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PSYCHOSOCIAL ASPECTS OF INTENSIVE CARE NURSING WORKERS

ASPECTOS PSICOSSOCIAIS DE TRABALHADORES DE ENFERMAGEM INTENSIVISTAS

ASPECTOS PSICOSOCIALES DE TRABAJADORES DE ENFERMERÍA INTESIVISTAS

Jorge Luiz Lima da Silva[1], Talita Monsores Paixão[2], Felipe dos Santos Costa[3], Rafael da Silva Soares[4], Liliane Reis Teixeira[5]

ABSTRACT

***Objective*:** to analyze the psychosocial aspects of work among intensive care nursing workers. ***Method*:** cross-sectional study using a self-administered questionnaire applied to 130 workers in two federal hospitals in Rio de Janeiro, a general hospital and a university hospital, using the reduced version of Job Stress Scale, adapted to Portuguese. The tests used in the analysis were Pearson's Chi-square and Fisher's exact test. For each step of the data analysis process, we used the SPSS ® version 21. ***Results*:** the workers of the general hospital, despite the lower demand, showed higher risk of mental illness when compared to those of the university hospital because even with high demands, these showed high job control and positive influence of social support. ***Conclusion*:** there is need for greater attention to workers in highly complex sectors. Interdisciplinary joint decisions should be sought to provide greater social support and reduce wear at work. ***Descriptors*:** Occupational Health; Nursing Staff; Psychological Stress.

RESUMO

Objetivo: analisar os aspectos psicossociais do trabalho entre profissionais de enfermagem intensivistas. ***Método:*** estudo seccional com uso de questionário autoaplicado a 130 trabalhadores de dois hospitais federais do Rio de Janeiro, um geral e outro universitário, com o uso da Job Stress Scale em versão reduzida e adaptada para o português. Os testes utilizados na análise foram o Chi-quadrado de Pearson e o teste exato de Fisher. Para cada etapa do processo de análise dos dados, utilizou-se o SPSS® versão 21. ***Resultados:*** os trabalhadores do hospital geral, mesmo com menores demandas, apresentam maior risco de adoecimento psíquico, quando comparados aos do hospital universitário, pois estes, mesmo com elevadas demandas, apresentaram alto controle no trabalho e influência positiva do suporte social. ***Conclusão:*** há necessidade de maior atenção aos trabalhadores de setores de alta complexidade. Devem ser buscadas decisões conjuntas interdisciplinares para oferecer maior apoio social e diminuir o desgaste no trabalho. ***Descritores:*** Saúde do Trabalhador; Equipe de Enfermagem; Estresse Psicológico.

RESUMEN

Objetivo: analizar los aspectos psicosociales del trabajo entre profesionales de enfermería intensivistas. ***Método:*** estudio seccional con uso de cuestionario auto-aplicado a 130 trabajadores de dos hospitales federales de Rio de Janeiro, un general y otro universitario, con el uso de Job Stress Scale en versión reducida y adaptada para el portugués. Los test utilizados en el análisis fueron el Chi-cuadrado de Pearson y el test exacto de Fisher. Para cada etapa del proceso de análisis de los datos, se utilizó el SPSS® versión 21. ***Resultados:*** los trabajadores del hospital general, mismo con menores demandas, presentan mayor riesgo de enfermedad psíquica, cuando comparados a los del hospital universitario, pues estos, mismo con elevadas demandas, presentaron alto control en el trabajo e influencia positiva del soporte social. ***Conclusión:*** hay necesidad de mayor atención a los trabajadores de sectores de alta complejidad. Deben ser buscadas decisiones conjuntas interdisciplinares para ofrecer mayor apoyo social y disminuir el desgaste en el trabajo. ***Descriptors*:** Salud del Trabajador; Equipo de Enfermería; Estrés Psicológico.

[1]Nurse, PhD in Public Health, Professor at the Fluminense Federal University / UFF. Niterói (RJ), Brazil. E-mail: jorgeluizlima@gmail.com; [2]Nurse, Master Student, Public Health Program, National School of Public Health / Ensp, Fiocruz. Rio de Janeiro (RJ), Brazil. E-mail: talitamonsores@gmail.com; [3]Nurse, Specialist in Public Health and Family Health, Municipal Health Secretariat. São Paulo (SP), Brazil. E-mail: felipedosantoscosta@gmail.com; [4]Nurse, Municipal Health Secretariat of Rio de Janeiro, Municipal Hospital Souza Aguiar, Fluminense Federal University / UFF. Rio de Janeiro (RJ), Brazil. E-mail: rafaeldasilvasoares@hotmail.com; [5]Biologist, PhD (Post-PhD in Public Health), National School of Public Health / Ensp, Fiocruz. Rio de Janeiro (RJ), Brazil. E-mail: lilianeteixeira@ensp.fiocruz.br

INTRODUCTION

Occupational health is responsible for the relationship between work and health, having as objective the health promotion and protection, which are carried out by means of surveillance actions of risk present in working environments, working conditions, health problems. It also carries out the organization and provision of care to workers.[1]

The work-related stress is currently known as harmful factor to the psychosocial well-being of professionals. It is a source of major concern, jeopardizes the health of workers and its consequences are lower performance, low morale, high turnover, absenteeism and violence at the workplace. It is also an important determinant of depressive disorders and other diseases such as metabolic syndrome, chronic fatigue syndrome, sleep disorders, diabetes mellitus and burnout syndrome.[2]

The units intended for intensive care appear to offer extremely stressful environment for anyone who experiences them, due to the fact that they are sites that are dedicated to the care of seriously ill patients. There are several psychosocial factors that have relation to work, but the more closely related are: lack of control and autonomy at work, monotonous work, hostility on the part of patients, lack of social support by colleagues, dissatisfaction with work, type of personality, styles of coping with stress, high concentration of tasks, the interface work / family, life habits, psychological disorders.[3]

The evaluation of the role of demands or environmental stimuli in stress responses has been growing in research about work-related stress. Stress is produced in situations whose demands exceed the individual's capacity to respond to stimuli, thus, its theory is based on the evaluation of the responses of the body to the demands of the external environment. The description of the harmful health effects arising from the high levels of demand and environmental stimulation is wide. Especially among the nursing staff, workload has been identified as a factor of work-related stress, which occurs when the demands at work exceed human limitations.[4]

The level of control at work should also be considered in evaluating the relationship between health and work. In the psychosocial perspective, the concept of control was first developed by psychologists, marked by an emphasis on the ability to influence life events and effects on self-esteem, or on the development of feelings of depression. However, until today, changes have been incorporated in its concept, especially those that direct discussions to workplaces and within the production process, which are factors involved in decision-making.[3,4]

With the need to consider demand and control simultaneously, Karasek formulated the so-called Demand-Control Model (DCM). This model distinguishes four types of work experiences, which are generated by the interaction of levels of psychological demands and control.[4-6] According to this model, high psychological demands and low worker's control over the work can be indicators of physical and mental overload in worker's everyday [6]. Subsequently, the social support dimension was added to the model, and when little present or absent in the workplace, can generate negative consequences to workers' health.[7]

During the analysis of the work process, one should highlight the elements that interact with each other and with the worker's body, which are responsible for adaptation processes and are translated as wear; for example, the stress response, considered the most characteristic adjustment process of capitalist society. The wear can be defined as a loss of actual and / or potential biological and mental capacity. However, information on stress and mental illness is scarce in Occupational Health Care Policy, although these are recognized threats.[1,8,9]

OBJECTIVE

- To analyze the psychosocial aspects related to the work of intensive care nurses in government hospitals of Rio de Janeiro.

METHOD

This work consists of observational, descriptive and sectional study. The study population was the nursing staff of the Coronary Care Unit (CCU) and Intensive Care Unit (ICU) of two hospitals in a large metropolitan region of Rio de Janeiro. Those licensed, transferred and absent in the ICU sector were sought actively. Those who had been away from the sector for up to six months were convened, after telephone contact, and a meeting was scheduled for completing the questionnaire at the hospital. These measures were taken in order to avoid the bias of the healthy worker. Data were collected during 2011. Hospitals were named as University Hospital (UH) and General Hospital (GH).

In all, 130 professionals participated in the study, The first unit (UH) had 80 professionals, consisting of 25 (31.6%) nurses, 46 (58.2%)

nursing technicians and nine (11.4%) nursing assistants, and the second unit (GH) had 50 professionals, 12 nurses (24%), 16 (32%) nursing technicians and 22 (44%) nursing assistants.

For data collection, a structured self-applied questionnaire was used. The psychosocial aspects related to work were measured by the short version of the Job Stress Scale (JSS), adapted to Portuguese[10]. The translated version has seventeen questions, five to evaluate the "psychological demands at work", six for assessing the degree of "control at work" and six for assessing the "social support".[10] Scores were obtained by adding the points assigned to each of the questions. According to these questions, the score for the dimension "demand" ranged from 5 to 20 points. Each question received scores of an increasing scale from 1 to 4. The scores of the dimension "control" were obtained by adding the points assigned to each of the six questions ranged from 6 to 24, just like in the dimension “social support”.

The median found in the scores of the two dimensions "demand” and “control" was used to define the stress exposure quadrants at work[5]. With regard to the composition of the demand-control model groups, the variables "psychological demand” and “control at work" and their respective dichotomized degrees (high and low) were combined to build the quadrants of the two-dimensional model, where: High Demand (HD) = combination of high demand and low control; Active Work (AW) = combination of high demand and high control; Low Demand (LD) = combination of low demand and high control; Passive Work (PW) = combination of low demand and low control. Social support and control are dimensions that have been influenced by changes in work organization and by preventive interventions on psychosocial risks of work.[3] This dimension followed the same score pattern of the previous dimensions and the median was used as the cutoff point.

Continuous variables were presented according to mean and standard deviation, and categorical variables according to their absolute values (minimum and maximum) and frequencies. Then, bivariate analysis was carried out between exposure variables (demand, control and social support) and sociodemographic and work variables. The p value was considered $p \leq 0.05$ in the evaluation of significance. The tests used in the analysis were Pearson's Chi-square and Fisher's exact test. For each step of the data analysis process, it was used the Statistical Package for the Social Sciences version 21 (SPSS®).

The study followed the resolution of the National Health Council (CNS) No. 466/12 under the Certificate of Presentation for Ethical Consideration: 24229013.5.0000.5240.

RESULTS

♦ Socio-demographic characteristics of the study groups

It was observed that in both hospitals, the self-referred skin color was white with a frequency of 45.0% in the UH and 44.0% in the GH. Regarding gender, the prevalence of males was observed in the UH, with 67.5%, whereas in the GH, women had 78.0% (p = <0.01).

The age range was observed according to the average of 35 years old, with standard deviation of 9.7 years. As for marital status, in the UH, 57.5% of workers has no partners, and in the GH, 74.0% had a partner (p = 0.01). Most of the workers in both hospitals did not have children, totaling 52.5% in UH and 52.0% in the GH.

Schooling presented significant difference between the hospitals (p = 0.01), with higher concentration of professionals with education up to high school in UH, with 76.3%, and higher education or more, in GH, with 60.0 %. The per capita income for minimum wage at both hospitals was observed by the general average of seven salaries.

♦ Characterization of labor variables

The professional category showed statistical difference between groups (p = <0.01). In the UH, nursing technician was more frequent with 57.5%, and in the GH, nursing assistant was more frequent, with 44.0%. As for nurses, there was a higher concentration of these in UH, with 31.3%. In GH, these professionals totaled 24.0%. The permanent employment relationship was the most frequent in both hospitals, totaling 61.3% in UH and 88.0% in the GH (p = 0.01).

As for the work shift, the mixed shift (professionals working in shifts ranging between night and day with no fixed schedule) was the most frequent in both hospitals, with 50.0% in UH and 64.0% in GH. The weekly workload was observed in accordance with the overall average of 51 hours per week, with a standard deviation of 19 hours. Thus, in UH, there was frequent group above average with 61.3%, and in GH there was frequency below the average, 54.0%. The existence of more than one job was found in 65.0% of workers in UH, and in 54.0% in the GH.

Regarding the time of work in the sector, it was observed frequency of average of 6.5 years and standard deviation of 5 years. It was found frequency until the average for 78.8% of the UH workers, and 58.0% of GH workers. As for the time of work in nursing, it was observed overall average of 12 years, with standard deviation of 12 years. In UH, 56.2% of professionals worked until the average, and in the GH, there was a balance between the options with 50.0% of workers above and below the average.

The sector of work showed statistical significance, where 67.5% worked in the ICU of UH, and 52.0% in the CCU of the GH (p = 0.04). As for the thinking of work during the rest, it was observed that 82.5% of UH professionals and 80.0% of GH professionals answered negatively. Regarding the self-perceived stress at work, the option medium stress was the most frequent with 83.8% in the UH and 52.0% in the GH (p = <0.01).

♦ Demand, control and social support analysis

In the analysis of demand at work, the median found was 10, so, it was observed high demand at work in the UH with 52.5%, and low demand at work in the GH, with 66.0% (p = 0.05). The control at work in both hospitals was observed according to the median 12. Thus, levels above the median were observed in UH, with 67.5%, whereas in GH they were below the median, with 64.0 % (p = 0.01). For social support at work, the median found was 11. It remained above that in UH with 51.2%, and below that level in GH, with 60.0%.

When analyzing demand and control at work simultaneously, it was observed that most UH workers presented a "high demand" role, with 35.0%; and GH workers presented "low demand" with 42.0% (p = 0.01). Table 1 shows these results.

Table 1. Psychosocial aspects according to demand-control model of intensive care nursing professionals - RJ, 2014, n=130.

Dimensions	Hospital				P value
	UG		GH		
	n	%	n	%	
Demand					0.05*
Median 10					
Low	38	4.5	33	66.0	
High	42	52.5	17	34.0	
Control					0.01*
Median 12					
Low	26	32.5	32	64.0	
High	54	67.5	18	36.0	
Social support					0.28
Median 11					
Low	39	48.8	30	60.0	
High	41	51.2	20	40.0	
Quadrants DCM					0.01*
High demand ↑D↓C	28	35.0	12	24.0	
Active work ↑D↑C	26	32.5	06	12.0	
Passive work ↓D↓C	16	20.0	11	22.0	
Low demand ↓D↑C	10	12.5	21	42.0	

Legend: n = Total of workers by subcategory ; % = Frequency; * Statistical significance .

♦ Analysis of the dimension demand, according to sociodemographic and occupational aspects

Bivariate analysis between the sociodemographic aspects and demand at work reveals statistically significant differences in the age group (p = 0.05) and in the per capita family income by minimum wage (p = 0.01). In the age group, it was observed in both the UH and in GH, low demand for 35 years old or more, with 52.6% (20) and 69.7% (23), respectively, and high demand for workers ages up to 35 years old, 59.5% (25) and 52.9% (09) respectively.

Regarding family per capita income, it was observed that in UH, 63.2% (24) of workers of the group with low demand at work receive more than seven minimum wages, and 71.4% (30) of the group with high demand at work, earn up to the average.

In the relationship between labor variables and the demand at work, statistical significance was observed in the "self-perception of stress at work" (p = 0.04). A total of 81.6% (31) of the UH workers in low demand presented medium stress and 85.7% (36) in high demand. In GH, 51.5% (17) of the group with low demand at work showed high stress and 64.7% (11) of the group in high demand had medium stress (p = 0.04). The results are shown in Table 2.

Table 2. Significant values of sociodemographic and occupational aspects related to demand in the work of intensive nursing professionals - RJ, 2014, n=130.

Demanda at work									
	Hospital								
Variables	UH				GH				P value
	Low demand		High demand		Low demand		High demand		
	n	%	n	%	n	%	n	%	
Sociodemographic									
Age group SD = 9.7									0.05*
Up to 35 years old	18	47.4	25	59.5	10	30.3	09	52.9	
35 years old or older	20	52.6	17	40.5	23	69.7	08	47.1	
Per capita income by MW									0.01*
Up to 07 minimum wages	14	36.8	30	71.4	17	51.5	09	52.9	
Above 07 minimum wages	24	63.2	12	28.6	16	48.5	08	47.1	
Ocupational									
Self-perceived stress									0.04*
No stress	04	10.5	04	09.5	01	03.0	02	11.8	
Medium stress	31	81.6	36	85.7	15	45.5	11	64.7	
Too much stress	03	07.9	02	04.8	17	51.5	04	23.5	

Legend: n = Total workforce by subcategory; % = Frequency; to = chi-square test of Pearson; * Statistical significance; SD = Standard Deviation.

♦ Analysis of the dimension control, according to sociodemographic and occupational aspects

Statistical difference was observed in the age group (p = 0.05) and education (p = 0.04). In the age group, workers of the low control group were aged 35 years or older, in both hospitals, 53.8% (14) in UH and 68.8% (22) in GH. In the group with high control at work, 57.4% (31) of the UH workers were aged up to 35 years and, in GH, there was no difference between age groups, both represented 50.0% (09).

In UH, those with up to high school showed higher frequencies in the strata of high control at work, 81.5% (44). In GH, those in the low control group presented with education up to higher education or more, 65.6% (21).

In the relationship between the variables labor and control at work, there was a significant result in "more than one job" (p = 0.05) and "thinking at work, during the rest" (p = 0.01). In the variable "more than a job," 73.1% (19) in the UH had more than one job in low control. By contrast, in GH, in high control, 72.2% (13) had more than one job.

Regarding the "thinking at work during the rest", it was observed that in both hospitals, workers do not think at work when resting, although it was observed that those who most think are those with high control, in the UH, 22.2% (22) and in the GH, 38.9% (07) (p = 0.01).

Table 3. Significant values of sociodemographic and occupational aspects related to the control at work of intensive nursing professionals - RJ, 2014, n=130.

Control at work									
	Hospital								
Variables	UH				GH				P
	Low control		High Control		Low control		High Control		value
	n	%	n	%	N	%	n	%	
Sociodemographic									
Age group SD = 9.7									0.05*
Up to 35 years old	12	46.2	31	57.4	10	31.2	09	50.0	
35 years old or older	14	53.8	23	42.6	22	68.8	09	50.0	
Education									0.04*
Up to High School	17	65.4	44	81.5	11	34.4	09	50.0	
Higher education or more	09	34.6	10	18.5	21	65.6	09	50.0	
Occupational									
More than one job									0.05*
Yes	19	73.1	33	61.1	22	68.8	05	27.8	
No	07	26.9	21	38.9	10	31.2	13	72.2	
Thinking at work during the rest									0.01*
Think at work	02	07.7	12	22.2	03	09.4	07	38.9	
Do not think at work	24	92.3	42	77.8	29	90.6	11	61.1	

Legend: n = Total workforce by subcategory; % = Frequency; p = chi-square test of Pearson; SD = standard deviation; * Statistical significance.

♦ Analysis of dimension social support, according to sociodemographic and occupational aspects

By analyzing the sociodemographic aspects relating them to social support at work, there was no statistical difference between the groups. In relation to occupational variables, there were differences in the variable "type of employment" (p = 0.02), in which 51.3% (20) of the UH workers with low social support had temporary employment and 73.2% (30) of the group with high social support had permanent relationship. In GH, there was the opposite, 80.0% (24) of permanent workers had low support and 100.0% (20) showed high social support.

♦ Analysis of the combination of quadrants with social support

In the simultaneous analysis of demand and control, related to social support at work, it was found statistical difference between groups (p = 0.03). In this regard, it was observed that 33.3% (13) of the UH workers with low social support had high demand jobs, and 41.5% (17) of the group of workers with high social support had active work.

Among the professionals of the GH, 46.7% (14) of the group with low social support, 35.0% (07) was in low demand, and among those with high social support, 35.0% (07) were in high demand and 35.0% (07) in low demand. This relationship is shown in Table 4.

Table 4. Dimensions of psychosocial aspects of work related to social support of intensive workers - R 2014, n=130.

Demand and control in work related to social support									
		Hospital							
		UH				GH			P value
Quadrants		Low support		High support		Low support		High support	
		n	%	n	%	n	%	n	%	0.03*
High demand	↑D↓C	13	33.3	15	36.6	05	16.7	07	35.0	
Active work	↑D↑C	09	23.1	17	41.5	03	10.0	03	15.0	
Low demand	↓D↑C	08	20.5	02	04.9	14	46.7	07	35.0	
Passive work	↓D↓C	09	23.1	07	17.1	08	26.7	03	15.0	

Legend: n = Total workforce by subcategory; % = Frequency; p = chi-square test of Pearson; * Statistical significance.

DISCUSSION

This study describes the psychosocial aspects and associated factors. This way, one can glimpse the sociodemographic and occupational aspects and how they behave in the population of workers, highlighting the differences between the groups.

♦ Socio-demographic aspects related to demand, control and social support at work

As for the sociodemographic aspects relating to the psychosocial dimensions demand and control, there was higher number of young people in UH with increased demand at work and also more control. In contrast, among older workers, there was less demand and more control. It is inferred, from this data, that UH workers have lower risks of illness at work, regardless of age.

In the GH and in the UH, younger workers have high demands and high control. Nevertheless, there was a higher prevalence of older workers with low demand and low control. The latter fact allows realizing that GH older workers are more likely to illness from work, when compared those in the UH, who had lower demand.

With regard to age, the study shows that most of the nursing staff members were aged 40 years, with a propensity to occupational stress.[11] Other research has found frequent age group of young people (80.2% under 40 years old), which confirms the profile of workers for the intensive care sector.[12]

In relation to gender, this study differs from those performed with nursing staff, since the male presence was more frequent, with highlight for the CCU at UH. This is confirmed by Gil-Monte[13], who highlights that female concentration of nursing workers is closely related to the feminization of care, but there has been increasing participation of men opting for this area in recent decades, which is expressed in a gradual and stable manner. Added to this, there is the realization that the critical care sector requires greater physical strength, so men are more required.[14]

As for education, there was more frequency of higher education in GH and of high school in UH; and although the GH professionals presented higher levels of education, that hospital had greater quantity of nursing technicians and assistants. The higher incidence of higher education on GH may be related to the fact that workers had attended graduation but were working as technicians and assistants. The psychosocial factor involved in this dynamic is the development of career. Even those with more schooling remain without prospect of rise in public institution and have sense of

frustration; insufficient payment and low social value of their work.[3]

The occurrence of more professionals with technical education in hospitals is due to the crisis of the Brazilian hospital system, as well as of other sectors of the economy. Entrepreneurs of this system are more concerned with reducing costs, even knowing that the presence of nurses means higher quality in patient care.[15] Other authors also note in their studies the higher concentration of technical-level professionals.[6,16,17] This is confirmed by another study, which by comparing the level of education of the nursing staff of a hospital, was observed that 71.6% had only finished high school.[18]

Regarding education related to control at work, it was observed in UH predominance of technical-level professionals with high control at work, which minimizes the negative effects of high psychological demands, as noted in a study that sheds light on the fact that these can present high control of their activities, feeling free to make their own decisions when implementing professional activities.[6] In GH, there was a greater concentration of higher education workers in the low-control group.

♦ Occupational aspects related to demand, control and social support at work

With regard to occupational aspects, permanent employment relationship was frequent in both hospitals, especially in GH (88%). In UH, employees with permanent relationship showed low demand, and in GH, they had high demands.[9] As for the control, workers from both institutions with permanent relationship had high control, and the reverse was observed by the same author.[9]

These data indicate that employment relationship shows different experiences of stress at work, however, when comparing the groups, there was significant difference regarding the temporary relationship, with a higher occurrence in UH (38.8%) when compared to GH (12.0%). This result suggests greater turnover of professionals in the UH against greater stability in GH. Precariousness of the bond can generate concern about the financial situation of considerable part of UH workers. France et al.[19] found greater frequency of workers with temporary employment relationship (63.2%) and highlighted that they feel anxious every contract termination, for not knowing whether they will have the contract renewed; they feel concerned with the need to ensure their financial commitments and sustainability of the family.

Even with greater job stability, an interesting fact could be perceived: in relation to the self-perception of stress, workers from both hospitals had "high stress" as the most frequent. However, in the GH, the second most common option was "too much stress" (42,0%).

Workers with temporary employment relationship have major problems related to stress due to overwork, professional involvement, professional and career instability, remuneration and also due to the socioprofessional status seen as precarious.[9,20] Permanent employment is described as a source of increased control and hence stress reducer.[21]

Regarding the type of employment, relating it to social support at work, it was observed that, in UH, most workers with permanent bond receive high support, when compared to those with temporary bonds, as in GH. The result demonstrates the deficiency of social support at work for temporary workers, which exposes them to the risk of mental illness when associated with high demands and low control, as in GH.

With respect to their position in the hierarchy of institutions, one can observe greater sense of control over work among nursing assistants and technicians when compared to nurses in both hospitals. UH technicians have higher control scores (64.8%) than nurses (24.1%). Also the GH assistants had greater control when compared to nurses (55.6% vs. 22.2%). Low frequency of control of nurses and high control of technicians resemble a study by Magnago et al.[6] in a large hospital in the South Brazil, where 25.0% of nurses had low control. It also showed that 37.7% of nursing technicians and assistants were classified as high level of control at work. In part, it can be inferred that the greatest number of tasks performed by technicians brings the perception of greater control because, in a way, they choose how and when to do activities. Whereas nurses work in management, a function that does not have the characteristic of objective task, in addition to receiving higher orders and acting in a shortsighted manner.

When relating payment aspects and demand at work, it was observed that most of the workers with salaries of up to seven minimum wages in UH, were subjected to high demands at work. And those who received above this value had low demand. In contrast, there was no difference between levels of demand among GH workers. The salary with the division up to the average found in a study and no difference was observed, evidencing

low demand among larger and smaller wage gains.[22] Similar to this picture, it was found income of 3 to 5 minimum wages prevalent among high school-level professionals, and these had higher demand activities when compared to professionals with higher education.[23]

Remuneration is a stressor reported by 50% of the nursing workers.[24] It is perceived that remuneration is linked to issues such as demand and satisfaction, or control when performing work activities, which is directly related to the development of stress. It is evident that the conception of work in nursing, especially in ICU, is constantly changing with different approaches for care, different forms of organization and increasing degree of increased activity, which indicates the specificity of its psychological demand.[25]

As for the self-perceived stress at work, medium stress was observed in UH as the most frequent in both groups subjected to low or high demands at work; however, in the high demand group, stress appeared higher, which shows the influence of demand levels in the definition of stress by employees of this hospital. In GH, it was observed highest concentration of professionals with perception of too much stress, even subjected to low demands, which may be related to low control at work. This result suggests that GH workers are in the process of mental illness from work. This information also resembles the data from Seleghim et al.[23], where it was observed that the degree of occupational stress affected the quality of life of nursing professionals.

With regard to weekly working hours and number of jobs, UH workers with higher perceived stress worked 51 weekly hours or more per week, in mixed shifts. It was also observed the existence of more than one job in the UH group, where most of workers had high control. Thus, it is observed that the existence of more than one job may not adversely influence the control over work in this hospital. The inverse was perceived in GH, where most of those in low control had more than one job, whereas those with high control did not have more than one job. It is evident, therefore, that the existence of more than one job in GH influences negatively on the control at work. Workers who did not have more than one job had low control and those who had more than one job had high control.[22] Studies have found that having multiple employment relationships in nursing can be a result of the need to supplement the salary.[24,26] It is a constant and also another important trigger of stress due to increasing hours worked [26] and demand.

Work in shifts is a feature of the nursing work. Thus, extensive working hours combined with multiple jobs may be harmful to the physical and mental health and to the maintenance of the family system and leisure activities, due to reduced time for activities outside of work and for rest. This brings out the role of social support at work, because the personal and social life are part of the social support, which have been neglected by the institutions despite being cited in studies as natural stress reducers.[3,5]

In UH, there was a higher frequency of workers with high social support in active work and low support in high demand. This result demonstrates that the support influenced positively, considering that it could serve as a "reliever" high demands of labor. Corroborating the findings in UH, authors found that low social support was associated with the quadrant high demand.[4,22] Research conducted in a public emergency unit of Rondonia found that, among the staff of nurses and nursing technicians, 52.40% had low social support and high demand. [27] This fact is reaffirmed in Negeliskii and Lautert[21], where nurses of the group with high demand perceive less social support from colleagues and management, compared to the low group demand, a factor that may enhance and / or generate stress. This trend is also followed by study of Theme Filha, Costa and Guilam[18] where 42.6% of nurses had low social support and were more prone to wear and harmful effects of stress. In this sense, environments with enhanced social support and a decrease in the level of stress result in higher rates of permanence of nurses and lower levels of absenteeism.[28]

The ICU is a closed sector where it is performed care to critically ill patients. In this place, there is great intensive work, physical strength of workers and stress, especially for nursing workers.[29] So, dimensions related to work itself are stressful, such as work overload, lack of autonomy, the role ambiguity and role conflict within organizations, among others wear generators and harmful consequences to workers' health.[30]

CONCLUSION

Statistical differences were found regarding the psychosocial aspects investigated between groups of workers. Regarding the demand, it was observed the age group, per capita income and self-perception of stress. As for the control, it was observed difference in age group, education,

having more than one job and thought at work during the rest.

Issues related to increased psychological demands of workers in the workplace accompanied by low control observed in this study are related to stress at work and its various health consequences.

It was observed that GH workers had increased risk of mental work-related illness when compared to the UH workers, because even with low psychological demands at work, they presented definitions of "medium and too much stress." It is also observed that, even though the work of low demand and low social support was more frequent at this hospital, the active work and passive work were also high. The high level of stress related to low demand and low control may be an indication that workers of this hospital are in work-related disease process.

Although UH workers have presented high psychological demands at work, which may have influenced the occurrence of the perception of "medium stress" by workers and high-demand work, they have also showed frequent active work, when related to social support at work, besides having high control at work. This result, according to the Karasek's model, has a lower risk of mental illness at work, and when associated with high social support, can have an even greater reduction of this risk. Therefore, it was evident, in this hospital, the positive influence of social support.

The results, especially in GH, demonstrate the need for greater assistance, support and preventive activities to the illness risk with workers of high complexity sectors, given that these are places that require greater skills and knowledge, not only with the assistance to the patient but also with the technologies used, which ends up generating psychic overload.

REFERENCES

1. Ministério da Saúde, Organização Pan-Americana da Saúde. Doenças relacionadas ao trabalho: manual de procedimentos para os serviços de saúde. Dias EC, editor. Brasília: Ministério da Saúde; 2001 [cited 2014 Apr 16]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/doencas_relacionadas_trabalho1.pdf

2. Schmidt DRC, Dantas RAS, Marziale MHP, Laus AM. Estresse ocupacional entre profissionais de enfermagem do bloco cirúrgico. Texto contexto-enferm [Internet]. 2009 Apr-June [cited 2014 May 20];18(2):330-7. Available from: http://bases.bireme.br/cgi-bin/wxislind.exe/iah/online/?IsisScript=iah/iah.xis&src=google&base=LILACS&lang=p&nextAction=lnk&exprSearch=519848&indexSearch=ID

3. Glina DMR. Modelos teóricos de estresse e estresse no trabalho e repercussões na saúde do trabalhador. In: Glina DMR, Rocha LE, editors. Saúde mental no trabalho: da teoria à prática. São Paulo: Roca; 2010. p. 3-32.

4. Araújo TM, Aquino E, Menezes G, Santos GO, Aguiar L. Aspectos psicossociais do trabalho e distúrbios psíquicos entre trabalhadoras de enfermagem. Rev saúde pública [Internet]. 2003 Aug [cited 2014 May 20];37(4):424-33. Available from: http://www.scielo.br/scielo.php?pid=S0034-89102003000400006&script=sci_arttext

5. Karasek RA, Theorell T. Healthy work: stress, productvity, and the reconstruction of working life. New York: Basic Books; 1990.

6. Magnago TSBS, Lisboa MTL, Griep RH, Zeitoune RCG, Tavares JP. Condições de trabalho de profissionais da enfermagem: avaliação baseada no modelo demanda-controle. Acta paul enferm [Internet]. 2010 [cited 2014 Apr 11];23(6):811-7. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0103-21002010000600015&lng=pt&tlng=pt

7. Theorell T. Working conditions and health. In: Berkman L, Kawachi I, editors. Social epidemiology. 1st ed. New York: Oxford University Press; 2000. p. 95-118.

8. Laurell AC, Noriega M. Para o Estudo da Saúde na sua Relação com o Processo de Produção. In: Laurell AC, Noriega M. Processo de trabalho e saúde: trabalho e desgaste operário. São Paulo: Hucitec; 1989. p. 99-144.

9. Silva JLL. Estresse e transtornos mentais comuns em trabalhadores de enfermagem. Rev eletrônica enferm [Internet]. 2008 [cited 2014 May 20];10(4):1174-5. Availabe from: http://www.fen.ufg.br/revista/v10/n4/v10n4a32.htm

10. Alves MGM, Chor D, Faerstein E, Lopes CS, Werneck GL. Versão resumida da job stress scale: adaptação para o português. Rev saúde pública [Internet]. 2004 Apr [cited 2014 Mar 5];38(2):164-71. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-89102004000200003

11. Griep RH, Rotenberg L, Landsbergis P, Vasconcellos-Silva PR. Uso combinado de modelos de estresse no trabalho e a saúde auto-referida na enfermagem. Rev saúde pública [Internet]. 2011 Feb [cited 2014 Apr 13];45(1):145-52. Available from: http://www.scielo.br/scielo.php?pid=S0034-89102011000100017&script=sci_arttext

12. Guerrer FJL, Bianchi ERF. Caracterização do estresse nos enfermeiros de unidades de terapia intensiva. Rev Esc Enferm USP [Internet]. 2008 June [cited 2014 May 10];42(2):355-62. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342008000200020

13. Gil-Monte PR. Influencia del género sobre el proceso de desarrollo del síndrome de quemarse por el trabajo (burnout) en profesionales de enfermería. Psicol estud [Internet]. 2002 Jan-July [cited 2014 Apr 13];7(1):3-10. Available from: http://www.scielo.br/pdf/pe/v7n1/v7n1a01.pdf

14. Araújo TM, Rotenberg L. Relações de gênero no trabalho em saúde: a divisão sexual do trabalho e a saúde dos trabalhadores. In: Assunção A, Brito J, editors. Trabalhar na saúde: experiências cotidianas e desafios para a gestão do trabalho e do emprego. Rio de Janeiro: Fiocruz; 2011. p. 131-50.

15. Zucchi P, Nero CD, Malik AM. Gastos em saúde: os fatores que agem na demanda e na oferta dos serviços de saúde. Saude Soc [Internet]. 2000 Jan-Dec [cited 2014 June 4];9(1-2):127-50. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-12902000000100010&lng=pt&tlng=pt

16. Meneghini F, Paz AA, Lautert L. Fatores ocupacionais associados aos componentes da síndrome de Burnout em trabalhadores de enfermagem. Texto & contexto enferm [Internet]. 2011 Apr-June [cited 2014 June 4];20(2):225-33. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-07072011000200002&lng=pt

17. Fascina LP, Hidaka KS, Guimarães CPA, Rezende F, Mekler PL. Avaliação do nível da Síndrome de Burnout na equipe de enfermagem da UTI adulto [relatório de pesquisa]. São Paulo: Universidade de São Paulo, Escola de Enfermagem; 2007.

18. Theme Filha MM, Costa MAS, Guilam MCR. Estresse ocupacional e autoavaliação de saúde entre profissionais de enfermagem. Rev latinoam enferm [Internet]. 2013 Mar-Apr [cited 2014 Apr 27];21(2):475-83. Available from: http://www.scielo.br/scielo.php?pid=S0104-11692013000200475&script=sci_arttext&tlng=pt

19. França FM, Ferrari R, Ferrari DC, Alves ED. Burnout e os aspectos laborais na equipe de enfermagem de dois hospitais de médio porte. Rev latinoam enferm [Internet]. 2012 Sept-Oct [cited 2014 May 18];20(5):961-70. Available from: http://www.scielo.br/scielo.php?pid=S0104-11692012000500019&script=sci_arttext&tlng=pt

20. Silva MCM, Gomes ARS. Stress ocupacional em profissionais de saúde: um estudo com médicos e enfermeiros portugueses. Estud psicol [Internet]. 2009 Sept-Dec [cited 2014 Apr 18];14(3):239-48. Available from: http://www.scielo.br/pdf/epsic/v14n3/a08v14n3

21. Negeliskii C, Lautert L. Estresse laboral e capacidade para o trabalho de enfermeiros de um grupo hospitalar. Rev latinoam enferm [Internet]. 2011 May-June [cited 2014 Apr 20];19(3):606-13. Available from: http://www.scielo.br/scielo.php?pid=S0104-11692011000300021&script=sci_abstract&tlng=pt

22. Urbanetto JS, Magalhães MCM, Maciel VO, Sant'Anna VM, Gustavo AS, Poli-de-Figueiredo CE, et al. Estresse no trabalho segundo o modelo demanda-controle e distúrbios psíquicos menores em trabalhadores de enfermagem. Rev Esc Enferm USP [Internet]. 2013 Oct [cited 2014 May 23];47(3):1186-93. Available from: http://www.scielo.br/scielo.php?pid=S0080-62342013000501180&script=sci_arttext&tlng=pt

23. Seleghim MR, Mombelli MA, Oliveira MLF, Waidman MAP, Marcon SS. Sintomas de estresse em trabalhadoras de enfermagem de uma unidade de pronto socorro. Rev gaúch enferm [Internet]. 2012 Sept [cited 2014 Apr 04];33(3):165-73. Available from: http://www.scielo.br/scielo.php?pid=S1983-14472012000300022&script=sci_arttext

24. Montanholi LL, Tavares DMS, Oliveira GR. Estresse: fatores de risco no trabalho do enfermeiro hospitalar. Rev bras enferm [Internet]. 2006 Sept-Oct [cited 2014 Apr 19];59(5):661-5. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-71672006000500013

25. Manley K. A conceptual framework for advanced practice: an action research project operationalizing and advanced practitioner/consultant nurse role. J Clin Nurs. 1997 May;6(3):179-90.

26. Preto VA, Pedrão LJ. A percepção de enfermeiros de unidades de terapia intensiva sobre o estresse em seu local de trabalho. Rev enferm UFPE on line [Internet]. 2014 Sept [cited 2015 Jan 16];8(9):2998-3007. Available from: http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/6542/pdf_6056

27. Kogien M, Cedaro JJ. Pronto-socorro público: impactos psicossociais no domínio físico da qualidade de vida de profissionais de

enfermagem. Rev latinoam enferm [Internet]. 2014 Jan-Feb [cited 2014 May 20];22(1):51-8. Available from: http://www.scielo.br/pdf/rlae/v22n1/pt_0104-1169-rlae-22-01-00051.pdf

28. Abualrub RF. Job Stress, Job Performance, and Social Support Among Hospital Nurses. J Nurs Scholarsh. 2004 Mar;36(1):73-8.

29. Shimizu HE, Couto DT, Hamann EM, Branco AB. Occupational Health Hazards in ICU Nursing Staff. Nurs Res Pract [Internet]. 2010 Dec [cited 2014 Apr 10];(2010):1-6. Available from: http://www.hindawi.com/journals/nrp/2010/849169/

30. Moustaka E, Constantinidis TC. Sources and effects of Work-related stress in nursing. Health Sci J. 2010;4(4):210-6.

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Corresponding Address

Jorge Luiz Lima da Silva
Universidade Federal Fluminense
Departamento materno-infantil e psiquiatria
Rua Dr. Celestino, 74, Sala 51
Bairro Centro
CEP 24120-091 – Niterói (RJ), Brazil