

Profile of readjusted workers at a public hospital in Southern Brazil

Perfil de trabalhadores readaptados em um hospital público do Sul do Brasil

Anelise Bertolino Pereira¹, Marcia Eiko Karino¹, Júlia Trevisan Martins¹,
Alessandro Rolim Scholze², Maria José Quina Galdino², Renata Perfeito Ribeiro¹

ABSTRACT | **Objective:** To establish the sociodemographic, occupational and clinical profile of labor readjusted workers at a public hospital. **Method:** Cross-sectional study conducted with 40 labor readjusted workers at a university hospital in Southern Brazil. Data collection was performed by means of an instrument with questions for sociodemographic, occupational and clinical profile. Descriptive analysis of relative and absolute frequencies was performed. **Results:** Female sex (72.5%), age range 54 to 59 years old (35%) and technical education level (37.5%) predominated. Most labor readjusted workers were members of the nursing staff (62.5%), and the main reasons for readjustment were musculoskeletal mental and behavioral disorders. **Conclusion:** One might infer that labor readjustment might related to factors present in the hospital work environment.

Keywords | occupational health; employment, supported; work environment; health personnel.

RESUMO | **Objetivo:** Identificar o perfil sociodemográfico, ocupacional e clínico de trabalhadores readaptados de um hospital público. **Método:** Estudo transversal com 40 trabalhadores readaptados de um hospital universitário do Sul do Brasil. Para a coleta de dados utilizou-se um instrumento com questões relacionadas ao perfil sociodemográfico, ocupacional e clínico. Foram realizadas análises descritivas com frequências relativas e absolutas. **Resultados:** Houve predomínio do sexo feminino (72,5%), faixa etária entre 54 e 59 anos (35%) e escolaridade de nível técnico (37,5%). A maioria dos readaptados fazia parte da equipe de enfermagem (62,5%) e o principal motivo que desencadeou a readaptação foram os distúrbios osteomusculares, mentais e de comportamento. **Conclusão:** Infere-se que a readaptação dos profissionais pode estar relacionada com os fatores vivenciados no ambiente laboral dos hospitais.

Palavras-chave | saúde do trabalhador; readaptação ao emprego; ambiente de trabalho; pessoal de saúde.

¹Department of Nursing, State University of Londrina - Londrina (PR), Brazil.

²Department of Nursing, State University of Northern Paraná - Bandeirantes (PR), Brazil.

DOI: 10.5327/Z1679443520170032

INTRODUCTION

Globalization and implementation of new technologies in the world of work resulted in relevant changes involving the relationship between work and workers, including work process, working time and competition, among other factors that directly interfere with the workers' health^{1,2}.

Workers' productivity is increasing in capitalist countries, often without consideration for the corresponding impacts on the physical and mental health of individuals^{2,3}. According to the International Labor Organization (ILO) about 2 million people worldwide die at work every year¹.

Work accidents have many consequences for the workers' health, as they impair the biological integrity of individuals, increase the social security costs and reduce productivity¹.

Within this context, hospital workers are daily exposed to occupational hazards originated in the activities they perform and environmental insalubrity, and which might lead to disease¹⁻⁶. Several authors^{7,8} stated that upon providing direct care to patients, such workers are exposed to chemical, physical, mechanic, biological, ergonomic and psychosocial occupational hazards, which might contribute to the development of diseases and occurrence of work accidents. Biological hazards are serious, and result from direct contact with bodily fluids and contaminated materials⁹.

It should be noticed that risk is considered to be present when workers perform an activity that includes one or more potentially harmful factors. Therefore, health care providers who work at hospitals are exposed to an occupational environment that contains a diversity of hazards^{9,10}. Facing this scenario, i.e., the fact that the work environment poses a risk to the health of these workers, and aiming at protecting employees who suffered some work-related or not harm, the Social Security administration enacted laws targeting workers' safety and protection, such as the ones that regulate function readjustment. Article 24 of the Federal Law no. 8,112/1990 defines function readjustment as: "ascription to an employee of attributions and responsibilities compatible with the limitations to his/her physical or mental capacity as established on medical assessment¹¹."

Therefore, function readjustment affords a way to meet the needs of workers who despite their limitations are still able to perform activities that might be relevant to services and themselves. The reason is the belief in that removing employees from their work activities might further impair their health, resulting in greater mental suffering¹².

As a function of the aforementioned considerations, the aim of the present study was to establish the socio-demographic, occupational and clinical profile of readjusted employees at a public hospital. We believe that this study might help managers implement strategies to reduce sickness among hospital workers associated with the hazards to which they are exposed and provide a better work environment for the already sick and readjusted employees.

METHODS

The present cross-sectional study with quantitative approach was conducted with readjusted workers registered at the Specialized Safety Engineering and Occupational Medicine Service (Serviço Especializado em Engenharia de Segurança e Medicina do Trabalho – SESMT) of a university hospital in Southern Brazil.

The study population comprised 60 employees readjusted in 2016, among which 61.7% (n=37) belonged to the nursing staff (nurses, nursing technicians and assistants) and 38.3% (n=23) were operational assistants (hospital hygiene, kitchen, laundry and reception workers). There was no readjusted technical-administrative personnel (general office work) at the time when the study was conducted. Eight employees on sick leave or not performing their usual activities for other reasons were excluded.

Data collection was performed from September through December 2016 by means of an instrument with questions on the employees' sociodemographic, occupational and clinical profile. This step involved two stages: first we identified the readjusted employees at SESMT based on their medical records; then we invited the located readjusted employees to participate in the study. The ones who agreed to participate were requested to respond the questionnaire in a secluded room at the workplace to protect them from exposure and preserve the confidentiality of

the collected information. From 52 eligible employees, 12 refused participation.

Data analysis was performed using software Statistical Package of Social Sciences (SPSS), version 20.0. Descriptive analysis included calculation of absolute and relative frequencies.

The study was approved by the research ethics committee of State University of Londrina, CAAE (Certificate of Presentation for Ethical Appraisal) no. 56996816.6.0000.5231.

RESULTS

Among the 40 participants, 72.5% (n=29) were female, 35.0% (n=14) were aged 54 to 59 years old, and 37% (n=15) had technical education level (Table 1).

Table 1. Sociodemographic characterization of readjusted employees. Londrina (PR, Brazil), 2016 (n=40).

Variables	n	%
Sex		
Female	29	72.5
Male	11	27.5
Age range (years)		
36 to 41	3	7.5
42 to 47	11	27.5
48 to 53	9	22.5
54 to 59	14	35
60 or older	3	7.5
Educational level		
Elementary school	3	7.5
Secondary school	11	27.5
Technical education	15	37.5
Higher education	9	22.5
Graduate education	2	5

Most readjusted employees belonged to the nursing staff (62.5%; n=25); 56.0% (n=14) were nursing technicians, 24.0% (n=6) nurses and 20.0% (n=5) nursing assistants. Operational assistants were the second largest group of readjusted employees (37.5%; n=15).

Relative to their job function before readjustment, among the 6 nurses 83.3% (n=5) had previously provided direct patient care and 16.7% (n=1) performed managerial tasks. Among the 14 nursing technicians, 50.0% (n=7) had worked at the intensive care unit, 28.6% (n=4) at the emergency department, 14.3% (n=2) at the surgery department and 7.1% (n=1) at the infectious diseases unit. All 5 nursing assistants had worked at adult wards. In regard to the operational assistants, 46.7% (n=6) had worked at the laundry, 33.3% (n=5) in hospital hygiene and 24.0% (n=4) had been receptionists.

As concerns the reasons for readjustment, musculoskeletal, mental and behavioral disorders were the most frequent among the nursing staff, and musculoskeletal disorders and nervous system problems among operational assistants (Table 2).

The detected musculoskeletal disorders were: herniated disk (19.4%; n=6), tendon tear (19.4%; n=6), arthrosis (19.4%; n=6), bursitis (12.9%; n=4), lupus (6.5%; n=2), arthritis (6.5%; n=2) and unspecific backache (16.1%; n=5). Mental and behavioral disorders comprised depression (66.6%; n=4) and unspecific mental disorders (33.3%; n=2). Finally the neurological problems were all cases of carpal tunnel syndrome (100%; n=3).

Table 2. Reasons for function readjustment. Londrina (PR, Brazil), 2016 (n=40).

Variable	Nursing staff		Operational assistants		Total	
	n	%	n	%	n	%
Musculoskeletal disorders	21	52.5	10	25.0	31	77.5
Mental and behavioral disorders	4	10.0	2	5.0	6	15.0
Nervous system disorders	0	0.0	3	7.5	3	7.5

In regard to the destination of the readjusted nursing staff, 4 out of the 6 nurses were reallocated to managerial positions and 2 to the hemodialysis unit. Four out of the 5 nursing assistants remained in the same department, but were attributed tasks compatible with their degree of limitation, and 1 was transferred to the central sterilization department. Eight out of the 14 nursing technicians remained in the same department with changes in their work routine in compliance with the medical orientation, 3 were transferred to the central sterilization department, 1 to the milk bank and 1 to the hemodialysis unit.

All the operational assistants remained in their original positions (laundry, hospital hygiene and reception) but their activities were readjusted as a function of their limitations, except for one hygiene worker who was reallocated to the storage department.

The time for readjustment was 1 to 5 years in 45.0% of the cases ($n=18$), 6 to 10 years in 32.5% ($n=13$) and more than 10 years in 22.5% ($n=9$) — most of these employees (47.5%; $n=19$) perform their job in an alternative shift.

DISCUSSION

The results showed that women predominated among the nursing staff — a fact evidenced all along the history of the profession^{9,13,14}.

The higher rate of illness among women might be related to their daily activities, because women often have a double burden, i.e., their jobs and household chores, in addition to suffering from inequality in the labor relations. All these factors favor the development of diseases and comorbidities¹⁵.

Most participants were 54 to 59 years old. This finding disagrees from the results of a study in which the average age of readjusted employees at a public hospital was 47.9 years old¹⁶.

Several authors observed that starting at age 45 years old workers exhibit a trend to reduced functional capacity due to loss of muscle mass and strength and increase of the adipose tissue, which are common signs of aging¹⁷.

Reduced functional capacity makes workers more vulnerable to hazards at the workplace. In a study that investigated reasons for work accidents among nursing

professionals, 60.9% were unpredictable events related to the work process, 17.4% were due to lack of attention and 15.2% to stress⁹.

As workers age, comorbidities related to their work environment and lifestyle become common. These aspects favor the development of incapacity for work and physical, physiological or mental disorders¹⁸.

In regard to the educational level of the sample, employees with technical education predominated. This finding agrees with the results of another study which detected the same predominance¹⁷. This fact is related with the job demands at hospitals and the fact that the activities performed by these employees tend to be manual and to demand physical effort as a function of the loads involved.

Developing this notion further, some authors assert that educational level has positive correlation with work ability. This is to say, the higher the educational level, the higher the odds for workers to maintain their work ability, because the physical demands of the job are lower, and these workers develop skills to easily control their work environment, resulting in lower rates of illness¹⁹.

It is worth noticing that many of the employees at the institution where the study was conducted had attended higher education, but worked in positions incompatible with their educational level.

When employees need to be reallocated to another area and have merely attended secondary school or technical education, readjustment is more difficult. The reason is that in this case, inclusion into another environment is more complex as a function of the employees' difficulty to accept and understand their new activity, which thus limit their ability to perform other functions²⁰.

Among the professional categories, nursing professionals predominated, which might be explained by the fact that such workers represent the largest workforce at hospitals as a function of the job characteristics. In the United States, the nursing staff corresponds to 63% of the cost of human resources at hospitals²¹. These data point to the need to promote work environments that protect employees, seek to reduce illnesses, and thus afford better quality of life and reduction of the costs derived from sick leaves, readjustment and disability retirement.

Nursing professionals are the most exposed to environment hazards at the workplace, because they handle hospital inputs, among other particularities related to the practice of the profession⁷⁻⁹. For providing direct patient care, they are exposed to occupational hazards much longer than other workers.

As a result, they are exposed to accidents and work-related diseases, the main factors associated with this risk being: insufficient number of employees, work overload, work in night shifts, mental and emotional exhaustion, improper physical conditions, lack of professional training, exposure to toxic chemicals, unavailability or undue use of individual protective equipment and inadequate working conditions²².

Therefore, managers should pay attention to the working conditions and together with the employees look for strategies to reduce hazards at the workplace to thus avoid occupational illnesses and afford a safer and high-quality environment²³.

It is worth observing that while the goal of hospital services is prevention and recovery of the patients' health, employees must perform their work within an environment that exposes them to many hazards along their professional career⁴. In addition, the capitalist society demands productivity and rationalization of resources². As a result, the work overload does not decrease, while managers accept the precarious working conditions, which directly impair the quality of life of workers, and consequently the care provided to patients¹⁶.

Some authors²⁴ further observe that workers eventually come to neutralize the hazards to which they are exposed, resulting in the development of a defense mechanism that makes hazards become and be accepted by workers as a natural part of the work process.

In regard to affected body parts, the musculoskeletal system was the most frequently involved. This finding might be directly related with the peculiarities of the work process of this population of workers, in which physical risk is inherent to most activities. Performance of repetitive movements together with work overload might favor the occurrence of diseases²⁵.

In agreement with the results of the present study, another study conducted at a general hospital in the interior of the state of São Paulo with members of the nursing staff undergoing readjustment found that the

disorders leading to this situation were mainly related to the musculoskeletal system, followed by the connective tissue¹⁶.

Also depression was one of the motives that led to readjustment. According to World Health Organization (WHO) estimates, depression represents 4.3% of the global burden of disease, being one of the main causes of disability worldwide, especially among women²⁶.

The rate of depression is high among the Brazilian overall population (about 18.4% of Brazilians had one depressive episode) losing only to France, where about 21.0% of inhabitants exhibited at least one episode, and the United States (19.2% of the population)^{27,28}. Therefore, preventive measures are needed in work environments seeking the satisfaction of workers, because the better the work environment is, the more satisfied workers become and their performance improves.

One study conducted with hospital employees found that the main causes of disability retirement were mental and behavioral disorders (45%), musculoskeletal disorders (25%), cardiovascular problems and neoplasms (7.5%)⁹.

Therefore, it is of paramount importance that, together with the readjusted workers, hospital managers look for strategies to promote health and prevent the occurrence of other diseases, thus improving the quality of life at work. Also, actions must be implemented targeting all workers pursuing one and the same goal: to promote health and avoid disease, thus reducing the need for function readjustment.

The present study had some limitations derived from the number of employees undergoing function readjustment, the fact it was conducted at one single hospital, and lack of studies with similar populations. However, we believe that the present study might contribute to the knowledge on workers' health, and the data might be used by managers and workers in their everyday routine to implement measures and policies at this type of institution.

CONCLUSION

The results of the present study allow inferring that the workers' health-disease process might be related with hazards present at the hospital work environment.

Therefore, such risk factors must be indispensably discussed with the employees so that they can protect themselves from the harm originated in the work environment. Managers should implement programs targeting

workers in general to promote health and avoid physical and mental disorders, thus contributing to improve the quality of life at work and the care provided to patients and their relatives.

REFERENCES

1. Alizadeh SS, Mortazavi SB, Sepehri MM. Analysis of occupational accident fatalities and injuries among male group in Iran between 2008 and 2012. *Iran Red Crescent Med J*. 2015;17(10):e18976. DOI: 10.5812/ircmj.18976
2. Prado CE. Estresse ocupacional: causada e consequências. *Rev Bras Med Trab*. 2016; 14(3):285-9.
3. Aldenis SM, Cabral AC, Santos SM, Pessoa MN, Roldan VP. Reestruturação produtiva no setor de saúde: estudo de caso em um hospital de Fortaleza-CE. *Rev Adm Hosp Inovaç Saúd*. 2012; 8(8):65-74.
4. Farias GS, Oliveira CS. Riscos ocupacionais relacionados aos profissionais de enfermagem na UTI: uma revisão. *Braz J Health*. 2012;3(1):1-12.
5. Loro MM, Zeitoune RC, Guido LA, Silveira CR, Silva RM. Desvelando situações de risco no contexto de trabalho da enfermagem em serviços de urgência e emergência. *Esc Anna Nery*. 2016;20(4):e20160086. DOI: 10.5935/1414-8145.20160086
6. Mininel VA, Felli VEA, Silva EJ, Torri Z, Abreu AP, Branco MT. Workloads, strain processes and sickness absenteeism in nursing. *Rev Latino-Am Enfermagem*. 2013;21(6):1290-7. DOI: 10.1590/0104-1169.2992.2366
7. Sousa AF, Queiroz AA, Oliveira LB, Moura ME, Batista OM, Andrade D. Representações sociais da enfermagem sobre biossegurança: saúde ocupacional e o cuidar prevencionista. *Rev Bras Enferm*. 2016;69(5):864-71. DOI: 10.1590/0034-7167-2015-0114
8. Porto JS, Marziale MH. Motivos e consequências da baixa adesão às precauções padrão pela equipe de enfermagem. *Rev Gaúcha Enferm*. 2016; 37(2):e57395. DOI: 10.1590/1983-1447.2016.02.57395
9. Barbosa AS, Diogo GA, Salotti SR, Silva SM. Subnotificação de acidente ocupacional com materiais biológicos entre profissionais de enfermagem em um hospital público. *Rev Bras Med Trab*. 2017;15(1):12-7
10. Brasil. Ministério do Trabalho. Norma regulamentadora - NR 9: programa de prevenção de riscos ambientais. Portaria nº 25 de 29/12/1994.
11. Brasil. Lei nº 8.112, de 11 de dezembro de 1990. Dispõe sobre o regime jurídico dos servidores públicos civis da união, das autarquias e das fundações públicas federais. Brasília; 1990.
12. Cavalcante MS. Aspectos polêmicos do instituto da readaptação funcional no âmbito da administração pública. *Rev Controle*. 2011;9(2):171-92.
13. Prochnow A, Magnago TS, Urbanetto JS, Beck CL, Lima SB, Greco PB. Work ability in nursing: relationship with psychological demands and control over the work. *Rev Latino-Am Enfermagem*. 2013;21(6):1298-305. DOI: 10.1590/0104-1169.3072.2367
14. Dall'Ora C, Griffiths P, Ball J, Simon M, Aiken LH. Association of 12h shifts and nurses' job satisfaction, burnout and intention to leave: findings from a cross-sectional study of 12 European countries. *BMJ Open*. 2015;5:e008331. DOI: 10.1136/bmjopen-2015-008331
15. Cacciari P, Haddad MC, Dalmas JC. Nível de estresse em trabalhadores readequados e readaptados em universidade estadual pública. *Texto Contexto Enferm*. 2016;25(2):e4640014. DOI: 10.1590/0104-07072016004640014
16. Batista JM, Juliani CM, Ayres JA. O processo de readaptação funcional e suas implicações no gerenciamento em enfermagem. *Rev. Latino-Am Enfermagem*. 2010;18(1):87-93. DOI: 10.1590/S0104-11692010000100014
17. Cacciari P, Haddad MC, Vannuchi MT, Marengo RA. Caracterização sociodemográfica e ocupacional de trabalhadores de enfermagem readaptados e readequados. *Rev Enferm UERJ*. 2013;21(3):318-23.
18. Cacciari P, Haddad MC, Vannuchi MT, Dalmas JC. Estado de saúde de trabalhadores de enfermagem em readequação e readaptação funcional. *Rev Bras Enferm*. 2013;66(6):860-5. DOI: 10.1590/S0034-71672013000600008
19. Gould R, Ilmarinen J, Järvisalo J, Järviskosk A. Dimensions of work ability: results of the health 2000 survey. Helsinki, Finland: Waasa Graphics Oy; 2008.
20. Farias SH, Lucca SR. Perfil dos trabalhadores vítimas de acidente de trabalho grave usuários de prótese do programa de readaptação profissional. *Rev Baiana Saúd Púb*. 2013;37(3):725-38.
21. Rossetti AC, Gaidzinski RR. Estimativa do quadro de pessoal de enfermagem em um novo hospital. *Rev Latino-Am Enfermagem*. 2011;19(4):1011-7. DOI: 10.1590/S0104-11692011000400021
22. Silva CD, Pinto WM. Riscos ocupacionais no ambiente hospitalar: fatores que favorecem a sua ocorrência na equipe de enfermagem. *Saúde Colet Debate*. 2012; 2(1):62-29.
23. Silva JL, Moreno RF, Soares RS, Souza VR. Acidentes com perfurocortante nas equipes de enfermagem. *R Pesq Cuid Fundam*. 2012;(Suppl):1-4.
24. Elias MA, Navarro VL. A relação entre o trabalho, a saúde e as condições de vida: negatividade e positividade no trabalho das profissionais de enfermagem de um hospital escola. *Rev Latino-Am Enfermagem*. 2006;14(4):517-25. DOI: 10.1590/S0104-11692006000400008

25. Hartwig TW, Silva MC, Reichert FF, Rombaldi AJ. Condições de saúde de trabalhadores de academias da cidade de Pelotas-RS: um estudo de base populacional. *Rev Bras Ativ Fis Saúde*. 2012;17(6):500-11. DOI: 10.12820/RBAFS.V17N6P500-511
26. Heck RM, Kantorski LP, Borges AM, Lopes CV, Santos MC, Pinho LB. Ação dos profissionais de um centro de atenção psicossocial diante de usuários com tentativa e risco de suicídio. *Texto Contexto Enferm*. 2012;21(1):26-33.
27. Bromet E, Andrade LH, Hwang I, Sampson NA, Alonso J, Girolamo G, et al. Cross-national epidemiology of DSM-IV major depressive episode. *BMC Med*. 2011;9:90. DOI: 10.1186/1741-7015-9-90
28. Macaia AA, Fischer FM. Retorno ao trabalho de professores após afastamentos por transtornos mentais. *Saúde Soc*. 2015;24(3):841-52. DOI: 10.1590/S0104-12902015130569
29. Martins JT, Galdino MJ, Linares PG, Ribeiro RP, Ueno LG, Broboff MC. Aposentadoria por invalidez de trabalhadores da área da saúde de um hospital universitário. *J Res Fundam Care*. 2017;9(1):122-7. DOI: 10.9789/2175-5361.2017.v9i1.122-127

Correspondence address: Alessandro Rolim Scholze – Rua Prefeito José Mario Junqueira, 393, apto. 2 – CEP: 86-360-000 – Bandeirantes (PR), Brazil – E-mail: scholze@uenp.edu.br