/10.1590/0104-1169.0284.2586>
19. Moradi T, Maghaminejad F, Azizi-Fini I. Quality of working life of nurses and its related factors. *Nurs Midwifery Stud* [Internet]. 2014 [cited 2017 Dec 10]; 3(2):e19450. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4228533>
20. Eslamian J, Akbarpoor AA, Hoseini SA. Quality of work life and its association with workplace violence of the nurses in emergency departments. *Iranian J Nurs Midwifery Res* [Internet]. 2015 [cited 2017 Dec 10]; 20(1):56-62. Available from: <http://www.ijnmrjournal.net/text.asp?2015/20/1/56/149817>
21. Jaafarpour M, Khani A, Mahmodian MR. Evaluation of the quality of nursing work life and its association with job burnout in Isfahan University of Medical Sciences. *Int J Epidemiol Res* [Internet]. 2015 [cited 2017 Dec 10]; 2(1):30-9. Available from: [http://ijer.skums.ac.ir/article\\_11994.html](http://ijer.skums.ac.ir/article_11994.html)
22. Walton RE. Quality of working life: what is it? *Sloan management review*. 1973; 15(1):11-21.
23. Karasek RA, Theorell T. *Healthy work. Stress, productivity and the reconstruction of working life*. New York(US): Basic Books; 1990.
24. Prochnow A, Magnago TSBS, Urbanetto JS, Beck CLC, Lima SBS, Greco PBT. Work ability in nursing: relationship with psychological demands and control over the work. *Rev Latino-Am Enferm* [Internet]. 2013 Dec [cited 2018 Feb 04]; 21(6):1298-305. Available from: <https://dx.doi.org/10.1590/0104-1169.3072.2367>
25. Oliveira JLC, Gatti AP, Barreto M da S, Bellucci Junior JA, Góes HL de F, Matsuda LM. User embracement with risk classification: perceptions of the service users of an emergency care unit. *Texto Contexto Enferm* [Internet]. 2017 [cited 2018 Feb 04]; 26(1):e0960014. Available from: <https://dx.doi.org/10.1590/0104-07072017000960014>
26. Mullen K. Barriers to work–life balance for hospital nurses. *Workplace HealthSaf* [Internet]. 2015 [cited 2017 Dec 10]; 63(3):96-9. Available from: <https://dx.doi.org/10.1177/2165079914565355>

## NOTES

### CONTRIBUTION OF AUTHORITY

Study Design: Teixeira GS, Silveira RCP.

Data collection: Teixeira GS

Analysis and interpretation of data: Teixeira GS, Ribeiro IKS, Silveira RCP.

Discussion of the results: Teixeira GS, Ribeiro IKS, Silveira RCP.

Writing and/or critical review of content: Teixeira GS, Ribeiro IKS, Silveira RCP, Mininel VA, Moraes JT.

Review and final approval of the final version: Teixeira GS, Ribeiro IKS, Silveira RCP, Mininel VA, Moraes JT.

### ETHICS COMMITTEE IN RESEARCH

Approved by the Ethics Committee in Research with Human Beings of the *Univerisade Federal de São João Del Rei* under Opinion No.1,696,428. Certificate of Submission for Ethical Appreciation - CAAE 58512316.0.0000.5545.

### CONFLICT OF INTERESTS

There is no conflict of interest.

### HISTORICAL

Received:14 August, 2018.

Approved:1 March, 2019.

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