

Analysis of nursing proactivity in a public university hospital

Análise da proatividade da enfermagem em um hospital universitário público

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Keywords

Work performance; Equipe de enfermagem; Leadership; Working environment; Nursing service, hospital

Descritores

Desempenho laboral; Equipe de enfermagem; Liderança; Ambiente de trabalho; Serviço hospitalar de enfermagem

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Abstract

Objective: To analyze the proactivity of nursing staff in a public university hospital.

Methods: A cross-sectional study was conducted from April to June of 2015, with 347 workers at a public university hospital in southern Brazil, by means of a questionnaire composed of socio-professional data and the shortened version of the Proactive Behaviors in Organizations Scale. The descriptive and inferential statistics supported the data analysis.

Results: Proactive behavior was identified in 218 (62.8%) of the participants. The proactivity means were associated with the professional categories and inversely correlated to age, and the period of time working in the health area and in the hospital.

Conclusion: Individual factors affect proactivity at work and a strong presence of proactive behaviors facilitates the leaders in encouraging their expansion in the context of the work teams.

Resumo

Objetivo: Analisar a proatividade de trabalhadores de enfermagem em um hospital universitário público.

Métodos: Estudo transversal realizado, entre abril e junho de 2015, com 347 trabalhadores de um hospital universitário público do sul do Brasil, mediante preenchimento de um questionário composto de dados socioprofissionais e da Escala reduzida de Comportamentos Proativos nas Organizações. A estatística descritiva e inferencial subsidiou a análise dos dados.

Resultados: Constatou-se forte emissão de comportamentos proativos em 218 (62,8%) dos participantes. As médias de proatividade foram associadas às categorias profissionais e inversamente correlacionadas à idade, tempo de trabalho na área da saúde e no hospital.

Conclusão: Fatores individuais afetam a proatividade no trabalho e a forte emissão de comportamentos proativos é um facilitador para que as lideranças fomentem a ampliação dos mesmos no âmbito das equipes de trabalho.

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Introduction

The demands of the contemporary world imply the need to increase the supply and quality of health services. Within the institutions, investment in the management of available resources and propositional actions that highlight participatory work groups is expected. Therefore, nurses especially those who occupy strategic management and administration positions, need to be proactive and stimulate their peers and other nursing team professionals to generate constructive movements in the context of professional practice.

The proactive professional does not merely allow circumstances happen; on the contrary, he becomes involved, takes initiative and anticipates solutions, solves problems and improves the environment in which he works. With the recognition of individual factors, managers can benefit the organization by intensifying the positive effects of proactive work teams.⁽¹⁾

In the present study, the concept of proactivity is understood to be the anticipated action when facing events experienced by individuals in their working environment, which involves knowing the daily work, having the necessary time for knowing the team and building trust with the staff, as well as having initiative to plan and execute ideas and confront the difficulties together.

In the international and national literature on the subject of proactivity, a predominance of publications on the quantitative dimension was identified, with a concentration in the areas of administration and psychology, but a scarcity in nursing.⁽²⁻¹¹⁾ In this search, only three studies were found within the nursing field.⁽⁹⁻¹²⁾

An investigation conducted in Turkey with 910 university hospital nurses resulted in a positive association between the proactivity of the nursing team and staff empowerment, revealing the importance of empowerment and individual differences to stimulate proactive behavior in organizations, especially when the teams plan its work in a participatory manner.⁽⁹⁾

The nurse has a relevant role in influencing nursing staff members, in the outcome of proactive behavior that promotes safe care with better patient outcomes.⁽¹⁰⁾

Another investigation by means of collaborative and engaged work, conducted with nursing managers in a North Carolina hospital, in the United States of America, looked at proactivity in medical error identification on the units, reaching a mean score of 4.01 (± 0.48) on a five-point proactive behavior scale. This result indicates that the proactive resolution of problems related to performance can provide for the best development of organizational teams and prevention of adverse events that compromise the quality of patient care.⁽¹¹⁾

A national qualitative research study with nurses sought to explore the impact of proactivity on care management. These professionals understood that their proactive actions could have positive repercussions on the work environment, such as: quality of care from an institutional scope; attention to the patients' health needs, in addition to their pathological conditions; perceived valuation of professional development; patient and employee satisfaction, among others.⁽¹²⁾

Knowledge of the degree of proactive behavior is important, in order to perceive its possible contributions to the stimulation of all nursing and other health team professionals, resulting in work team performance improvement of the work and, as a result, institutional improvement. Based on the purposes of the present study, the following hypotheses were assumed: there are different degrees of proactivity among hospital nursing staff; and, there are differences in the proactivity of nursing staff in relation to socio-economic data such as age, professional category, type of contract, and time working in the institution.

The objective of this study was to analyze the proactivity of nursing staff in a public university hospital.

Methods

This was a cross-sectional study of quantitative nature, conducted in a public university hospital with 175 beds, in southern Brazil. The proposal was to

include the entire population of 410 nursing staff; however, 47 were on prolonged leave during the data collection period for different reasons, such as vacation, sick leave, personal leave, etc. In addition, 16 people refused to participate in the study and, thus, the sample size was 347 participants.

The data were collected from April to June of 2015, on the institution's premises, using a self-administered structured questionnaire composed of two parts. The first contained socio-professional variables, and the second consisted of a validated short form of the Proactive Behaviors in Organizations Scale (PBOS-SF) - (Escala de Comportamentos Proativos nas Organizações - ECPO_R), based on the original Brazilian scale.^(13,14)

The PBOS-SF, with a single-frame structure, has 13 closed questions with a five-point Likert-type response scale, where 1 = never, 2 = rarely, 3 = sometimes, 4 = frequently, and 5 = always; it has an internal consistency of 0.94, using the Cronbach's alpha coefficient.

The study factor, degree of proactivity, was analyzed using means, standard deviations and modes. It was classified by the interpretation of means as weak (1 to 2.49), moderate (2.5 to 3.49), and strong (higher than 3.5), as recommended by the author, according to the stratification related to the five-point Likert response scale. In addition, the internal consistency analysis of the PBOS-SF was 0.904, applied in this study using the Cronbach alpha coefficient, which proved to be adequate for the population surveyed.

A bivariate analysis was performed after descriptive analysis of the professional variables, using absolute and relative frequency, mean, standard deviation and median. The Pearson's simple linear correlation r was used for analysis of the dependent variable and the continuous socio-professional variables. To verify the association between proactivity and the variables of education and work shift, the one-way ANOVA variance analysis test and Tukey's post hoc test were applied. The Student's t-test was used to identify the relationships of proactivity with other categorical socio-professional variables. The relationship between variables with a

$p \leq 0.05$ was considered significant. The analysis was supported by the Statistical Package for the Social Sciences (SPSS), version 18.0.

The study was registered in Brazil under the Platform Presentation of Certificate number for Ethics Assessment (CAAE) number 43407015.2.0000.5347.

Results

Table 1 shows the socio-professional variables and their relationships with proactivity. Among nursing staff, a predominance of women with a partner was identified, with a mean of 42 (\pm 9.8) years of age,

Table 1. Analysis of the relationships between socio-professional variables and hospital nursing staff proactivity

Socio-professional variables	n (%) / mean (SD) / median	Mean/r	p-value
Sex (n=346)			0.536
Female	280(80.9)	3.67(\pm 0.75)	
Male	66(19.1)	3.60(\pm 0.63)	
Age (years) (n=345)	41.6(\pm 9.8)	-0.108	0.022
Marital status (n=342)			0.769
With partner	219(64)	3.66(\pm 0.71)	
Without partner	123(36)	3.64(\pm 0.79)	
Number of children (n=346)	1(1-2)	-0.058	0.139
Professional category			<0.001
Nursing assistants/technicians	273 (78.7)	3.56 (\pm 0.75)	
Nurse	74 (21.3)	3.98 (\pm 0.56)	
Education			0.256
High school	111(32)	3.56(\pm 0.79)	
Higher education	127(36.6)	3.56(\pm 0.73)	
<i>lato sensu</i> (Specialty course)	95(27.4)	3.85(\pm 0.64)	
<i>stricto sensu</i> (master's or doctorate)	14(04)	3.83(\pm 0.61)	
Time working in healthcare (years) (n = 344)	15(7-22)	-0.108	0.023
Work sector			0.269
Inpatient units	252(72.6)	3.62(\pm 0.72)	
Other	95(27.4)	3.72(\pm 0.76)	
Time working in the institution (years) (n=345)	7(0-14)	-0.103	0.027
Type of employment contract			0.119
Consolidation of Labor Laws	183(52.7)	3.71(\pm 0.73)	
Contract for public employee (Regime Jurídico Único)	164(47.3)	3.59(\pm 0.74)	
Shift worked			0.154
Morning	107(30.8)	3.64(\pm 0.74)	
Afternoon	91(26.2)	3.85(\pm 0.60)	
Daytime**	12(3.5)	4.10(\pm 0.56)	
Nighttime	137(39.5)	3.49(\pm 0.78)	
Working in another institution			0.506
No	196(56.5)	3.63(\pm 0.74)	
Yes	151(43.5)	3.68(\pm 0.73)	
Number of people in the nursing team	06(4-8)	-0.010	0.846

*Specialized Clinic, **Professionals working eight hours a day; Absolute frequency (Relative frequency); Mean (Standard Deviation); Median (interquartile range); t-test; Pearson correlation; Tukey HSD post hoc test; N <347 due to missing values

Table 2. Mean scores of proactive behaviors in the hospital nursing staff

Items	Mean	Mode	SD
01. Actively participate in the institution, analyzing the best work practices	3.03	4	1.348
02. When planning to implement work improvements, I think of how to help my peers to adapt to new practices.	3.92	4	1.087
03. Looking for previous knowledge to plan and implement improvement actions	3.85	4	1.032
04. Putting my improvement ideas into practice	3.67	4	1.010
05. Creating opportunities for action in order to improve this organization	3.62	4	1.096
06. Giving new suggestions to improve this organization	3.54	4	1.089
07. Making changes aimed at organizational improvement	3.27	4	1.175
08. Seeking to learn new knowledge that will bring future benefits to the organization	4.10	5	0.912
09. Improving the organizational systems and practices	3.44	4	1.074
10. Not expecting ready answers, I actively seek alternatives	3.86	4	0.906
11. Observing my work sector routine and thinking about how I could improve it	4.16	4	0.830
12. If I realize that organizational systems or practices can be improved, I suggest new practice ideas that bring improvements to the organization	3.38	3	1.155
13. If I realize that organizational systems or practices can be improved, I suggest new ideas for improvement	3.62	4	1.156
Proactivity	3.65	3.85	0.73

SD - Standard deviation

of which 74 (21.3%) were nurses, working approximately 15 years in the healthcare area, and seven years in the hospital.

Nursing assistants and technicians attend courses beyond the level of high school education, therefore, they are part of the contingent of 95 (27.4%) nursing professionals with a *lato sensu degree* (a specialization course in one area of study), and 14 (4%) held a master’s degree and/or doctorate.

The proactivity means were higher in nurses ($p < 0.001$) and were, inversely correlated to age, time working in the healthcare area and in the institution ($p < 0.05$).

Among nursing staff, 218 (62.8%) showed strong proactive behavior, while in 27 (7.8%) these behaviors were weak. Table 2 explains the results from the PBOS-SF. The highest mean was related to the routine observation of the work sector and how to improve it; the lowest score was in relation to active participation in the hospital.

Discussion

One of the limitations of the research lies in the potential for generalization, due to the cross-sectional design, considering the characteristic of data collection occurring at a single moment in time, that is, the information presented demonstrate the perceptions of nursing staff in the hospital during the time frame from April to June of 2015.

Concerning the contributions of the study, the knowledge of whether the level of proactive behavior is weak, moderate or strong allows the organizations to support more assertive actions to encourage workers, at different intensities of expression of proactivity, to improve such behaviors in their daily practices. In addition, an understanding of the measurement of proactivity by the professionals provides an opportunity to assist the teams, by means of periodic meetings allows for dialogue on strategic analysis, and a systematic search for continuous work improvements and innovative solutions to work on the problems perceived by managers and nursing staff and health staff.

Regarding the level of education, the small number of individuals with *stricto sensu* degrees (master’s or doctorates) is possibly related to difficulties associated with the demands required for long-term educational programs, especially in the case of temporary employment and those holding several jobs.⁽¹⁵⁾ However, a study conducted with multiple organizations in Dresden, Germany, found that proactive people seek higher educational levels.⁽¹⁶⁾ In addition, proactive teams specialize in continuous improvement, reviewing work processes and seeking innovative solutions to work problems.⁽¹⁷⁾

The Consolidation of Labor Laws, known as a contractual employment relationship, is the most common type of contract, however, the ratio of these private employees are similar to that of public employees, whose labor relations with

the Public authority are governed by the Federal Public Servant Statute. Even though the employment relationship did not have a statistically significant association with proactivity at this hospital ($p=0.119$), the mean of 3.71 (± 0.73) of proactive behavior of private employees, was higher in relation to the mean of 3.59 (± 0.74) of such behaviors in governmental employees, who have job stability.

A statistically significant difference was identified between the means of proactivity in nurses and nursing assistants or technicians ($p<0.001$). The influence of wage differentials of nurses, nursing assistants and technicians, the hierarchical position of the nurse, the subordination of the others, as well as the difference in their level of education, can be factors that influence the presence of proactive behavior between these professionals. On the other hand, the position of the nurse, as coordinator of the nursing team, provides more opportunities for autonomy and decision-making power to develop activities, and this strategic position may favor the nurse in presenting proactive attitudes.

It is plausible that such difference in the variable professional category of nursing is due the condition of the nurses being responsible for management activities.⁽¹⁸⁾ In addition, it is necessary to emphasize the importance of the percentage of nurses in the staff, to ensure qualified care, as in situations in which the number of nurses is reduced, activities unique to this professional category are performed by nursing staff with a medium level education.⁽¹⁹⁻²¹⁾

A weak correlation was identified of proactivity, and it was inversely proportional to the variable of time working in the institution, therefore, the increase in time working corresponded to a decrease in proactivity. In a study that used the same PBOS-SF scale, no correlation was found between socio-professional variables and proactivity.⁽¹⁴⁾

According to another research study, professionals tend to present more proactive behaviors as the time of working increases, a fact that enables familiarization and openness for new initiatives and, thus, provides a favorable environment for proactivity. If, over time, the more proactive attitudes of individuals are not valued by the organization and their

peers, or if they do not produce desired outcomes, these individuals tend to act with less proactivity.⁽²²⁾ Proactive colleagues can promote engagement in the work of those newly hired, by means of relevant responses to their questions, and by welcoming and socializing behaviors.⁽²³⁾

In the present study, proactivity was inversely correlated with age, so that proactivity decreased as the age increased ($p < 0.05$). In this regard, a study showed that younger professionals were perceived more positively in terms of proactive personality, citing a possible relationship with the stereotype that older professionals have less energy for work.⁽²⁴⁾

In a survey with nurses from a North Carolina hospital in the United States of America, age ($\beta=0.01$, $p=0.04$) and working time ($\beta=0.01$, $p=0.05$) in the sector showed a significant association with the proactive behavior at work, explaining 27.5% of the variance in proactivity.⁽¹¹⁾ In a university hospital in Singapore, experienced nurses exhibited greater prioritization of activities and anticipation of needs, collaborating with the staff, which is characteristic of proactivity. In addition to fewer mistakes, their performance on their non-technical cognitive skills was significantly better than inexperienced nurses.⁽²⁵⁾

Among the results from the PBOS-SF scale, we highlight the strong level of proactive behavior of the research participants, reaching an average of 3.65 (± 0.73). Another study that used the same scale in four public and two private institutions of the Federal District, found an average of 3.71 (± 0.64).⁽¹³⁾

Nine items of the PBOS-SF scale showed means above 3.5, and modes of 4, representing similar understandings of such behaviors among survey respondents and proactivity as characteristic of the workers.

These nine items correspond to different attributes that refer to the proactivity of workers, from actions aimed at the common goal of improving the work environment and the initiative to seek knowledge, as well as to suggest ideas and put them into practice. However, the scale items with moderate means and different modes are related to different understandings among the

respondents and may reflect perception of difficulties. These items are related to the achievement of work improvements through execution and evaluation of the actions.⁽¹⁴⁾

Of these nine items of the PBOS-SF scale, with means higher than 3.5, item 11 presented the highest mean. The result of the standard deviation was less than 0.91, which indicates the respondents' agreement that such items represent the attitudes of the more proactive hospital employees and the potential to think about improvements for the daily work. Regarding item 1, regarding active participation in the organization, the mean was the lowest of the scale, and the higher standard deviation indicates differences in the perceptions among respondents in relation to this statement.

The congruence of staff members' understanding about proactive behavior is important for the development and strengthening of the team participants. The influence of the group on the values desirable for their participants impacts on mutual support and the engagement of proactive behavior.⁽¹³⁾

Finally, because the hospital nursing proactivity exceeded the restricted behavior of a few professionals, a critical reading of obstacles for presenting this behavior is essential for a comprehensive interpretation of the reality, and for concrete action.

Conclusion

Different levels of proactivity among the hospital nursing staff were demonstrated. An expressive contingent of the sample demonstrated a strong presence of proactive behaviors, facilitating the leadership staff in promoting its extension into the scope of the work teams, however, with the exception of the need to pay attention to the peculiarities related to the different age groups.

As a conclusion, the intention is to contribute to the exploration of proactivity in the area of nursing and health, given that there are few publications on the subject in these areas, and that research on the subject is far from being exhausted.

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Collaborations

Porto AR and Dall'Agnol CM contributed to the study design, research execution, relevant critical review of the intellectual content, analysis and data interpretation, article writing and final approval of the version to be published.

References

1. Reis S, Pissara J. Antecedentes do comportamento proativo em contexto de trabalho e seus efeitos no desempenho profissional. *J Aging Innovation*. 2013; 2(2):75-94.
2. Gong Y, Siu-Yin C, Mo W, Jia-Chi H. Unfolding the proactive process for creativity: integration of the employee proactivity, information exchange, and psychological safety perspectives. *J Manag*. 2012; 38(5):1611-33.
3. Tornau K, Frese M. Construct clean-up in proactivity research: a meta-analysis on the nomological net of work-related proactivity concepts and their incremental validities. *Appl Psychol Int Rev*. 2013; 62(1):44-96.
4. Spitzmuller M, Van Dyne L. Proactive and reactive helping: Contrasting the positive consequences of different forms of helping. *J Organiz Behav*. 2013; 34(4):560-80.
5. Wang J, Kim T. Proactive socialization behavior in China: the mediating role of perceived insider status and the moderating role of supervisors' traditionality. *J Organiz Behav*. 2013; 34(3):389-406.
6. Chiaburu DS, Smith TA, Wang J, Zimmerman RD. Relative importance of leader influences for subordinates' proactive behaviors, prosocial behaviors, and task performance: a meta-analysis. *J Pers Psychol*. 2014; 13(2):70-86.
7. Ghitulescu BE. Making change happen: the impact of work context on adaptive and proactive behaviors. *J Appl Behavior Sci Rev*. 2012; 49(2):206-45.
8. Maden C. Linking high involvement human resource practices to employee proactivity. *Pers Rev*. 2015; 44(5):720-38.
9. Erkutlu H, Chafra J. The impact of team empowerment on proactivity. *J Health Organ Manag* 2012; 26(5):560-77.
10. Wong C, Laschinger H, Cummings G. Authentic leadership and nurses' voice behavior and perceptions of care quality. *J Nurs Manag*. 2010; 18(8):889-900.
11. Warshawsky NE, Havens DS, Knafel G. The influence of interpersonal relationships on nurse managers' work engagement and proactive work behavior. *J Nurs Adm*. 2012; 42(9):418-25.

12. Ferreira GE, Dall'Agnol CM, Porto AR. Repercussões da proatividade no gerenciamento do cuidado: percepções de enfermeiros. *Esc Anna Nery*. 2016; 20(3): e20160057.
13. Veiga HM, Torres CV, Bruno-Faria MF. Comportamento pró-ativo e normas sociais: validação de medidas e estudo correlacional. *Rev Psicol Organ Trab*. 2013; 13(2):155-70.
14. Kamia M, Porto JB. Desenvolvimento e validação da Escala de Comportamento Proativo nas Organizações - ECPO. *Aval Psicol*. 2009; 8(3):359-67.
15. Griep RH, Fonseca MJ, Melo EC, Portela LF, Rotenberg L. Enfermeiros dos grandes hospitais públicos no Rio de Janeiro: características sociodemográficas e relacionadas ao trabalho. *Rev Bras Enferm*. 2013; 66(n spec):151-7.
16. Li WD, Fay D, Frese M, Harms PD, Gao XY. Reciprocal relationship between proactive personality and work characteristics: a latent change score approach. *J Appl Psychol*. 2014; 99(5):948-65.
17. Beck JA, Cha J, Kim S, Knutson B. Evaluating proactive behavior in lodging revenue management. *Int J Contemp Hospit Manag*. 2014; 26(8):1364-79.
18. Carneiro SM, Dutra HS, Costa FM, Mendes SE, Arreguy-Sena C. Uso de abreviaturas nos registros de enfermagem em um hospital de ensino. *Rev RENE*. 2016; 17(2):208-16.
19. Perroca MG, Jericó MC, Calil AS. [Composition of the nursing staff in intensive care units]. *Acta Paul Enferm*. 2011; 24(2):199-205. Portuguese.
20. Penedo RM, Spiri WC. [Meaning of the systematization of nursing care for nurse managers]. *Acta Paul Enferm*. 2014; 27(1):86-92. Portuguese.
21. Rabenschlag LA, Lima SB, Eberhardt TD, Kessler M, Soares RS, Camponogara S. Gestão da qualidade na assistência de enfermagem em unidades de clínica cirúrgica. *Rev Enferm UFSM*. 2015; 5(2):235-46.
22. Pereira JT. Relações entre comprometimento organizacional e expressão de comportamentos proativos em uma instituição pública do setor elétrico [monografia]. Brasília (DF): Faculdade da Ciência da Educação e Saúde, Centro Universitário de Brasília; 2008.
23. Cooper-Thomas HD, Paterson NL, Stadler MJ, Saks AM. The relative importance of proactive behaviors and outcomes for predicting newcomer learning, well-being, and work engagement. *J Vocat Behav*. 2014; 84(3):318-31.
24. Truxillo DM, McCune EA, Bertolino M, Fraccaroli F. Perceptions of older versus younger workers in terms of big five facets, proactive personality, cognitive ability, and job performance. *J Appl Soc Psychol*. 2012; 42(11):2607-39.
25. Koh RY, Park T, Wickens CD. An investigation of differing levels of experience and indices of task management in relation to scrub nurses' performance in the operating theatre: analysis of video-taped caesarean section surgeries]. *Int J Nurs Stud*. 2014; 51(9):1230-40.