ORIGINAL ARTICLE

STRESS LEVEL AND QUALITY OF LIFE OF RESIDENT NURSES

NÍVEL DE ESTRESSE E QUALIDADE DE VIDA DE ENFERMEIROS RESIDENTES

NIVEL DE ESTRÉS Y LA CALIDAD DE VIDA DE ENFERMEROS RESIDENTES

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ABSTRACT

Objective: identifying stress levels and the quality of life of resident nurses and comparing them during the first year of the course. ***Method:*** developmental study, longitudinal cohort and prospective, with 20 residents nurses, being one a follow-up at the beginning of the course in six and another in 12 months. It was answered an informative questionnaire at the beginning of the course, as well as a stress inventory (ISSL) and The Medical Outcomes Study Short Form 36 (SF-36). The research project was approved by the Research Ethics Committee, Protocol nº 14955913.3.0000.5285. ***Results:*** it was observed that after the course most of the residents have stress in the resistance phase, with predominance of psychological symptoms. The most affected SF36 domains were: vitality, limitations due to physical and emotional aspects. ***Conclusion:*** clearly increased levels of stress and reduced quality of life during the first year of the course. It becomes necessary to investigate how such damage influence the assistance provided. ***Descriptors:*** Nurses; Psychological Stress; Quality of Life.

RESUMO

Objetivo: identificar os níveis de estresse e a qualidade de vida de enfermeiros residentes e compará-los durante o primeiro ano do curso. ***Método***: estudo desenvolvimental, de corte longitudinal e prospectivo, com 20 enfermeiros residentes, sendo um follow-up no inicio do curso, em 6 e outro em 12 meses. Foi respondido um questionário informativo no início do curso, assim como um inventário de estresse (ISSL) e ao *The Medical Outcomes Study Short Form* 36 (SF- 36). O projeto de pesquisa foi aprovado pelo Comitê de Ética em Pesquisa, Protocolo nº 14955913.3.0000.5285. ***Resultados***: foi observado que ao final do curso a maior parte dos residentes possui estresse na fase de resistência, com predomínio dos sintomas psicológicos. Os domínios do SF36 mais afetados foram: vitalidade, limitações por aspectos físicos e emocionais. ***Conclusão***: é evidente o aumento do nível de estresse e redução da qualidade de vida ao longo do primeiro ano de curso. Faz-se necessário investigar o quanto esses danos influenciam na assistência prestada. ***Descritores***: Enfermeiros; Estresse Psicológico; Qualidade de Vida.

RESUMEN

Objetivo: identificar los niveles de estrés y la calidad de vida de las enfermeras residentes y comparar los durante el primer año del curso. ***Método:*** Estudio del desarrollo, de cohorte longitudinal y prospectivo conducido con 20 enfermeras residentes, siendo un seguimiento al inicio del curso, en seis y otro en 12 meses. Se respondió a un cuestionario informativo al inicio del curso, así como un inventario de estrés (ISSL) y The Medical Outcomes Study Short Form 36 (SF-36). El proyecto de investigación fue aprobado por el Comité de Ética en Investigación, Protocolo nº 14955913.3.0000.5285. ***Resultados:*** Se observó que después del curso la mayoría de los residentes tienen estrés en la fase de resistencia, con predominio de síntomas psicológicos. Los dominios del SF36 más afectados fueron: vitalidad, limitaciones debido a los aspectos físicos y emocionales. ***Conclusión:*** aumentó claramente los niveles de estrés y reduce la calidad de vida durante el primer año de curso. Es necesario investigar cómo esos daños influyen en la asistencia prestada. ***Descriptores:*** Enfermeras; Estrés Psicológico; Calidad de Vida.

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INTRODUCTION

Stress is a contemporary problem, studied by several professionals; it presents risk to the physical and mental balance of human beings. Over the years it has become a public health issue deserving a different look by the World Health Organization (WHO), an organization that has cared for the physical and mental health of workers and conditions and the risks that are being submitted.[1]

The first definition of stress was given in 1956 by doctor Hans Selye, who emphasized that stress is a normal part of the body's functioning, being a consequence of the act of living. In translating the concept of physics to medicine and biology, the didactically divided into three interdependent stages: alarm phase; resistance phase or intermediate or continuous stress; and the phase of depletion or exhaustion.[2-3]

The term stress was redefined as non-specific response of the body to any demand. According to it, the individual has stressed irritation, aggression, impatience, which ultimately hinder his relationship with other people, leading him to a difficulty to think of other matters, which is not related to his stressor.[4-5]

Based on the studies of Selye, Lipp identified clinically and statistically, a new phase of stress, redefining the concept and then four phases: alert; resistance, near exhaustion and exhaustion. This new phase almost exhaustion occurs when the person no longer able to adapt or resist the stressor and can start the onset of diseases due to the weakening of the body. In this, the individual productivity is compromised, but not like in the burnout stage, when the individual has difficulties to work or concentrate, in addition to establishing severe forms of disease.[6-7]

Studies investigating the risk that professionals, especially the residents of the areas of health, are subjected due to long working hours.[8-9] Residents, whether medical or nursing, face different challenges to gain trust and confidence of patients, families and team. These challenging situations provoke feelings of tension, anxiety and fear, which can be evaluated as stressful and interfere directly on the quality of life of these individuals.[10]

Regarding quality of life, the World Health Organization (WHO) played an important role in encouraging studies related to the population of health by defining, in 1947, that "Health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity".[11]

The expression Quality of Life (QOL) was originally broadcast in the United States after World War II to describe the devastating effects of accelerated industrial and technological growth. The meaning of the term was linked to issues related to the environment and environmental pollution caused by economic and industrial growth.[11]

Quality of life is a subjective, multidimensional and dynamic concept and may be influenced by cultural, religious, ethical and personal values and depend on directly from intrinsic and extrinsic factors. Thus there is a connotation of this term for each individual, which stems from their integration into society, its objectives, set targets and claims.[12-15]

Health care professionals who are proven susceptible to high stress rates, so organizations have increasingly been concerned about the quality of life of its employees. A professional with a positive diagnosis for stress can be affected by various health deviations that affect the care provided to the service user.[16]

When evaluating medical residents, we realized that the areas of quality of life, vitality, social functioning, emotional aspects and mental health are the ones who suffer influence of stress and can be compared to those found in patients with chronic diseases.[15] These considerations lead to establish as an object of study stress levels and quality of life for residents nurses.

We hope with this study answering the following question: “What are the stress levels of nursing home residents and how to consider the quality of life of this group during the first year of the course?”

To answer this question defined the following goal:

- Identifying stress levels and the quality of life of resident nurses during the first year of specialization;
- Comparing the evolution of levels of stress and quality of life at the beginning of the course, after 6 months and at the end of 12 months.

The residence is characterized as a stressful phase, especially in the first year, to be a full immersion period in the occupation, with many hours of work, caring for patients with complex care situations and difficult to handle, either by severity of clinical frames or by institutional shortcomings and limitations. The residence's daily life is characterized by constantly deal with new situations, complex and serious, a construction period of personal

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and professional identity with many doubts and uncertainties.[16]

Faced with this problem it is necessary to observe, *in loco*, the physical and psychological conditions of these professionals and discuss possible interference in their activities.

METHODOLOGY

This is a developmental study, of longitudinal cohort and prospective; there were followed 20 resident nurses within one year, which includes the time of their admission to the residence course until the end of the first year of this. These professionals were part of a Postgraduate Program Specialization Level in the Training of Nurses in Shape for service in Residence molds, admitted to the 2013 year class.

Each professional was given three questionnaires: The first was to map out a socio-demographic profile, where data such as gender, age, marital status, number of children, years of training, training time, hours worked/week and hours of sleep/day were collected. The selection of these variables occurred because according to the literature, directly influence the stress and the possible perception of quality of life.

The second was the Inventory of Stress Symptoms for Adults Lipp (ISSL), with the objective of assessing stress levels. This inventory was validated in 1994 by Lipp and Guevara and has been used in dozens of research and clinical work in the stress area. Aims to detect the presence of stress, determine at what stage the person is and if there is a predominance of physical or psychological symptoms. It is a self-reported account that lasts about 10 minutes and for the youth and the adults.[6,7]

The ISSL has a four phases' model, consisting of three tables: the first relates to the symptoms presented in the last 24h - alert phase; the second is on the symptoms experienced in the last week - resistance phase and almost exhaustion; and the third refers to symptoms in the last month - exhaustion phase.[7]

The third instrument used was The Medical Outcomes Study Short Form 36 (SF-36) to evaluate the quality of life. The SF-36 is a multidimensional questionnaire consisting of 36 items in two major groups: physical and mental. Each group consists of four areas, which in turn, constitute items that assess the same area of the life of the subject evaluated. Physical subgroup is composed of the domains: functional capacity (10 items); physical limitation (04 items); pain (02 items); general health (05 items). The mental subgroup composed of: vitality (04 items); social aspects (02 items); role emotional (03 items); mental health (05 items). There is also a question of comparative evaluation between current health status and a year ago.[17]

For each domain there are obtained final scores, ranging from 0 to 100, where the greater the score, the better the health status assessed. In a second phase we use the calculation scale "Raw Scale". This does not present measurement units at the end value is obtained only symbolic numbers that define the level of commitment that the patient has in each domain.[17]

The choice of these instruments took to be validated and the data obtained through its results are in line with those proposed in the study objectives.

It delivered to nursing home residents the same questionnaires at the beginning of the course (first week of residence), in the middle of the course (6 months after the start) and the end of the first year of the course (12 months after onset) and from this chart that evidences a possible variation in the results from the answers.

Data collection was carried out in March and August 2013 and January 2014, the first week of every month in the morning. This day was chosen because it is the timing of weekly theoretical activities in the hospital, thus not interfering in the dynamic practice services.

It is noteworthy that the study met with Resolution 466/12 and was approved by the Research Ethics Committee of UNIRIO under Protocol 14955913.3.0000.5285, as well as all participants have signed and received a copy of the Informed Consent (IC).

RESULTS

♦ Informative questionnaire

In table 1 are described the characteristics of the population of the study.

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Table 1. Sociodemographic of the sample. Rio de Janeiro, (RJ), Brazil. 2013/2014

Variables	N (total=20)	%
Gender		
Female	17	85
Male	03	15
Age (in years)	N	%
22 - 25	13	65
26 - 29	04	20
30 - 33	02	15
Marital Status	N	%
Married / Stable union	10	50
Single	10	50
Separated	0	0
Widower	0	0
Number of children	N	%
Yes	02	10
No	18	90
Year of Education	N	%
2006	01	05
2010	01	05
2011	09	45
2012	09	45
Time of education (in months)	N	%
0 - 11	07	35
12 - 24	10	50
≥ 36	03	15
Sleep hours / night / week	N	%
05	02	10
06	06	30
07	03	15
08	04	20
09	02	10
≥10	03	15

It is noteworthy that all the investigated have weekly hours of work of 60 hours.

♦ Inventory of SF-36 Quality of Life

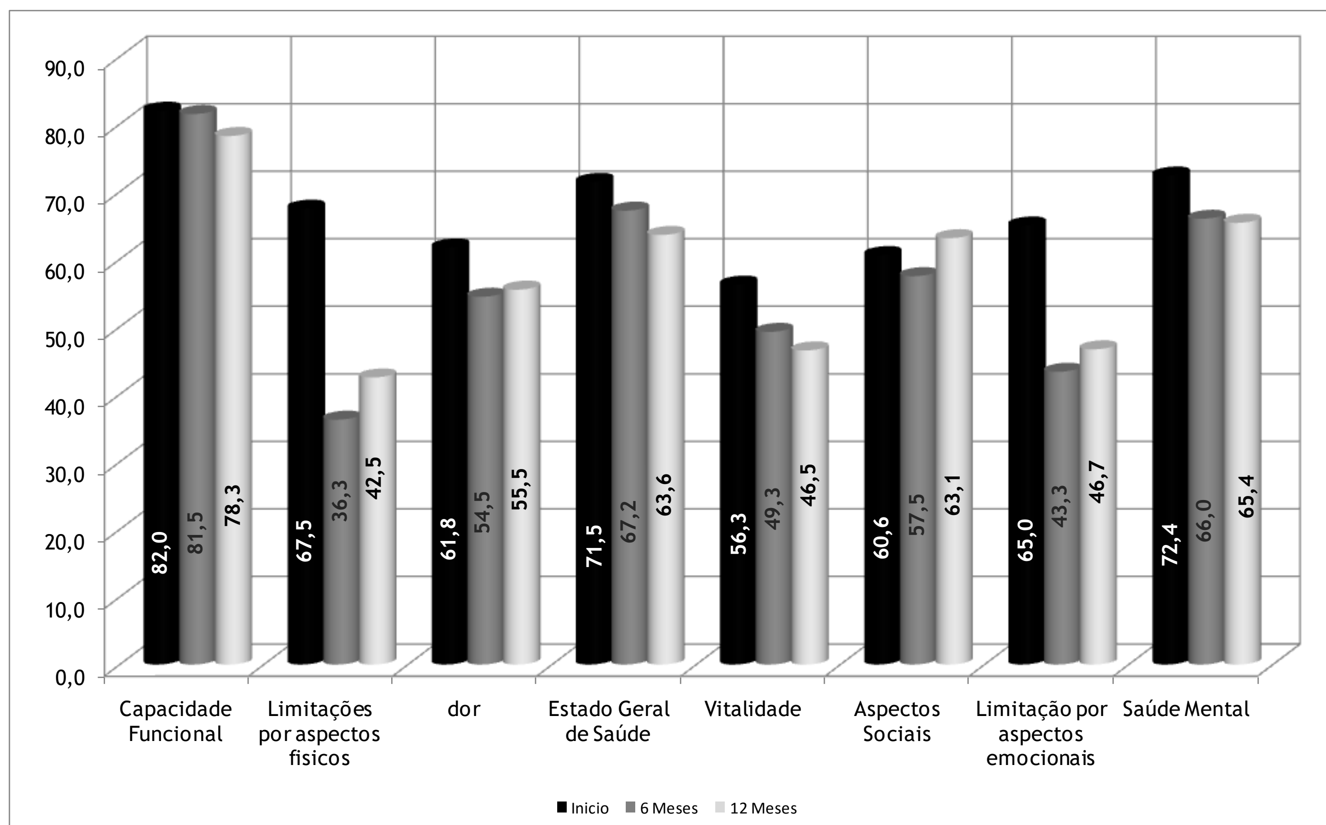

Figure 1. Score of the SF36 by domains (beginning, 6 months, 12 months)

♦ **Inventory of Stress Symptoms in Adults (ISSL)**

Tables 2.3 and 4 take into account the determination stipulated analysis by Lipp.

Table 2. Diagnosis of Stress during the first year of course. Rio de Janeiro, (RJ), Brazil. 2013/2014

Diagnosis	March / 2013		August / 2013		January / 2014	
	n	%	n	%	n	%
Negative	09	45	05	25	04	20
Positive	11	55	15	75	16	80
Total	20	100	20	100	20	100

Table 3. Phase distribution of stress during the first year of course. Rio de Janeiro, (RJ), Brazil. 2013/2014

Stress Phases	March / 2013		August / 2013		January / 2014	
	n	%	n	%	n	%
Alert	01	09	0	0	01	6
Resistance	10	91	12	80	12	75
Near exhaustion	0	0	01	07	02	13
Exhaustion	0	0	02	13	01	6
Total	11	100	15	100	16	100

Table 4. Distribution of Stress Symptoms in the first year of the course. Rio de Janeiro, (RJ), Brazil. 2013/2014

Stress Symptoms	March / 2013		August / 2013		January / 2014	
	n	%	n	%	n	%
Physical Symptoms	04	36	06	40	04	25
Psychological Symptoms	06	55	08	53	10	63
Both Symptoms	01	09	01	07	02	12
Total	11	100	15	100	16	100

DISCUSSION

The study showed the largest share of professional nursing women 85%. This can be explained by the history of nursing in Brazil and in the world that has experienced intense feminization from the institutionalization of modern nursing from the late nineteenth century. These data also go out to the data provided by the Federal Nursing Council in 2011 to assign a percentage of 87,35% for women workers in this profession.[18]

Nursing is among the ten courses with higher percentages of female enrollment; of 92.134 enrolled, 85% are women. Ojeda shows that there is (pre) social concepts that relate Man and Nursing with homosexuality.[18,19]

Because nursing is a mostly female group, it considers such studies, the concurrence of the numerous obligations that they have in the family and in society. According to the author, the effects of stress at work are taken for married life and can cause major relationship stress the numerous obligations women have within the family and society. The sample showed 50% of resident nurses being married. The large workload and study the residency program has, is a factor negatively influence aspects of family relationships, social as well as leisure and sleep.[20]

The National Commission on Multidisciplinary Residency in Health, Ministry of Health agency that regulates residency programs, through the Interministerial Ordinance in 1077, to November 12th, 2009, states that multi- residents, including nurses, meet a workload 60 hours per week. Residents who made up show the mentioned meet this requirement in full.[21]

Regarding the number of hours of sleep per day, it was observed that 75% of nursing home residents has about 8 hours of sleep or less. American study showed that sleep deprived residents have the following changes: difficulty concentrating, depression, irritability, difficulty and extreme sensitivity to accept criticism, depersonalization, derealization and deficit in recent memory.[8-9,22]

In those areas which characterize the quality of life, the study sample showed an improvement in the social aspects throughout the residence course of development.

Regarding the domain limitations for physical, a score was obtained which showed significant drop in this compared to the beginning of the course (46,7 → 67,5). This domain can be identified early, situations of loss of labor capacity and aid in disease prevention, health maintenance workers and

improving the quality of working life. Recent studies show that promote the improvement of working conditions reduces the early retirement of staff.[23]

The diversity and complexity of the technical procedures, the hierarchy, the organization of work and the daily confrontation with the suffering, pain and death, is directly related to the mental health domain. Our sample revealed a reduction in this area (72,4 → 65,4), but still within the limit set by the WHO Quality of Life.[24]

Three domains showed greater prominence: vitality, limitations on physical aspects and limitation by emotional aspects. About the Vitality identified a large reduction in this area (56,3 → 46,5) which directly affects the quality of life. The subjective perception of vitality tells how much work interferes with strength, energy and mood of residents nurses.

The limitations due to physical aspects was the domain with the highest decline over the course (67,5 → 42,5), down about 25 points in the SF-36 scale. This shows how much workload a residence course is perceived by professional nurses.

The Murofuse conclusions can be complemented by Nishide that a sample of 68 nursing professionals who work in intensive care units, 46% identified physical effort as a cause of injury.[25, 26]

Regarding the limitation due to emotional problems, the decline was also great (about 19 points). These data complement those found by this stress.

The ASSI showed that the amount of residents in nursing diagnosis positive stress increases during the first year of course (55% → 80%). The findings are far superior to that found by Pafaro when using the Lipp scale in a sample of 33 nurses showing a predominance of psychological stress (37,5%) and resistance phase (62.5%).[27]

In relation to stress phases it was prevalent during the first year of course the resistance phase (91% → 75%), though we can see a reduction in individuals classified in the alert phase (9% → 6%) and increased individuals at the stage of near exhaustion (0 → 13%) and exhaustion (0 → 6%). the resistance phase is characterized by the action of the body to prevent the total wear power, resisting the stressors and trying to unconsciously restore inner balance.[6]

These data lead us against studies that show that the situations experienced by residents can be assessed as stressful and so cause them to stress, as the residence period is the time that nurses must learn to deal with feelings of vulnerability, to make a balance between the desire to care for and manage the feelings about the complex care system.[29]

CONCLUSION

Nursing has been classified by the Health Education Authority as the fourth most stressful profession, which has been trying to assert itself professionally for greater social recognition. Moreover, the situation of wage decrease aggravates the situation, forcing practitioners to have more than a working relationship, resulting in extremely long and exhausting monthly charge.[30]

Although the exercise of the nursing profession requires good physical and mental health, rarely nurses receive the protection and care necessary to prevent accidents and diseases arising from activities.

With this research we can conclude that the nursing resident shows changes in various domains of quality of life once it starts the course in better condition which ends the first year of the course.

The areas that stood out to reduce the perception in Quality of Life by the nursing home residents were: limitation by physical, vitality and emotional role. Among other areas, the only one that showed improvement was on the social aspects.

The sample showed that stress increases during the first year of the course, with worsening phases presented by residents and frequency of psychological symptoms.

The population of nursing residents needs to be investigated and monitored, heard and valued as the residence Nursing undoubtedly is a great way to professional qualification in view of the growth in demand for the course. Improving working conditions in this type of course reflected in the patient nursing care, the quality of life of its subjects and the quality of specialists trained professionals.

It is extremely important future studies aimed at resident nurses, so one can understand and thus improve working conditions to ensure the permanence of these professionals in the active exercise of their functions, avoiding early departures disability or lack of motivation to the profession.

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