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ORIGINAL ARTICLE

Cost of nursing turnover in a Teaching Hospital*

Custo da rotatividade da equipe de enfermagem em hospital de ensino
Costo de la rotatividad del equipo de enfermería en hospital de enseñanza

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ABSTRACT

Objective: To map the sub processes related to turnover of nursing staff and to investigate and measure the nursing turnover cost. **Method:** This is a descriptive-exploratory study, classified as case study, conducted in a teaching hospital in the southeastern, Brazil, in the period from May to November 2013. The population was composed by the nursing staff, using Nursing Turnover Cost Calculation Methodology. **Results:** The total cost of turnover was R$314.605,62, and ranged from R$2.221,42 to R$3.073,23 per employee. The costs of pre-hire totaled R$101.004,60 (32,1%), and the hiring process consumed R$92.743,60 (91.8%) The costs of post-hire totaled R$213.601,02 (67,9%), for the sub process decreased productivity, R$199.982,40 (93.6%). **Conclusion:** The study identified the importance of managing the cost of staff turnover and the financial impact of the cost of the employee termination, which represented three times the average salary of the nursing staff.

DESCRIPTORS

Nursing, Team; Personnel Turnover; Personnel Administration, Hospital; Costs and Cost Analysis.

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INTRODUCTION

Nursing Turnover is a global concern, however, its definition and measurement vary according to the authors used[1-2]. It is defined and presented in literature in different ways, as the fluctuation between the hiring and termination of employees[3], or just by the number of employees terminated in relation to the number of employees who work at the institution[4].

The causes of turnover are related to external phenomena (supply and demand in the labor market and economic situation) and internal phenomena (salary policy, types of supervision and organizational conditions)[5].

There is a lack of consensus regarding the optimal rate of turnover, but what must be considered is that there should not be losses to the harmony of the institution. When this value is null, it demonstrates a stagnation of the institution, and if this rate is high, it leads to losses in productivity[6]. It is considered that an optimal turnover rate would be one in which the institution can retain their quality staff, replacing those with poor performance[3].

Healthcare organizations spend a lot of money to replace nurses and lose intellectual capital when they quit, showing as a consequence potential productivity losses associated with this turnover[7]. A study conducted in the United States estimated the cost of hiring new nurses, to the institution, at US$856 million per year, ranging from US$1.4 to US$2.1 billion for society. However, this estimate may be low, as they included only the costs associated with the hiring of new nurses[8].

There are few national[9-10] and international[2-4,7] studies exploring the cost of turnover, as well as the use of a standard methodology for the survey of expenditures/investments. In Brazilian literature, it is proposed that the calculation of cost is composed by primary, secondary and tertiary costs. The primary costs are related to the termination of each employee and their replacement by another, secondary costs are related to extra-labor and extra-operational expenditures, and the tertiary costs consist of estimated costs and parallel effects related to turnover[3]. Hiring process studies, training and termination of direct costs of labor showed the time taken by professionals and their monetary value[9-10], and also the materials consumed in each step of the process[10].

Internationally, studies propose different methodologies for calculating cost of turnover. Some use the stages of hiring to calculate the cost of turnover[11]. Other authors estimate the direct and indirect costs based on the management model, which considers hiring, their productivity and termination. This model recognizes characteristics of the patient, nurses and hospital unit involved in the professional productivity[12].

Nursing Turnover Cost Calculation Methodology (NTCCM) is divided into two categories of cost: pre-hire (recruitment, vacancies and hiring) and post-hire practices (training, decreased productivity of the new employees during their learning curve, and termination)[4]. In other research, similar to NTCCM, five subcategories were used, except for the decreased productivity of the new employees during their learning curve and termination[11].

Turnover is an international concern due to high cost to health organizations and to affect the work environment in relation to the quality of care and patient/collaborator safety. However, among the turnover studies, the ones related to its cost, due to its complexity, are still little investigated.

In this respect, the objectives of the study were to map the sub processes related to turnover of nursing staff and to measure the cost of turnover of nursing staff.

METHOD

The research is exploratory and descriptive, classified as case study[12], with quantitative characteristics. It was conducted in a large teaching hospital (720 beds), located in the Southeast region of Brazil, in the period from May to November 2013. The hospital performs, on average, 46.000 visits per month, it has 5.259 employees, and is a reference to 102 municipalities in the northwestern region of São Paulo State.

The investigated places were 12 inpatient units (six clinics and six surgical), 15 specialized units (nine semi-intensive and intensive care units, two emergency units, two surgical centers, one materials and sterilization center and one hemodialysis unit) and one diagnostic and therapeutic service unit (Endoscopy). The clinics and health units that are not part of the structure of the hospital complex were excluded. The population was composed by members of the nursing staff (nurses, technicians and assistants), except residents.

Data collection was conducted after formal authorization from the hospital, signatures of the Consent Form of participants in accordance with the Research Ethics Committee (nº 96,830/2012).

The calculation of the turnover rate was conducted by means of the equation proposed by Hospital Quality Control (HQC), which considers the number of people who are hired and terminated in the institution[13]. Only the external turnover rates were considered, therefore, internal turnover and reassignments were excluded.

$$Turnover = \frac{\dfrac{n° \ of \ employees \ hired + n° \ of \ employess \ terminated}{2}}{n° \ of \ employess \ per \ period/month} \ x = 100$$

The methodology used was Nursing Turnover Cost Calculation Methodology (NTCCM), composed by two categories of cost pre-hire and post-hire. This methodology was developed in early 1990s and has been refined for application in Nursing[4]. The pre-hire cost encompasses three subcategories (recruiting applicants for open vacancies, handling vacancies, and hiring new nurses) and post-hire, four (orientation and training of new employees, decreased productivity of new employees during their learning curve, dismissals and terminations). Each subcategory includes relevant costs to its variables. In this investigation, the term "process" was considered in place of the term "category" and "sub-process" for "subcategory". Thus, the mapping of the processes and their consequences (sub-processes and

activities) was conducted through interviews with professionals in human resources (HR) and Permanent Education Center (PEC).

The calculation of productivity measurement comprised four steps:

Step 1: Preparation of instrument and appropriateness of content – To measure the reduction of productivity of new sub-processes and pre-turnover (termination), using instruments based on the Nursing Interventions Classification (NIC)[14]. Six specialties with mapped interventions have been identified in the literature: emergency unit, adult intensive care, medical and surgical clinics, Operating room, pediatrics, multi-occupancy patient rooms and hemodialysis. For the others, endoscopy, neurology, palliative care unit, semi-intensive care, ICUs (cardiac adult and pediatric, and neonatal) transplant (kidney and bone marrow), and interventions were mapped considering the suggestions of the NIC. In the Materials and Sterilization Center (MSC), the recommended competencies were used by the Brazilian Society of Nursing in the Operating Room (BSNOR)[15].

Step 2: Validation of instruments – After listing, the interventions were forwarded to an expert opinion on NIC language used. Subsequently, a meeting was held with the nurses and clinic Manager of each area according to the zip code. At this point, representative interventions were selected for the nursing practice in each specialty.

Step 3: Criteria and score definition – three criteria were adopted for assessment, the planning of resource consumption, following the steps of Standard Operating Procedure (SOP) and intervention in a timely manner. The scores of the interventions ranged from zero to four: (0) Intervention was not performed; (1) it does not meet the criteria; (2) it meets a criterion; (3) it meets two criteria; (4) it meets three criteria.

Step 4: The estimated time of the nurse/supervisor for orientation of newly-hired professional.

The implementation of the instrument for measuring the productivity of each employee newly-hired or terminated was performed (after pre-test), with the participation of the manager nurse or unit clinic, nurse of the zip code area and the researcher who did the record in the instrument.

Calculations of costs were performed (table 2) based on the Brazilian currency (R$) and the conversion to dollar was done in September 2015, when R$ 1.00 corresponded to U$3.81 dollars.

The composition for the calculation of costs/employees is shown in chart 1.

Chart 1 – Costs Composition of sub-processes. From May to August 2013, São José do Rio Preto, SP, Brazil.

Costs Composition	Sub-processes	Calculating the cost/sub-process
Hourly cost of labor = base salary and social charges (20.1%), divided by the monthly working hours	Recruitment	Recruitment cost per employee = total cost/n° registered applications
	Hiring	Contract cost per employee = total cost/n° interviews
	Orientation/Training	Training cost = total cost/n° training hours
	Terminations	Termination costs = total cost/n° of terminations
Overtime = hourly cost of the Professional category + 100%	Vacancies	Vacancies per employee cost = total cost/n° of terminations
Orientation time = hourly cost of Professional category (days of the week)	Decreased Productivity of nurses	No productivity cost per employee = total cost/n° hired
Decreased productivity of newly hired = percentage difference between performance achieved and estimated (90 days), for 90% of productivity[13]	Decreased Productivity	
Decreased Productivity of the termination = percentage difference between performance achieved and estimated (30 days), for 90% of productivity [13]		No productivity cost per employee = total cost/n° terminated

*n°- Number

The total estimated cost of turnover was obtained by the sum of the pre and post-hire costs. The turnover/employee cost has been calculated by dividing the total costs by the sum of the hired professionals and terminations/month.

It was not considered for the calculation the turnover costs with supplies in hire sub process − R$13.30 used in group dynamic, tests and interviews and also the orientation/training − R$93.50 - related to the material in the integration period of newly hired professionals. This exclusion was due to the use of remaining office supplies of school kits which are distributed to the employees of the institution.

RESULTS

It was observed that in the period of four months, 38 hospital nursing staff professionals were terminated, as a result of initiatives from the employee or from the institution and 76 professionals were hired (table 1). The turnover rate ranged from 0.84% to 1.06%, the average number of hired professionals ranged from 2.5 to 9.5 and termination from 1.3 to 4.5.

Table 1 – Distribution of hired and terminated nursing staff, according to Professional category, turnover rate and inpatient units. From May to August 2013 - São José do Rio Preto, SP, Brazil.

	May		June		July		August		Total		M (SD)	
Category*	H	T	H	T	H	T	H	T	H	T	H	T
Nurse	-	2	-	1	2	1	3	-	5	4	2.5 (0.5)	1.3 (0.6)
Technician	10	8	10	1	9	5	4	4	33	18	8.3 (2.9)	4.5 (2.9)
Assistant	6	3	8	10	6	2	18	1	38	16	9.5 (5.7)	4 (4.1)
Total	16	13	18	12	17	8	25	5	76	38	19 (3.2)	9.5 (3.7)
N° of employees	1,411		1,479		1,492		1,492		5,050		1,469	
Turnover rate (%)	1.03		0.98		0.84		1.06		1.11		0.98	
Unit												
ICU	8	3	6	9	6	1	15	1	35	14	8.8 (4.3)	3.5 (3.8)
Specialized	6	10	11	2	9	7	8	4	34	24	8.5 (2.1)	5.8 (3.5)
DTS	-	-	-	1	1	-	-	-				
NA	2	-	1	-	1	-	2				1.5 (0.6)	-
Total	16	13	18	12	17	8	25	5	76	38		

*H- Hired; T- Terminated; Tx- Tax; DTS- Diagnostic and Therapeutic Service; NA- Not Answered.

Table 2 shows that the costs of the pre-hire process were R$101,004.60, and the sub process vacancies accounted for R$92,743.60 (91.8%) and the extra hour of activity ranged from R$13,694.90 to R$32,771.58.

Table 2 – Distribution of the costs of sub processes related to pre-hire of nursing staff (R$). From May to August 2013, São José do Rio Preto, SP, Brazil.

Pre-hire cost	May	June	July	August	Total	%
Recruitment						
Application registration	182.21	171.90	367.86	158.14	880.11	54.7
Application selection	221.12	108.80	59.67	161.45	551.04	34.2
Telephone Contact	67.68	36.63	20.09	54.36	178.76	11.1
Total cost	471.01	317.33	447.61	373.95	1.609.90	1.6
Recruitment/employee cost	8.88	6.34	4.18	8.12	6.28	
Vaccancies						
Measure extra working hour	32,771.58	18,098.81	13,694.90	14,316.83	78,882.12	85.1
Measure temp. contract	3.465.37	3.465.37	3.465.37	3.465.37	13,861.48	14.9
Total cost	36,236.95	21,564.18	17,160.27	17,782.20	92,743.60	91.8
Vaccancies/employee cost	2,787.45	1,797.01	2,145.03	3,55.44	2,572.20	
Selection and hire						
Telephone contact	155.98	70.9	60.27	92.17	379.32	5.7
Perform tests	334.90	459.29	334.9	334.9	1.463.99	22.1
Perform group dynamic	415.36	138.45	138.45	138.45	830.71	12.5
Perform Interview	518.99	286.98	522.88	348.27	1.677.12	25.2
Prepare documentation	886.98	484.75	350.66	577.57	2.299.96	34.6
Total cost	2,312.21	1,440.37	1,407.16	1,491.36	6,651.10	6.6
Contract cost/employee	42.81	49.66	82.77	46.60	51.16	
Total pre hire cost	39,020.17	23,321.88	19,015.04	19,647.51	101,004.60	32.1

*temp - temporary

The costs relating to post-hire process (Table 3) totaled R$213,601.02, and the sub-process of decreased productivity of the 68 newly hired professional in the trial period was R$199,982.40. The time spent by the nurse supervisor applying orientation to newly hired professionals ranged from R$21,712.72 to R$43,292.33.

Table 3 – Distribution of the costs of sub-processes related to post-hire process of nursing staff (R$). From May to August 2013, São José do Rio Preto, SP, Brazil.

Post-hire cost	May	June	July	August	Total	%
Orientation and training						
Perform integration PCE	664.29	664.29	687.19	675.76	2.691.53	79.8
Perform integration HR	170.77	170.77	170.77	170.77	683.08	30.2
Total cost	835.06	835.06	857.96	846.53	3.374.61	1.6
Training/employee cost	21.91	21.91	21.94	22.04	21.83	
Decreased productivity of newly-hired professional						
No productivity	16,962.68	18,239.36	17,072.92	18,951.60	71,226.56	35.6
Perform orientation	28,474.57	21,712.72	35,276.22	43,292.33	128,755.84	64.4
Total cost	45,437.25	39,952.08	52,349.14	62,243.93	199,982.40	93.6
No productivity cost/Employee	3,495.17	2,350.12	3,489.94	2,706.25	2,856.89	
Decreased productivity of terminated professionals						
No productivity	3,661.62	2,376.97	2,662.78	1,046.25	9,747.62	4.6
No productivity cost/Employee	305.13	216.08	532.55	209.25	295.38	
Termination						
Perform termination interview	169.82	156.75	104.50	65.31	496.39	0.2
Termination/employee Cost	13.06	13.06	13.06	13.06	46.93	
Total cost post-hire	50,103.75	43,320.86	55,974.38	64,411.27	213,601.02	67.9

The total cost of turnover (processes of pre and post-hire) was R$314,605.62. The pre-hire costs represented 32.1% and post-hire 67.9% of the total. The turnover/employee cost ranged from R$2,221.42 to R$ 3,073.23 and the cost of termination/employee was R$5,553.56 to R$16,811.75 (Table 4).

Table 4 – Distribution of costs related to pre and post-hire processes of the nursing staff (R$). From May to August 2013, São José do Rio Preto, SP, Brazil.

	May	June	July	August	Total	%
Pre-hire costs						
Recruitment	471.01	317.33	447.61	373.95	1.609.90	0.5
Vaccancies	36,236.95	21,564.18	17,160.27	17,782.20	92,743.60	29.5
Selection and hiring	2,312.21	1,440.37	1,407.16	1,491.36	6,651.10	2.1
Total cost	39,020.17	23,321.88	19,015.04	19,647.51	101,004.60	32.1
Turnover cost	1,393.57	777.39	760.60	654.91	886.00	
Post-hire costs						
Orientation and training	835.06	835.06	857.96	846.53	3,374.60	1.1
Decreased productivity of newly hired professional	45,437.25	39,952.08	52,349.14	62,243.93	199,982.40	63.6
Decreased productivity of terminated professionals	3,661.62	2,376.97	2,662.78	1,046.25	9,747.62	3.1
Termination	169.82	156.75	104.50	65.31	496.39	0.1
Total cost	50,103.75	43,320.86	55,974.38	64,411.27	213,601.02	67.9
Turnover cost	1,698.92	1.416.19	2.204.65	2.147.04	1.844.09	
Pre/post hire costs	89,123.92	66,642.74	74,989.42	84,058.78	314,605.62	
Turnover/Employee cost	3,073.23	2,221.42	2.999.57	2.801.95	2.759.69	
Termination/employee cost	6,855.68	5,553.56	9.373.67	16,811.75	8,279.09	

DISCUSSION

Turnover of nursing has a big financial impact for healthcare organizations, their rates vary according to the type of institution, private or public[11]. In this study, the turnover rate was lower - MD 0.99% - than those presented in 37 general unsealed hospitals, participants of HQC - MD 2.17% - over the same period[13].

The global perspective on turnover rates in England is approximately 10%[16]; ranging from 12 to 21% of a research including ten European countries[11] and are around 20% in Canada[17]. International Classification for annual turnover rates in health organizations relates how low variations 4-12%, moderate 12-21% and high 22-44%[18].

Turnover is a multifactorial event, there is not a number that defines this ideal rate, since it depends on the individuality of each institution and also the external market[11]. Taking these aspects into consideration, it is expected that the turnover rate does not reach levels that lead to compromised quality, rising costs and patient safety.

The pre-hire related costs totaled 32.1% of the expenses generated in turnover, in which the sub-process vacancies (overtime and temporary contract) was the most present, with 29.5%. An integrative review of literature showed that the cost of vacancies is more costly, regardless of cost methodology[11]. In other researches conducted in the United States, Australia, Canada and New Zealand, this figure reached 68% of direct costs[12].

A study conducted in the United States, during one year, showed that the values of the direct costs caused by turnover vary widely. In an estimate, it was concluded that for hospitals, the recruitment cost per nurse/month was a total of US$241.67[4] for nursing staff, in our study it was R$6.28 (US$ 1.76). Regarding the sub-process cost of recruiting/month, this research showed R$402.48 for the nursing staff, higher value than those found in the national research of the nursing technicians category (R$191.18)[10]. Recruitment plays a central role supplying the selection process of the institution with the highest number of candidates and, if inefficient, possibly brings losses for the institution, and high turnover rates[3].

After recruitment, the selection of candidates takes place, and for that sub-process there was an expense cost/month of R$1,662.78. A national study found that for the hiring process, this sub-process was the most consumed resource/month, around R$1,138.890[10]. The proper selection process will bring high productivity to the institution, lower turnover rates, ensuring return on investment applied to this activity. However, the recruitment and selection activities do not end when the candidate is hired, but, after the process of integration and adaptation of the institution[3].

For the sub-processes of orientation and training, in this investigation, there was an investment/month of R$ 843.65. In a national study, the admission training/month was R$ 268.90[11]. This sub-process aims to develop favorable attitudes to the institution and meet the information needs for the new institution[19]. Human capital should be well developed and the training becomes a lucrative source because, since it enriches the human heritage in the institution, reducing their time to adapt and the initial turnover[3].

The greatest burden presented in this study was related to post-hire process - 67.9% - and the lower productivity of the newly hired professional was the most expensive, with 63.6%. The scarcity of research related to objective or subjective measure of the productivity of newly hired professionals makes the comparison of data to be done only with international studies, which reported costs for this process up to 64%[11]. Turnover contributes to an increase in the organization's costs, loss of productivity and organizational inefficiency by replacing a skilled employee. The awareness of leaders is diverted and increases the consumption time to monitor the newly hired, expending resources that could be directed to other financial initiatives/policies[4].

In the present study, we identified that the estimated annual cost of turnover per employee (nursing staff) will be R$33,116.28 (US$ 8,961.93). Recent international studies have shown great variability in their findings, where expenditures per nurse/year are estimated at R$83,820.00 (US$ 22,000) and R$335,607.66 (US$ 88.086)[4,11-12,20].

When analyzing turnover rates and comparing their costs, it can be seen that the costs are directly proportional to that event. Internationally, researches reported that the rates range from less than 9.49% to a maximum of 250%[11], while our study presents rates ranging from 0.84% to 1.06%. The costs presented by these studies, whether in American hospitals, in Europe, or only in an institution, range from US$5.8 million/year[20] to US$ 7.9 to 8.5 million/year[4]. Compared to the present study, which showed a lower turnover rate, the total cost was R$314,605.62 (US$ 82,790.95) in four-month investigation. Performing an estimated total cost shown in the research for a year, the cost of turnover may reach R$943,816.86 (US$ 247,720.96).

Thus, the results found in the literature revealed variability in international studies and lack of data in national research on turnover cost, in terms of concept, professional nursing categorization, measurement and indicators. The research methodologies, data sources, and the cost of calculation and coverage provide just the results of estimated costs.

The case study method is limited in its applicability, but the validity of the results, since studies have shown that when taking infrastructure many results are similar. Another limitation relates to the use, for the first time, at the national level, in an adapted form, the methodology Nursing Turnover Cost Calculation Methodology (NTCCM), and objective measurement of productivity not using the NIC. Still, there is a gap on the scope of the termination sub-process, in which activities related to the medical examination were not investigated, and also the termination of sub-process, with regard to activities related to registration, documentation, attendance at the approval in the Labor Courts.

CONCLUSION

The study identified the importance of managing the cost of staff turnover and the financial impact of the termination/employee cost, who represented three times the average salary of the nursing staff.

This study provides the knowledge and mapping of processes and activities involved in turnover, advancing the management of nursing staff costs and innovating in the use of NIC to measure the productivity of newly hired professionals and terminations. More than numerical results, we believe in the need for improvements in personnel policies aimed at retaining nurses, especially in the first year. This study has also contributed to the personal management and productivity analysis of newly hired professionals, as well as the costs involved.

RESUMO

Objetivo: Mapear os subprocessos relacionados à rotatividade da equipe de enfermagem e mensurar o custo da rotatividade da equipe de enfermagem. **Método:** Estudo exploratório-descritivo, na modalidade de estudo de caso, realizado em hospital de ensino do sudeste do Brasil, no período de maio a novembro de 2013. A população foi composta pela equipe de enfermagem, utilizando-se a metodologia para o cálculo de custo da rotatividade. **Resultados:** O custo total da rotatividade foi de R$314.605,62, e por colaborador variou de R$2.221,42 a R$3.073,23. Os custos decorrentes da pré-contratação totalizaram R$101.004,60 (32,1%), sendo que o processo vagas consumiu R$92.743,60 (91,8%). Os custos referentes à pós-contratação totalizaram R$213.601,02 (67,9%), e para o subprocesso de diminuição da produtividade, R$199.982,40 (93,6%). **Conclusão:** O estudo permitiu identificar a importância do gerenciamento do custo da rotatividade de pessoal e o impacto financeiro do custo do colaborador desligado, que representou três vezes o salário médio da equipe de enfermagem.

DESCRITORES

Equipe de Enfermagem; Reorganização de Recursos Humanos; Administração de Recursos Humanos em Hospitais; Custos e Análise de Custos.

RESUMEN

Objetivo: Mapear los subprocesos relacionados con la rotatividad del equipo de enfermería y medir el costo de la rotatividad del equipo de enfermería. **Método:** Estudio exploratorio-descriptivo, en la modalidad de estudio de caso, llevado a cabo en hospital de enseñanza del sudeste de Brasil, en el período de mayo a noviembre de 2013. La población estuvo compuesta del equipo de enfermería, utilizándose la metodología para el cálculo de costo de la rotatividad. **Resultados:** El costo total de la rotatividad fue de R$314.605,62 y, por colaborador, varió de R$2.221,42 a R$3.073,23. Los costos consecuentes de la pre contratación totalizaron R$101.004,60 (32,1%), siendo que el proceso plazas consumió R$92.743,60 (91,8%). Los costos referentes a la post contratación totalizaron R$213.601,02 (67,9%) y, para el subproceso de disminución de la productividad, R$199.982,40 (93,6%). **Conclusión:** El estudio permitió identificar la importancia de la gestión del costo de la rotatividad de personal y el impacto financiero del costo del colaborador alejado, que representó tres veces el sueldo medio del equipo de enfermería.

DESCRIPTORES

Grupo de Enfermería; Reorganización del Personal; Administración de Personal en Hospitales; Costos y Análisis de Costo.

REFERENCES

1. Tai TWC, Bame SI, Robinson CD. Review of nursing turnover research, 1977–1996. Soc Sci Med. 1998;47(12):1905-24.

2. Hayes LJ, O'Brien-Pallas L, Duffield C, Shamian J, Buchan J, Hughes F, et al. Nurse turnover: a literature review. Int J Nurs Stud. 2006;43(2):237-63.

3. Chiavenato I. Gestão de pessoas: o novo papel dos recursos humanos nas organizações. 3ª ed. Rio de Janeiro: Elsevier; 2008.

4. Jones CB. Revisiting nurse turnover costs. J Nurs Adm. 2004;34(12):562-70.

5. Medeiros CRG, Junqueira AGW, Schwingel G, Carreno I, Jungles LAP, Saldanha OMFL. A rotatividade de enfermeiros e médicos: um impasse na implementação da Estratégia de Saúde da Família. Ciênc Saúde Coletiva [Internet]. 2010 [citado 2014 jan. 08];15(Supl 1):1521-31. Disponível em: http://www.scielo.br/pdf/csc/v15s1/064.pdf

6. Stancato K, Zilli PT. Fatores geradores da rotatividade dos profissionais de saúde: uma revisão de literatura. Rev Adm Saúde. 2010;12(47):87-99.

7. Jones CB, Gates M. The costs and benefits of nurse turnover: a business case for nurse retention. Online J Issues Nurs. 2007;12(3):1-3.

8. Brewer CS, Kovner CT, Greene W, Tukov-Shuser M, Djukic M. Predictors of actual nurse turnover in a national sample of newly licensed registered nurses employed in hospitals. J Adv Nurs. 2012;68(3):521-38.

9. Holanda FL, Cunha ICKO. Tempo de permanência de enfermeiros em um hospital-escola e valores monetários despendidos nos processos de admissão, desligamento e provimento de novo profissional. Rev Latino Am Enfermagem. 2005;13(5):642-7.

10. Okano HIH, Castilho V. Levantamento do custo do processo admissional de técnico de enfermagem de um hospital de ensino. Rev Esc Enferm USP. 2007;41(3):492-9.

11. Yin L, Jones CB. A literature review of nursing turnover costs. J Nurs Manage. 2013;21(3):405-18.

12. O'Brien-Pallas L, Griffin P, Shamian J, Buchan J, Duffield C, Hughes F, et al. The impact of nurse turnover on patient, nurse, and system outcomes: a pilot study and focus for a multicenter international study. Policy Polit Nurs Pract. 2006;7(3):169-79.

13. Yin RK. Estudo de caso, planejamento e métodos. 4ª ed. São Paulo: Bookmen; 2010.

14. Núcleo de Apoio à Gestão Hospitalar. Programa CQH. Manual de indicadores de enfermagem. São Paulo: APM/CREMESP; 2006.

15. Buleck GM, Butcher HK, Dochterman JM. Classificação das intervenções de enfermagem (NIC). 5ª ed. Rio de Janeiro: Elsevier; 2010.

16. Sociedade Brasileira de Enfermagem em Centro Cirúrgico (SOBECC). Manual de Práticas Recomendadas da SOBECC. 6ª ed. São Paulo: SOBECC; 2013.

17. Clancy J. Dignity Denied: long term care and Canada [Internet]. Nepean: National Union; 2008 [cited 2011 Ago 27]. Available from: http://www.nupge.ca/presidentscommentary/n05fe08e.htm

18. United to Improve America's Health. The business case for workforce stability. New York: VHA; 2002.

19. Bucchi SM, Mira VL, Otrenti E, Ciampone MHT. Nurse instructor in the process of admission training of nurses in the Intensive Care Unit. Acta Paul Enferm. 2011;24(3):381-7.

20. Mukamel DB, Spector WD, Limcangco R, Wang Y, Feng Z, Mor V. The costs of turnover in nursing homes. Med Care. 2009;47(10):1039-45.