Leadership in Health Services

Brazilian nursing professionals: leadership to generate positive attitudes and behaviours

Claudia Affonso Silva Araujo, Kleber Fossati Figueiredo,

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Claudia Affonso Silva Araujo and Kleber Fossati Figueiredo
COPPEAD Graduate School of Business, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil

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Abstract

Purpose – This paper aims to identify the kind of work environment that should be offered by hospital leaders to their nursing staff in Brazil to generate job satisfaction, organizational commitment and organizational citizenship behaviour within their field of expertise.

Design/methodology/approach – A survey was applied to 171 nurses and 274 nursing technicians who work at five private hospitals in Brazil. Both factor analysis and regression analysis were used to analyse the study model.

Findings – The results indicate that to stimulate positive behaviours and attitudes among nursing staff, managers should mainly be concerned about establishing a clear and effective communication with their professionals to ensure role clarity, promote a good working environment and encourage relationships based on trust.

Research limitations/implications – The limitations of the study are absence of the researcher while the questionnaires were filled out and the fact that the sample comprised respondents who made themselves available to participate in the research.

Practical implications – This study contributes to elucidate the factors that can promote a good internal climate for nursing staff, assisting hospital leaders to face the huge managerial challenges of managing, retaining and advancing these professionals.

Originality/value – The findings contribute to the body of knowledge in leadership among nursing professionals in developing countries. Hospital leaders in Brazil should encourage trusting relationships with nursing professionals through clear, effective and respectful communications, besides investing in team development and promoting a good working environment.

Keywords Job satisfaction, Work environment, Organizational commitment, Organizational citizenship behaviour, Internal climate, Nursing professionals, Private hospitals, Nursing leadership

Paper type Research paper

Introduction

The primary objective of this article is to investigate how to manage nursing professionals through leadership to generate positive behaviours and attitudes in relation to the hospital in which they work. The purpose of our research is to identify the kind of work environment that should be offered by hospital leaders to their nursing staff to generate job satisfaction, organizational commitment and organizational citizenship behaviour within their field of expertise. To achieve this objective, a survey was offered to 410 nurses and 1,619 nursing technicians working inside five private hospitals in Brazil.

The shortages of nursing professionals and also their high turnover have become a global issue (Jenaro *et al.*, 2010; Robson and Robson, 2016). However, a good internal climate can reduce turnover, promote work engagement and this way improve the quality of patient

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care and motivate these professionals (Jenaro *et al.*, 2010; Lu *et al.*, 2012; Körner *et al.*, 2016). In this context, creating a positive internal climate for nursing professionals is pivotal to retaining this valued staff. However, there is no consensus on what factors determine a positive internal climate among nursing professionals (Utriainen and Kyngas, 2009).

Two trends emerged in the 80s: the first one emphasized psychological factors promoting a view that work fulfils or allows for the fulfilment of important values for professionals in the health sector. The second one pointed out factors related to the work environment such as acknowledgement, adequate team size, autonomy and appropriate facilities for patient care. Later in the 90s, the satisfaction of nursing professionals started to be regarded as a complex terminology made up of both objective and subjective factors such as autonomy nature and level, authority and responsibility, acknowledgement, reward and personal satisfaction towards the work performed and a perspective of growth in the career. Patient care was considered paramount for nurse satisfaction (Jenaro *et al.*, 2010; Utriainen and Kyngas, 2009).

In this sense, this study is important and relevant because it contributes to elucidate the factors that can promote a good internal climate for nursing staff besides assisting hospital leaders to face the huge managerial challenges of managing, retaining and advancing these professionals.

Theoretical background

Hospitals are institutions characterized by the fact that decision-making powers, administration and distribution of resources are divided up among an important group of professionals – physicians, nursing staff, physiotherapists, nutritionists, among others. In Brazil, nursing activities are performed by different professional categories – nursing assistants, nursing technicians and nurses (Hausmann and Peduzzi, 2009). Nursing assistants and technicians have a high-school diploma, while nurses hold the Nursing degree diploma (COFEN, 2015). According to the Nursing Profile in Brazil, an extensive survey carried out by the Federal Nursing Council and The Oswaldo Cruz Foundation (Federal Nursing Council – COFEN, 2015), the nursing team in Brazil is predominantly female, being composed of 84.6 per cent of women and 80 per cent are technicians and assistants and 20 per cent are nurses while more than half of the nurses (53.9 per cent), nursing assistants and technicians (56.1 per cent) are concentrated in the Southeast Region. The three nursing categories are in charge of integrating the health team and promoting health education, but the limits of the activities of nursing professionals are defined in Decree No. 94,406/87, which regulates Law No. 7,498/86 on the professional practice of Nursing (Federal Nursing Council - COFEN, 2013).

The nurses have the exclusive responsibility of managing the nursing service and activities such as nursing care planning, consulting and auditing, nursing consultation, nursing care prescription and all the care of greater technical complexity. On the other hand, it is incumbent upon the nursing technician to execute the tasks related to patient care under the nurses' supervision and to assist the nurse in planning care activities for the severely ill patient and in the prevention and execution of integral health care programmes (COFEN, 2013). In this study, we will focus our analysis on nurses and nursing technicians.

Although each nursing category is in charge of a part of the process, a good healthcare service results from high task interdependence and work cooperation of all these professionals in a good work environment (Drach-Zahavy and Somech, 2013; Körner *et al.*, 2016), which is still regarded as a rhetorical figure rather than a real practice (Körner *et al.*, 2016). For that reason, hospitals need leaders that can reconcile diverse perspectives to provide integrated care (Smits *et al.*, 2014). In this sense, to enhance the level of task interdependence and to improve the quality of care provided to patients, hospital leaders

should create more opportunities for nursing professionals to interact and promote a positive internal climate that foments teamwork, increases job satisfaction and reduces the turnover among healthcare professionals (Hayes *et al.*, 2010; Albrecht and Andreetta, 2011, Drach-Zahavy and Somech, 2013; Chiarini and Bracci, 2013; Chiarini and Baccarani, 2016).

In addition, several studies have indicated the turnover and intention to leave negative effects on organizational effectiveness of hospitals such as low morale and an increase in workload for the nurses who remain on the job, resulting in a poor quality patient care and patient safety and satisfaction (Sellgren *et al.*, 2007; Park and Kim, 2009). A good internal climate is crucial to help nurses stay in their jobs, which requires leadership engagement and organisational support recognised by the nursing staff (Sellgren *et al.*, 2007, Albrecht and Andreetta, 2011, Robson and Robson, 2016). Furthermore, according to a study developed by Costa and Marziale (2006) in a public hospital in Brazil, leaders should promote a good relationship between nursing professionals and physicians to maintain a good work climate and to reduce dissatisfaction and stress by nursing professionals.

For these reasons, an effective leadership that acts like a coach by spending time maintaining group harmony, empowering and mentoring staff, and regularly reviewing the factors that contribute to a good internal climate for nursing professionals is crucial (Sellgren *et al.*, 2007; Park and Kim, 2009; Crowne *et al.*, 2017).

According to Park and Kim (2009), leaders should balance efficiency with human relation aspects of a hospital's culture that enhance the nurses' quality of work life and the internal climate. In this sense, Chiarini and Baccarani (2016) researched three hospitals in Italy to evaluate total quality management (TQM) and Lean strategy in public healthcare and, according to them, all the managers interviewed agreed that TQM–Lean can bring other improvements more linked to human resources such as involvement and awareness of the staff on the decision-making process, motivation, empowerment and self-responsibility, group identity, communication among departments and teamwork.

Sellgren *et al.* (2007), in turn, argue that there is a strong relationship between leadership behaviour and work climate, and between work climate, job satisfaction and staff turnover. Besides, Freire and Azevedo (2015) considered the impact of workplace empowerment and staff nurse perceptions of trustworthiness in their supervisor as determinants of organizational commitment. For them, an empowering work context was significantly predictive of the nurses' affective commitment and on the perceptions of trustworthiness of the supervisor. Also, the workers who understand that they have access to factors of empowerment and perceive that they could influence their workplace are in a better position to establish affective connections with the organization, as well as to view their supervisor as trustworthy.

Another important concept related to a good internal climate for nursing professionals is "shared nursing governance" where systems and services are aligned in partnership and nurses are empowered to go beyond hospital norms and to collaborate with physicians in operational activities, thus reducing clinical errors (Tuan, 2015). All these leadership characteristics are in line with what is known as Kantian theory, in which there is more participation on the part of the followers and leaders foment values such as justice, autonomy and respect (Bowie, 2000). According to Bowie (2000), Kant rejects instrumental and also most charismatic theories of leadership and focuses on transformational leadership and the leader as educator. Therefore, a good leader ought to respect and enrich the autonomy of followers. Mainly, the Kantian leader turns followers into leaders.

In addition to leadership behaviour, organizational characteristics are key factors in nurse attraction and retention and many nurses are attracted to work in hospitals with a "Magnet" status, which is the award given to hospitals that satisfy a set of criteria by the

American Nurses Credentialing Center (ANCC). In Magnet Hospitals, managerial practices and environmental characteristics, such as opportunity to influence decisions about workplace organization and participate in shared governance and employer-paid continuing education, increase the job satisfaction of nurses and their commitment to the organization, which in turn decreases nurse turnover and burnout (Hess *et al.*, 2011). Regarding Magnet hospitals, Abu Raddaha *et al.* (2012) state that these hospitals distinguish themselves through the delivery of excellent patient outcomes evidenced by decreased mortality rates, lengths of stay and needle stick injuries.

Likewise, in a very recent article about role stressors and coping strategies among nurse managers (NMs) in Western Canada, Udod *et al.* (2017) pointed out that organizational practices and structures affect NM stress by creating expectations that cannot be achieved, responding to continuous organizational change and shifting organizational priorities. Also in this sense, Hayes *et al.* (2012), based on a literature review, argue that without adequate resources and supports to meet workload demands, nurses grow dissatisfied and emotionally exhausted, decreasing job satisfaction and Holden *et al.* (2011) found that nurse job satisfaction was positively associated with staffing adequacy.

The concept of internal climate for nursing professionals

There are various labels found in the literature reflecting a concern about the human element in organizations: quality of internal services, quality of life at work, endomarketing, internal marketing, service climate, work climate, organisational climate and internal climate. Each one of these constructs has arisen within the most diverse areas of knowledge such as service management, marketing, human resources, organizational behaviour and social sciences such as psychology and sociology of health and illness.

In this paper, the construct named *internal climate* for nursing professionals is defined as the work environment offered by the organization to these professionals to generate positive consequences such as greater job satisfaction, organizational commitment and organizational citizenship behaviour (Schneider, 1994; Schneider *et al.*, 2005; Schneider *et al.*, 2009).

According to the literature, internal climate for nursing professionals is a multidimensional construct that involves trustworthiness, higher levels of employee involvement and empowerment in decision-making, shared governance programmes, nursing governance, self-managing work team, teamwork, job security, employee training and development, employee suggestion and recognition systems, rewards, perception of justice, good work infrastructure, among other characteristics (Rad and Yarmohammadian, 2006; Rondeau, 2007; Sellgren *et al.*, 2007; Park and Kim, 2009; Abu Raddaha *et al.*, 2012; Tuan, 2015). A broad bibliographical review concerning the health sector was carried out to identify the internal quality dimensions for nursing professionals. Because of space limitations, the dimensions that emerged from the literature, its attributes and the authors who have proposed them are summarized in Table I.

The positive consequences of internal climate for nursing professionals

The direct consequences of internal climate that arise from the literature and that have been taken into consideration in this study are as follows: job satisfaction (JS), affective commitment (AC) and organizational citizenship behaviour (OCB).

Job satisfaction may be defined as an employee's positive emotional state in relation to their tasks, which derives from aspects related to the characteristics of the work itself, such as working conditions and workload and from intrinsic characteristics of the person such as personality, education, age and gender (Utriainen and Kyngas, 2009; Lambrou *et al.*, 2010;

Dimension	Attributes	Authors
Trust	Good relationship with the hospital leaders, clarity about the hospital's mission and objectives, effective internal communication, avoidance of excessive work hours and inflexible schedules, participation in the institution decisions, shared governance, high involvement practices, respect, maintenance of the psychological contract	Lu *et al.* (2007), Rondeau (2007), Sellgren *et al.* (2007), Laschinger *et al.* (2009), Park and Kim (2009), Cortese, *et al.* (2010), Albrecht and Andreetta (2011), Lu *et al.* (2012), Siqueira and Kurcgant (2012), Jefferson *et al.* (2014), Smits *et al.* (2014), Mun *et al.* (2015), Robson and Robson (2016), Chiarini and Baccarani (2016), Udod *et al.* (2017)
Justice	Fairness and impartiality perceived in the leader's actions, non-discrimination	Lambrou *et al.* (2010), Hess *et al.* (2011), Rogers (2012), Sawbridge and Hewison (2013), Baptiste (2015)
Pride	Pride regarding the profession, the institution and the characteristics of the work per se	Newman and Maylor (2002), Lambrou *et al.* (2010)
Camaraderie	Friendly environment good interaction with other professionals, thus forming a team, absence of physical and verbal aggression among team members, Teamwork	Newman and Maylor (2002), Rondeau (2007), Utriainen and Kyngas (2009), Park and Kim (2009), Hayes *et al.* (2010), Pitkäaho *et al.* (2011), Abu Raddaha *et al.* (2012), Sawbridge and Hewison (2013), Körner *et al.* (2016); Chiarini and Baccarani (2016)
Work Infrastructure	Adequate resources for taking care of patients (physical structure, medicines, instruments and adequate equipment), planning and organization of the workspace, adequate contingent of professionals, clear and detailed work manual	Newman and Maylor (2002), Lu *et al.* (2007), Rad and Yarmohammadian (2006), Ridley (2007), Utriainen and Kyngas (2009), Park and Kim (2009), Hayes *et al.* (2010), Holden *et al.* (2011), Lu *et al.* (2012), Hayes *et al.* (2012), Pitkäaho *et al.* (2011), Drach-Zahavy and Somech (2013), Udod *et al.* (2017)
Autonomy	The amount of job-related independence, initiative and freedom permitted in daily work activities	Lee and Cummings (2008), Hayes *et al.* (2010), Lambrou *et al.* (2010), Abu Raddaha *et al.* (2012), Zydziunaite *et al.* (2015)
Training & Development (T&D)	Opportunity to develop skills and to acquire new knowledge	Rondeau (2007), Hayes *et al.* (2010), Lambrou *et al.* (2010), Chen and Johantgen (2010), Johnson *et al.* (2011), Hess *et al.* (2011), Gianfermi and Buchholz (2011), Drach-Zahavy and Somech (2013), Pantouvakis and Mpogiatzidis (2013), Armstrong-Stassen *et al.* (2015), Mun *et al.* (2015)
Reward &Acknowledgement (R&A)	Recognition of effort put forth, possibility of promotion and professional growth, feedback from superiors, career planning, prospects for promotion	Newman and Maylor (2002), Rad and Yarmohammadian (2006), Abu Raddaha *et al.* (2012), Sawbridge and Hewison (2013), Drach-Zahavy and Somech (2013), Mun *et al.* (2015)
Remuneration & benefits (R&B)	Adequate pay for responsibility of services performed, monetary benefits, bonuses and non-monetary benefits adequate economic reward	Rad and Yarmohammadian (2006), Curtis (2007), Lambrou *et al.* (2010), Abu Raddaha *et al.* (2012)

Table I. Internal quality dimensions for nursing professionals, according to the literature

Pitkäaho *et al.*, 2011, Albrecht and Andreetta, 2011). The environment in which the nurse works will impact job satisfaction (Rad and Yarmohammadian, 2006; Utriainen and Kyngas, 2009; Hayes *et al.*, 2010; Lu *et al.*, 2012; Abu Raddaha *et al.*, 2012, Udod *et al.*, 2017) and because of its impact on patient satisfaction, patient safety and quality of care, job satisfaction is very important in healthcare (Sellgren *et al.*, 2007). Pitkäaho *et al.* (2011) labelled the variety of factors contributing to nurse job satisfaction as intra-personal, interpersonal or extra-personal factors. Intra-personal factors describe those characteristics that the nurse brings as a person to the job, inter-personal factors are those that relate to interactions between the nurse and others, and extra-personal factors are those influenced by institutional or governmental policies. In this sense, the results of a research conducted by Park and Kim (2009) in Korea indicate that organizational flexibility and human relationship-oriented culture may be more helpful for improving job satisfaction of nurses than a stability-oriented and control-centred mood, and Abu Raddaha *et al.* (2012) state that leaders should value staff contributions to promote retention and job satisfaction.

Organizational commitment, in turn, may be defined as a psychological, emotional link between the employee and the company (Laschinger *et al.*, 2009; Eslami and Gharakhani, 2012). Allen and Meyer (1990, 1996) have proposed an organizational commitment model composed of three elements:

(1) *The Affective Component* – emotional bond, identification and involvement with the organization where the employee stays with the company "because he or she wants to";

(2) *The Continuity Component* – commitment based on costs associated with leaving the company where the employee stays with the organization "because he or she has to"; and

(3) *The Normative Component* – employees remain with the company "because they feel obligated to".

The *organizational citizenship behaviour* (OCB) concept is characterized by spontaneous and unconditional behaviours engaged by individual personnel beyond the organization's officially requested responsibility. This behaviour is beneficial to the organizational system and can foster its efficiency, yet it is not directly recognized by the formal reward system (Huang *et al.*, 2010). It entails activities of cooperation with colleagues, protective actions of the institution, creative suggestions for organizational improvement, self-training for a better work performance and the creation of a favourable climate for the organization. Therefore, the concept of organizational citizenship behaviour ensures that employees are willing to contribute to the hospital as best as possible by enhancing their sense of belonging to the healthcare organization (Bellou and Thanopoulos, 2006).

Proposed conceptual model and research hypothesis

The literature indicates that an appropriate good and healthy internal climate can generate positive attitudes and behaviours on nursing professionals. Therefore, the analytical model proposed in this study (Figure 1) relates the internal climate dimensions presented in Table I to positive attitudes and behaviours from nurses in relation to the hospital and the following general hypothesis has been formulated:

H1. Positive attitudes and behaviours from nursing professionals may be explained by the internal climate dimensions for these professionals.

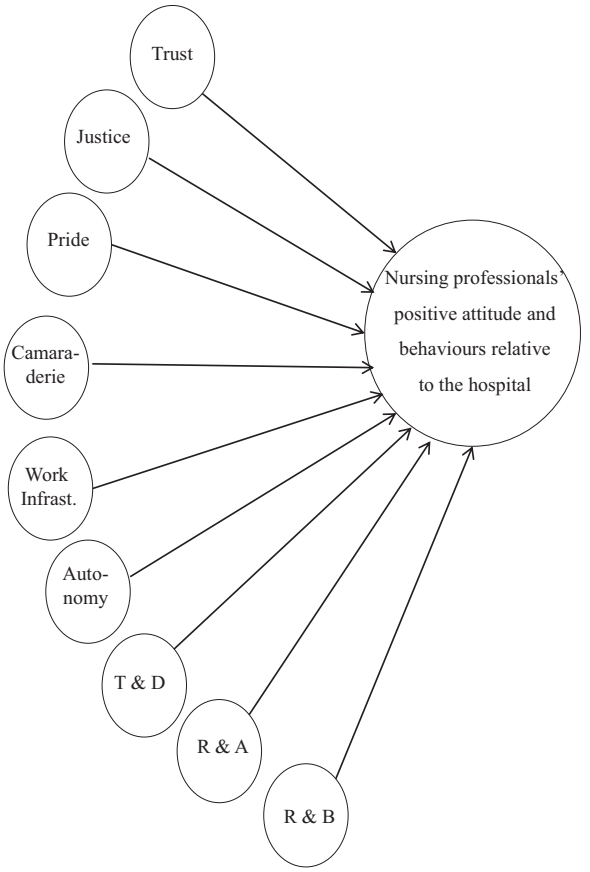

Figure 1.
Proposed conceptual model

Methods

Based on the literature, a standardized questionnaire of 45 items related to internal climate and 12 related to its consequences was applied to 410 nurses and 1,619 nursing technicians. From these, 171 nurses (41.71 per cent) and 274 nursing technicians (16.92 per cent) agreed to participate in the research. All the participants interviewed work at five Brazilian private hospitals belonging to National Association of Private Hospitals (ANAHP), three located in Rio de Janeiro state and two located in Rio Grande do Sul.

A five-point Likert scale, ranging from 1 – strongly disagree to 5 – strongly agree, was adopted. The questionnaires were adjusted and pre-tested before applying the final version on a large scale. There was an adaptation to the needs of each hospital regarding the best time to apply the questionnaire and the professionals available for filling it out. The internal consistency of the scale was verified using Cronbach's alpha, and the computed values for the items of internal climate and for the items of positive consequences were 0.956 and 0.878, respectively. After the fieldwork, the data were entered and personally checked by the researcher.

The multivariate techniques factor analysis and multiple linear regression were applied to analyse the data by running them through SPSS 22.0. The factor analysis was applied to the set of attributes of the internal climate and positive consequences in terms of attitudes

and behaviours for nursing professionals. To verify the adequacy of this technique, the Bartlett's test of sphericity and an examination of the Kaiser-Meyer Olkin measure of sampling adequacy were done. The principal component analysis procedure was used for extracting the factors. The latent root criterion (eigenvalue > 1) was adopted to select the factors. A varimax orthogonal rotation was applied to the original factor matrix to facilitate the interpretation of the factors.

After applying the factor analysis, multiple linear regression was applied to learn more about the relationship between the internal climate dimensions, extracted from the factor analysis, and the nursing professionals' positive attitudes and behaviours. Our objective was to verify which dimensions of internal climate (independent variables) better explained the positive attitudes and behaviours for nursing professionals (dependent variable). The following steps were followed to perform this analysis:

- *Determination of the PC Index*: Twelve variables were analysed as a single construct called Positive Consequences Index (PC Index), keeping in mind the importance of nursing professionals' positive attitudes and behaviours for the hospitals. To calculate the PC Index, the percentage of variance explained by each one of the factors was utilized together with the values of the factor scores for each one of the respondents. The PC index of respondent *i* may be represented as follows:

$$PBC_i = \frac{\sum_{j=1}^{m} EF_{ij} x VarExp_j}{\sum_{j=1}^{m} VarExp_j},$$

  Where: EFij = factor score for respondent i for dimension j and VarExpj = variance explained by dimension j.

- *Multiple linear regression analysis using the Enter method*: This method is to verify the contribution of each internal climate dimension (independent variables) to predict the PC Index. Furthermore, a multiple linear regression analysis using *Stepwise* estimation to examine the contribution of each independent variable to the regression model was applied. The beta coefficient was analysed to verify the relative explanatory power of the dependent variables. To apply the multiple linear regressions, an analysis of the outliers was done using Cook's distance analysis as a criterion. Also, a graphical analysis of residuals was done to verify the constant variance, independence, and normality of the error term distribution, and multicollinearity was avoided by the orthogonal factor rotation. Thus, it was decided to include a categorical variable "profession" in the regression equation to allow the distinction between nursing technicians and nurses. The inclusion of the categorical variables was done using the dummy variable as a predictor (dummy-prof), coding it *1* if the respondent is a technician and *0* if the respondent is a nurse.

Results and analysis

Demographic profile of the sample

Nurses were 38 per cent of the sample and 62 per cent were nursing technicians. Most of the nursing professionals (80 per cent) who participated in the survey were female, 48 per cent aged between 31 and 50, and 65 per cent of them worked in the hospital for up to five years.

Internal climate dimensions for nursing professional

The factor analysis performed on the 45 attributes included in this study indicated the existence of nine dimensions of internal climate for nursing professionals, which explains 66.04 per cent of the total variance: *trust, camaraderie, non-discrimination, work infrastructure*, role *clarity, training & development, remuneration & benefits, relationship with the doctors* and *nursing contingent* (Table II). A statistically significant Bartlett's test of sphericity (p value < 0.01) indicates the presence of sufficient correlations among the variables to continue with the factor analysis. In addition, the measuring of sampling adequacy (MSA) value of each variable was greater than 0.80. An examination of the Kaiser-Meyer-Olkin measure of sampling adequacy suggested that the sample was factorable (KMO = 0.923) and the observations/variable reason was 9.20 observations for each variable. Commonalities were also analysed and all values were equal to or greater than 0.500. The factors were labelled based on the higher loading variables (>0.50) for each factor.

The dimension that clusters the items related to the leaders' position was denominated *trust*, representing the trust that nursing professionals have in the hospital leaders; the dimension that groups the items regarding the good relationships among colleagues was labelled *camaraderie*; the dimension composed of items dealing with the absence of discrimination on the grounds of age, gender, or race within the work environment was called *non-discrimination*; the dimension that gathers the items related to working conditions in terms of workspace organization, existence of medication, equipment and suitable facilities was named *work infrastructure*; role *clarity* was the name selected for the dimension containing the items related to the absence of ambiguity as far as what management expects from the work performed by nursing professionals; the dimension representing the items related to the opportunity in career growth and to the managers' investment in the professional development of their nursing team was named *training and development*; the items related to the remuneration and to the benefits given by the hospital constituted a dimension named *remuneration and benefits* and the items related to the doctors' perspective regarding nursing professionals formed a dimension whose name was *relationship with doctors*. Also, *nursing contingent* was the title that represents the items related to the size of the nursing team to care for the patients.

As prescribed by the literature, the *trust* dimension aggregates attributes related to the leadership's ability to easily dialogue, give support for the accomplishments of activities, show concern for the team's welfare in the work environment, allow participation in hospital decision-making and respect individual rights (Bowie, 2000; Park and Kim, 2009; Tuan, 2015; Freire and Azevedo, 2015; Udod *et al.* (2017). Trust in hospital leaders had already been deemed important to nursing professionals in previous studies carried out by Sellgren *et al.* (2007), Hayes *et al.* (2010), Huang *et al.* (2010), Siqueira and Kurcgant (2012), Jefferson *et al.* (2014), Freire and Azevedo (2015), Chiarini and Baccarani (2016), Robson and Robson (2016), Udod *et al.* (2017), among others. On the other hand, the attributes related to role clarity, which was believed to be part of the trust dimension as stated in the literature (Cortese *et al.*, 2010; Lu *et al.*, 2012, Mun *et al.*, 2015), constituted a distinct dimension designated role *clarity* containing items related to the absence of ambiguity as far as what management expects from the work performed by nursing professionals.

Camaraderie, also indicated by the literature, characterized by a good relationship among colleagues, proved to be one of the internal climate dimensions for nursing professionals in consonance with previous researches (Hayes *et al.*, 2010; Chiarini and Baccarani, 2016).

In this research, *non-discrimination* of any sort – on the grounds of age, gender or race within the work environment – emerged as an independent dimension. According to

Dimensions	Loads
Dimension 1: Trust	
The superiors make my job easier	0.668
The superiors care about my well-being at work	0.666
My superiors are accessible and open to dialogue	0.608
The nursing team participates of the hospital decisions	0.587
My individual rights are respected	0.579
Dimension 2: Camaraderie	
Communicating with colleagues is easy	0.764
Colleagues help each other	0.746
Everyone celebrates the success of their colleagues	0.740
The work environment is social and friendly	0.729
We seem to be like a "big family"	0.685
Dimension 3: Non-discrimination	
No one is discriminated against by age	0.852
No one is discriminated against by colour	0.840
No one is discriminated against by gender	0.789
No one is discriminated against for the work position	0.632
Dimension 4: Work infrastructure	
There is enough equipment to attend the patient	0.801
Policies and procedures facilitate the patient care	0.679
The facilities are adequate	0.675
Medications and instruments are always in the right place	0.637
Training is offered to the nursing team constantly	0.560
There are enough medicines needed to treat patients	0.545
Dimension 5: Role clarity	
I know exactly what my superiors expect from my performance	0.795
I know exactly what the physicians expect from my performance	0.720
The work rules are clear	0.670
Dimension 6: Training & Development	
There is equal opportunity for career growth	0.584
I have the possibility of professional growth	0.566
The management team invests in my professional development	0.553
I am proud to work in this team because the professionals are the best on the market	0.551
Dimension 7: Remuneration & Benefits	
In addition to the gross salary, I earn other benefits	0.807
Bonuses and benefits are fairly distributed	0.787
My salary is according to the market average	0.617
Dimension 8: Relationship with the Doctors	
The physicians support the nursing team	0.742
The physicians respect the nursing professional	0.685
The physicians give autonomy to the nursing professionals to attend the patients	0.616
Dimension 9: Nursing contingent	
The number of nurses is adequate to attend the patients	0.780
The number of nursing technicians is adequate to attend the patients	0.630

Table II.
Internal climate dimensions for nursing professional, according to the research

Baptiste (2015), discrimination is a complex phenomenon related to subconscious beliefs about different ethnic, cultural or religious groups. In our research, this dimension includes the non-discrimination policies as far as positions go. This is probably because nurses sometimes feel discriminated against by doctors.

Work infrastructure, present in previous studies carried out in the health sector (Park and Kim, 2009; Hayes *et al.*, 2010; Lu *et al.*, 2012; Drach-Zahavy and Somech, 2013; Udod *et al.*, 2017), also arose as an internal climate dimension among nurses in this study. This dimension groups attributes related to workspace organization, existence of medication, equipment, and suitable facilities to take care of the patients. This dimension is also composed of an attribute related to the existence of well-trained workers, indicating that the technical quality of nursing professionals is part of the work infrastructure for these professionals. The total number of nursing staff, which was believed to cluster under the work infrastructure dimension, turned out to constitute an independent dimension called *nursing contingent*. It corroborates with the results of previous research as the insufficient number of professionals to attend to patients is pointed out as one of the reasons for stress and dissatisfaction among nursing professionals (Newman and Maylor, 2002; Ridley, 2007; Abu Raddaha *et al.*, 2012).

The *training & development* dimension represents the attributes related both to the opportunity in career growth and to managers investing in the professional development of their nursing team. This result is in line with previous research by Lambrou *et al.* (2010), Johnson *et al.* (2011), Gianfermi and Buchholz (2011), Armstrong-Stassen *et al.* (2015), Mun *et al.* (2015), among others. *Remuneration & benefits* also formed an internal climate dimension for nursing professionals in this study, grouping attributes related to remuneration and benefits. The research carried out with nursing professionals by Lambrou *et al.* (2010), Mun *et al.* (2015), among others, had already indicated that a suitable remuneration was highly important for a healthy internal climate.

Lastly, items related to the doctors' view of nursing professionals formed a dimension called *relationship with doctors*. Costa and Marziale (2006) had already pointed out that physical and verbal aggressions among team members represent one of the causes of nursing professionals' dissatisfaction and stress. Therefore, the results of this research reinforce that in Brazil it is very important to foment a good relationship between nursing professionals and physicians to create a good internal climate for nurses and nursing technicians. This result is also aligned with Park and Kim's (2009) research, which indicated that human relationship-oriented culture is important to improve the nurses' job satisfaction.

Dimensions of nursing professionals' positive attitudes and behaviours

The factor analysis generated a three-factor solution, which together explains 66.18 per cent of the total variance: *compliance, job satisfaction and organizational commitment* (Table III). The observations/variable reason was 34 observations for each variable investigated. The Bartlett's test of sphericity presented a p value < 0.01 indicating the presence of correlations among the variables, and the Kaiser-Meyer-Olkin (KMO) value was 0.846 indicating the sampling adequacy. The factors were labelled based on the higher loading variables (>0.50) for each factor.

The *compliance* dimension basically groups the items related to meeting institutional rules in line with Bellou and Thanopoulos (2006), which state that employees want to contribute to the hospital as best as possible. *Job satisfaction* was the designated term for the dimension representing items related to satisfaction in working at the hospital as mentioned by Rad and Yarmohammadian (2006), Utriainen and Kyngas (2009), Hayes *et al.* (2010), Lu *et al.* (2012), Abu Raddaha *et al.* (2012), Udod *et al.* (2017). *Organizational commitment* was the term designated for the dimension representing items related to nursing professionals'

Table III. Dimensions of nursing professionals' positive attitudes and behaviours

Dimensions	Loads
Compliance	
I try to avoid wasteful use of hospital resources	0.803
I try not to miss work	0.793
I try not to be late for work	0.773
I Respect the hospital rules	0.738
I collaborate with my colleagues for the hospital's goals	0.724
Job satisfaction	
I feel happy working in this hospital	0.910
I really like working in this hospital	0.893
Good work environment	0.853
I intend to stay for a long time in this job	0.553
Organizational commitment	
I attend meetings even if attendance is not compulsory	0.788
I try to keep myself informed about hospital matters	0.681
I feel well doing beyond what is specified to me	0.623

interest in the company matters as proposed by Laschinger *et al.* (2009) and Eslami and Gharakhani (2012).

As previously mentioned, these three dimensions were analysed as a single construct called *PC Index*.

Dimensions of internal climate that best explain nursing professionals' positive attitudes and behaviours (PC index)

As can be seen in Table IV, only six of the nine internal climate dimensions proved statistically significant to explain the PC Index for nursing professionals. Five of them proved statistically significant to explain the PC Index for nurses: *trust, camaraderie*, role *clarity, training & development* (statistically significant at the level of 1 per cent) and *non-discrimination* (statistically significant at the level of 5 per cent); and the dimension *nursing contingent* is statistically significant at the level of 5 per cent to explain the nursing technicians' PC Index. The coefficient of determination (R^2) of 0.412 indicates that 41.20 per cent of total variation of PC Index is explained by the independent variables considered in this study.

In relation to the dimensions of *trust, camaraderie*and role *clarity*, this result is consistent with previous researches that state that the environment in which the nurse works and extra-personal factors impact job satisfaction (Utriainen and Kyngas, 2009; Hayes *et al.*, 2010; Pitkäaho *et al.*, 2011; Lu *et al.*, 2012; Abu Raddaha *et al.*, 2012, Chiarini and Bracci, 2013; Chiarini and Baccarani, 2016, Udod *et al.*, 2017, Crowne *et al.*, 2017, among others). Also, *training & development* is mentioned in the literature as important to foment positive attitude in nurses, such as job satisfaction and retention (Drach-Zahavy and Somech, 2013; Pantouvakis and Mpogiatzidis, 2013; Armstrong-Stassen *et al.*, 2015; Mun *et al.*, 2015). Concerning *non-discrimination*, as previously mentioned, in this study this dimension includes the non-discrimination policies as far as positions go and, in Brazil, nurses usually feel discriminated against by doctors. Besides, non-discrimination is part of the justice dimension that emerged from the literature and that focuses on treating employees fairly, equally and without discrimination (Hess *et al.*, 2011; Rogers, 2012; Baptiste, 2015).

With regard to the dimension statistically significant to explain the nursing technicians' PC Index – *nursing contingent* – this result can be explained by the fact that nursing

Variables	Standardized Beta	*t* value	Significance
Constant		1.526	0.128
Trust	0.193	2.677	0.008**
Camaraderie	0.261	3.441	0.001**
Non-discrimination	0.172	2.014	0.045*
Work Infrastructure	0.122	1.684	0.093
Role Clarity	0.484	6.476	0.000**
Training and Development	0.364	4.673	0.000**
Remuneration and Benefits	0.058	0.703	0.482
Relationship with the doctors	0.135	1.779	0.076
Nursing contingent	−0.121	−1.482	0.139
Dummy-Prof	−0.071	−1.666	0.096
Trust-TEC	−0.053	−0.740	0.460
Camaraderie-TEC	−0.040	−0.529	0.597
Non-discrimination-TEC	0.028	0.336	0.737
Work Infrastructure-TEC	0.011	0.155	0.877
Role Clarity-TEC	−0.108	−1.483	0.139
Training and Development-TEC	−0.090	−1.179	0.239
Remuneration and Benefits-TEC	0.044	0.547	0.585
Relationship with the doctors-TEC	−0.113	−1.502	0.134
Nursing contingent-TEC	0.184	2.285	0.023*
R^2	*0.412*		
R^2 adjusted	*0.038*		

Notes: *5% significance level; **1% significance level

Table IV.
Internal results of the multiple linear regression–enter method

technicians are responsible for performing the tasks related to patient care under the nurses' supervision (COFEN, 2013). Thus, the number of professionals available to provide patient care impacts the workload and job satisfaction of these professionals, as pointed out by Hayes *et al.* (2012), Holden *et al.* (2011), among others.

In the stepwise procedure (Table V), nine internal climate dimensions statistically significant at the 0.000 level explain the dependent variable PC Index: *training & development*, role *clarity, trust, camaraderie, remuneration & benefits, non-discrimination, relationship with doctors, work infrastructure and* role *clarity-TEC*. The inclusion of these nine variables in the regression model allows for the explanation of 70.60 per cent of the PC Index variance of nursing professionals.

Table V analysis shows that:

- The F ratio of 80.891 indicates that, considering the sample used for estimation, it is possible to explain 80.89 times more variation than it would when using the average (1% significance level);
- Standard errors of the coefficients are low, indicating that the prediction is reliable;
- The standardized coefficient (beta) indicates that *role clarity* and *training & development* are the dimensions that most contribute to explaining the nurses' PC Index; and
- The negative beta coefficient *role clarity-TEC* indicates that this dimension is less important to explain nursing technicians' PC Index than to explain nurses' PC Index.

These results are consistent with the fact that the nursing technicians have no autonomy in the performance of their duties, while, on the other hand, nurses are responsible for

Model	Variables entered	R	R^2	Adjusted R^2	Standard error
1	Training &Development	0.379	0.144	0.141	0.285
2	Role Clarity	0.565	0.320	0.315	0.254
3	Trust	0.642	0.413	0.407	0.237
4	Camaraderie	0.718	0.515	0.509	0.215
5	Remuneration & Benefits	0.751	0.565	0.557	0.205
6	Non-discrimination	0.782	0.612	0.604	0.193
7	Relationship with the doctors	0.811	0.658	0.650	0.182
8	Work infrastructure	0.830	0.689	0.680	0.174
9	Role Clarity-TEC	0.840	0.706	0.697	0.169

Analysis of Variance

	Sum of Squares	df	Mean square	*F*	Significance
Regression	20.828	9	2.314	80.891	0.000
Residual	8.668	303	0.029		
Total	29.496	312			

	Variable entered into Regression Model					Variables not entered	
Variable	Coefficient	Standard error	Standardized coefficient	*t* value	Significance	Partial correlation	*t* value
(Intercept)	0.060	0.011		5.602	0.000		
Training & Development	0.153	0.011	0.429	13.620	0.000		
Role Clarity	0.307	0.023	0.701	13.109	0.000		
Trust	0.101	0.011	0.285	9.051	0.000		
Camaraderie	0.114	0.011	0.317	10.086	0.000		
Remuneration & Benefits	0.087	0.012	0.236	7.434	0.000		
Non-discrimination	0.120	0.014	0.268	8.378	0.000		
Relationship with the doctors	0.065	0.010	0.204	6.472	0.000		
Work infrastructure	0.069	0.012	0.185	5.863	0.000		
Role Clarity-TEC	−0.123	0.029	−0.227	−4.248	0.000		
Nursing contingent						0.004	0.078
Dummy_pf						0.000	−0.003
Trust-TEC						−0.095	−1.661
Camaraderie-TEC						−0.053	−0.914
Non-discrimination-TEC						0.018	0.311
Work infrastructure-TEC						−0.041	−0.705
Training & Development-TEC						−0.061	−1.063
Remuneration & Benefits-TEC						0.000	0.007
Relationship with the doctors-TEC						0.004	0.062
Nursing contingent-TEC						0.008	0.143

Table V.
Dimensions that best explain nursing professionals' PC index

managing the nursing service and activities and for the nursing care planning, respecting the medical prescription (COFEN, 2013). In this context, role *clarity* and *training & development* are important dimensions for the job satisfaction of nurses and for the perfect execution of their nursing activities. This result reinforces the findings of previous studies conducted by Drach-Zahavy and Somech (2013), Pantouvakis and Mpogiatzidis (2013); Armstrong-Stassen *et al.* (2015), Mun *et al.* (2015), among others.

Conclusion and discussion

The dimensions of internal climate for nursing professionals have been investigated, as well as the dimensions of positive consequences in terms of their behaviours and attitudes. Based on the literature reviewed, the analytical model proposed relates some dimensions of the internal climate to the nursing professionals' positive attitudes and behaviours measured by the PC index.

The results have indicated that six dimensions of internal climate contribute to explaining the nursing professional's positive attitudes and behaviours measured by the PC Index: *trust, camaraderie*, role *clarity, training & development* and *non-discrimination* for nurses and *nursing contingent* for nursing technicians. These dimensions explain 41.20 per cent of the total variation of the PC index. Therefore, *H1* has been partially confirmed. Figure 2 presents the final model.

Among the Brazilian nursing professionals interviewed, the dimension that most contributes to explaining the PC Index is role clarity followed by training & development, camaraderie, trust, non-discrimination, remuneration & benefits, relationship with the doctors and work infrastructure. The results also indicate that role clarity is more important to nurses than to nursing technicians.

These results indicate a small difference between nurses and nursing technicians regarding the internal quality dimensions and their impact on the PC Index. For nursing technicians, *nursing contingent* proved to be important to foment positive attitudes and behaviours. This result can be explained by the fact that in Brazil nursing technicians are

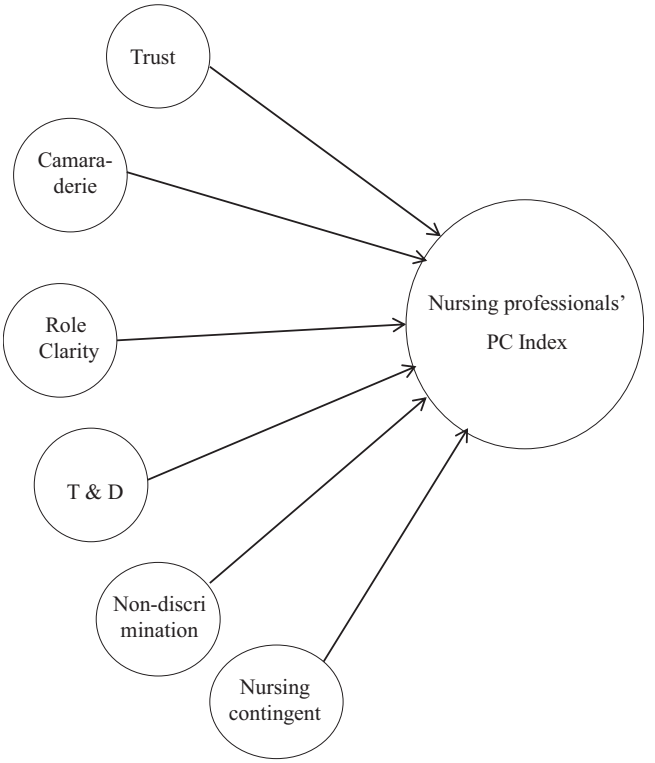

Figure 2.
Dimensions of internal climate that contribute to explaining the nursing professionals' PC index

responsible for performing the tasks related to patient care, under the nurses' supervision and the number of professionals available to provide patient care impacts the workload and job satisfaction of these professionals. Another aspect to be mentioned is that nursing technicians have no autonomy in the performance of their duties, while nurses have to manage and plan the nursing care service according to medical prescription. That is why role clarity and training & development is so important for nurses.

Considering the three most important dimensions to explain the nursing professionals' PC Index, hospital leaders should be concerned to establish a clear and effective communication with these professionals and stimulate physicians to do this to ensure role clarity among nurses. Leaders should also invest in their professional development and stimulate a good work environment among the professional staff.

Some methodological limitations must be considered such as the absence of the researcher when the questionnaires were being filled out, the order in which the questions were presented (which could have introduced some bias in the responses) and finally the fact that the sample consisted of respondents who made themselves available to participate in the research. Future research could investigate the impact of demographic characteristics such as gender, age and work experience on the internal quality dimensions for nursing staff. Furthermore, qualitative exploratory research could be carried out with nursing professionals that work at private Brazilian hospitals to capture attributes that were not included in this study. In addition, it would be interesting to replicate this study in public and university hospitals in Brazil and compare the results, which would probably be quite different from those found in the present study.

Despite these limitations, this study has important implications for practitioners and adds value to the literature. For practitioners and managers, this study is relevant because it contributes to elucidate the factors that can promote a good internal climate for nursing staff, assisting hospital leaders to face the huge managerial challenges of managing, retaining and advancing these professionals. For academics, to the best of our knowledge, it is an original contribution in the context of Brazil and the findings of this research broadens the knowledge about leadership among nursing professionals in developing countries.

References

Abu Raddaha, A.H., Alasad, R.J., Albikawi, Z.F., Batarseh, K.S., Realat, E.A., Saleh, A.S. and Froelicher, E.S. (2012), "Jordanian nurses' job satisfaction and intention to quit", *Leadership in Health Services*, Vol. 25 No. 3, pp. 216-231.

Albrecht, S.L. and Andreetta, M. (2011), "The influence of empowering leadership, empowerment and engagement on affective commitment and turnover intentions in community health service workers: test of a model", *Leadership in Health Services*, Vol. 24 No. 3, pp. 228-237.

Allen, N.J. and Meyer, J.P. (1990), "The measurement and antecedents of affective, continuance and normative commitment to the organization", *Journal of Occupational Psychology*, Vol. 63 No. 1, pp. 1-18.

Allen, N.J. and Meyer, J.P. (1996), "Affective, continuance and normative commitment to the organization: an examination of construct validity", *Journal of Vocational Behavior*, Vol. 49 No. 3, pp. 252-276.

Armstrong-Stassen, M., Freeman, M., Cameron, S. and Rajacic, D. (2015), " "Nurse managers' role in older nurses' intention to stay", *Journal of Health Organization and Management*, Vol. 29 No. 1, pp. 55-74.

Baptiste, M.M. (2015), "Workplace discrimination: an additional stressor for internationally educated nurses", *OJIN: The Online Journal of Issues in Nursing*, Vol. 20 No. 3, p. 8.

Bellou, V. and Thanopoulos, J. (2006), "Enhancing service quality in a hospital setting", *Review of Business*, Vol. 27 No. 1, pp. 26-32.

Bowie, N. (2000), "A Kantian theory of leadership", *Leadership & Organization Development Journal*, Vol. 21 No. 4, pp. 185-193.

Chen, Y.M. and Johantgen, M.E. (2010), "Magnet Hospital attributes in European hospitals: a multilevel model of job satisfaction", *International Journal of Nursing Studies*, Vol. 47 No. 8, pp. 1001-1012, doi: 10.1016/j.ijnurstu.2009.12.016.

Chiarini, A. and Baccarani, C. (2016), "TQM and lean strategy deployment in italian hospitals: benefits related to patient satisfaction and encountered pitfalls", *Leadership in Health Services*, Vol. 29 No. 4, pp. 377-391.

Chiarini, A. and Bracci, E. (2013), "Implementing lean six sigma in healthcare: issues from Italy", *Public Money & Management*, Vol. 33 No. 5, pp. 361-368.

COFEN (2013), "Quais as devidas funções do enfermeiro, do técnico de enfermagem e do auxiliar enfermagem e quais as diferenças entre cada categoria?", available at: http://mt.corens.portalcofen.gov.br/diferenca-entre-categorias_698.html (accessed 12 July 2017).

COFEN (2015), "Pesquisa perfil da enfermagem no Brasil", available at: www.cofen.gov.br/perfilenfermagem/ (accessed 12 July 2017).

Cortese, C.G., Colombo, L. and Ghislieri, C. (2010), "Determinants of nurses' job satisfaction: the role of work–family conflict, job demand, emotional charge and social support", *Journal of Nursing Management*, Vol. 18 No. 1, pp. 35-43.

Costa, A.L.R.C. and Marziale, M.H.P. (2006), "Relação tempo-violência no trabalho de enfermagem em Emergência e Urgência", *Revista Brasileira de Enfermagem*, Vol. 59 No. 3, pp. 337-343.

Crowne, K.A., Young, T.M., Goldman, B., Patterson, B., Krouse, A.M. and Proenca, J. (2017), "Leading nurses: emotional intelligence and leadership development effectiveness", *Leadership in Health Services*, Vol. 30 No. 3, pp. 217-232.

Dickson, G., Owen, K., Smits, S.J., Bowden, D., Falconer, J.A. and Strasser, D.C. (2014), "Improving medical leadership and teamwork: an iterative process", *Leadership in Health Services*, Vol. 27 No. 4, pp. 299-315.

Drach-Zahavy, A. and Somech, A. (2013), "Linking task and goal interdependence to quality service: the role of the service climate", *Journal of Service Management*, Vol. 24 No. 2, pp. 151-169.

Eslami, J. and Gharakhani, D. (2012), "Organizational commitment and job satisfaction", *ARPN Journal of Science and Technology*, Vol. 2 No. 2, pp. 85-91.

Freire, C.M.F.C. and Azevedo, R.M.M. (2015), "Empowering and trustful leadership: impact on nurses' commitment", *Personnel Review*, Vol. 44 No. 5, pp. 702-719.

Gianfermi, R.E. and Buchholz, S.W. (2011), "Exploring the relationship between job satisfaction and nursing group outcome attainment capability in nurse administrators", *Journal of Nursing Management*, Vol. 19 No. 8, pp. 1012-1019.

Hausmann, M. and Peduzzi, M. (2009), "Articulação entre as dimensões gerencial e assistencial do processo de trabalho do enfermeiro", *Texto Contexto-Enferm*, Florianpólis, Vol. 18 No. 2, pp. 258-265.

Hayes, B., Bonner, A. and Pryor, J. (2010), "Factors contributing to nurse job satisfaction in the acute hospital setting: a review of recent literature", *Journal of Nursing Management*, Vol. 18 No. 7, pp. 804-814.

Hayes, L.J., O'Brien-Pallas, L., Duffield, C., Shamian, J., Buchan, J., Hughes, F., Laschinger, H.K.S. and North, N. (2012), "Nurse turnover: a literature review - an update", *International Journal of Nursing Studies*, Vol. 49 No. 7, pp. 887-905.

Hess, R., DesRoches, C., Donelan, K., Norman, L. and Buerhaus, P. (2011), "Perceptions of nurses in magnet® hospitals, non-magnet hospitals, and hospitals pursuing magnet status", *Journal of Nursing Administration*, Vol. 41 Nos 7/8, pp. 315-323.

Holden, R.J., Scanlon, M.C., Patel, N.R., Kaushal, R., Escoto, K.H., Brown, R.L., Alper, S.J., Arnold, J.M., Shalaby, T.M., Murkowski, K. and Karsh, B.-T. (2011), "A human factors framework and study of the effect of nursing workload on patient safety and employee quality of working life", *BMJ Quality & Safety*, Vol. 20 No. 1, pp. 15-24.

Huang, X., Iun, J., Liu, A. and Gong, Y. (2010), "Does participative leadership enhance work performance by inducing empowerment or trust? The differential effects on managerial and non-managerial subordinates", *Journal of Organizational Behavior*, Vol. 31 No. 1, pp. 122-143.

Jefferson, T., Klass, D., Lord, L., Nowak, M. and Thomas, G. (2014), "Context and the leadership experiences and perceptions of professionals", *Journal of Health Organization and Management*, Vol. 28 No. 6, pp. 811-829.

Jenaro, C., Flores, N., Orgaz, M.B. and Cruz, M. (2010), "Vigour and dedication in nursing professionals: towards a better understanding of work engagement", *Journal of Advanced Nursing*, Vol. 67 No. 4, pp. 865-875.

Johnson, A., Hong, H., Groth, M. and Parker, S.K. (2011), "Learning and development: promoting nurses' performance and work attitudes", *Journal of Advanced Nursing*, Vol. 67 No. 3, pp. 609-620.

Körner, M., Lippenberger, C., Becker, S., Reichler, L., Müller, C., Zimmermann, L., Rundel, M. and Baumeister, H. (2016), "Knowledge integration, teamwork and performance in health care", *Journal of Health Organization and Management*, Vol. 30 No. 2, pp. 227-243.

Lambrou, P., Kontodimopoulos, N. and Niakas, D. (2010), "Motivation and job satisfaction among medical and nursing staff in a Cyprus public general hospital", *Human Resources for Health*, Vol. 8 No. 26, pp. 1-9.

Laschinger, H., Finegan, J. and Wilk, P. (2009), "Context matters: the impact of unit leadership and empowerment on nurses' organizational commitment", *Journal of Nursing Administration*, Vol. 39 No. 5, pp. 228-235.

Lee, H. and Cummings, G.G. (2008), "Factors influencing job satisfaction of front line nurse managers: a systematic review", *Journal of Nursing Management*, Vol. 16 No. 7, pp. 768-783, doi: 10.1111/j.1365-2834.2008.00879.x.

Lu, H., While, A.E. and Barriball, K.L. (2007), "Job satisfaction and its related factors: a questionnaire survey of hospital nurses in Mainland China", *International Journal of Nursing Studies*, Vol. 44, pp. 574-588.

Lu, H., Barriball, K.L., Zhang, X. and While, A.E. (2012), "Job satisfaction among hospital nurses revisited: a systematic review", *International Journal of Nursing Studies*, Vol. 49 No. 8, pp. 1017-1038.

Mun, Y., Leong, J. and Crossman, J. (2015), "New nurse transition: success through aligning multiple identities", *Journal of Health Organization and Management*, Vol. 29 No. 7, pp. 1098-1114.

Newman, K. and Maylor, U. (2002), "Empirical evidence for the nurse satisfaction, quality of care and patient satisfaction chain", *International Journal of Health Care Quality Assurance*, Vol. 15 No. 2, pp. 80-88.

Park, J.S. and Kim, T.H. (2009), "Do types of organizational culture matter in nurse job satisfaction and turnover intention?", *Leadership in Health Services*, Vol. 22 No. 1, pp. 20-38.

Pitkäaho, T., Ryynänen, O.P., Partanen, P. and Vehviläinen-Julkunen, K. (2011), "Data-based nurse staffing indicators with Bayesian networks explain nurse job satisfaction: a pilot study", *Journal of Advanced Nursing*, Vol. 67 No. 5, pp. 1053-1066.

Pantouvakis, A. and Mpogiatzidis, P. (2013), "The impact of internal service quality and learning organization on clinical leaders' job satisfaction in hospital care services", *Leadership in Health Services*, Vol. 26 No. 1, pp. 34-49.

Rad, A.M. and Yarmohammadian, M.H. (2006), "A study of relationship between managers' leadership style and employees' job satisfaction", *Leadership in Health Services*, Vol. 19 No. 2, pp. 11-28.

Ridley, C. (2007), "Relating nursing workload to quality of care in child and adolescent mental health inpatient services", *International Journal of Health Care Quality Assurance*, Vol. 20 No. 5, pp. 429-440.

Rondeau, K.V. (2007), "The adoption of high involvement work practices in Canadian nursing homes", *Leadership in Health Services*, Vol. 20 No. 1, pp. 16-26.

Robson, A. and Robson, F. (2016), "Investigation of nurses' intention to leave: a study of a sample of Uk nurses", *Journal of Health Organization and Management*, Vol. 30 No. 1, pp. 154-173.

Rogers, B. (2012), "Occupational and environmental health nursing: ethics and professionalism", *Workplace Health & Safety*, Vol. 60 No. 4, pp. 177-181.

Sawbridge, Y. and Hewison, A. (2013), "Thinking about the emotional labour of nursing supporting nurses to care", *Journal of Health Organization and Management*, Vol. 27 No. 1, pp. 127-133, available at: https://doi.org/10.1108/14777261311311834

Schneider, B. (1994), "A service perspective: towards a costumer-focused HRM", *International Journal of Service Industry Management*, Vol. 5 No. 1, pp. 64-76.

Schneider, B., Macey, W.H., Lee, W.C. and Young, S.A. (2009), "Organizational service climate drivers of the American Customer Satisfaction Index (ACSI) and financial and market performance", *Journal of Service Research*, Vol. 12 No. 1, pp. 3-14.

Schneider, B., Ehrhart, M.G., Mayer, D.M., Saltz, J.L. and Niles-Jolly, K. (2005), "Understanding organization-customer links in service settings", *Academy of Management Journal*, Vol. 48 No. 6, pp. 1017-1032.

Sellgren, S., Ekvall, G. and Tomson, G. (2007), "Nursing staff turnover: does leadership matter?", *Leadership in Health Services*, Vol. 20 No. 3, pp. 169-183.

Siqueira, V. and Kurcgant, P. (2012), "Satisfação no trabalho: indicador de qualidade no gerenciamento de recursos humanos em enfermagem", *Revista da Escola de Enfermagem*, Vol. 46 No. 1, pp. 151-157.

Tuan, L.T. (2015), "Nursing governance and clinical error control", *International Journal of Pharmaceutical and Healthcare Marketing*, Vol. 9 No. 2, pp. 136-157.

Udod, S., Cummings, G.G., Care, W.D. and Jenkins, M. (2017), "Role stressors and coping strategies among nurse managers", *Leadership in Health Services*, Vol. 30 No. 1, pp. 29-43.

Utriainen, K. and Kyngas, H. (2009), "Hospital nurses' job satisfaction: a literature review", *Journal of Nursing Management*, Vol. 17 No. 8, pp. 1002-1010.

Zydziunaite, V., Lepaite, D., Åstedt-Kurki, P. and Suominen, T. (2015), "Head nurses' decision making when managing ethical dilemmas", *Baltic Journal of Management*, Vol. 10 No. 2, pp. 166-187.

About the authors

Claudia Affonso Silva Araujo is an Associate Professor of the COPPEAD Graduate School of Business, Federal University of Rio de Janeiro – COPPEAD/UFRJ. She is also the Area Head of Operations, Technology and Logistics (OTL) of COPPEAD/UFRJ and Coordinator of the Centre for Studies in Management of Healthcare – CESS/COPPEAD/UFRJ. She has a Doctorate in Business Administration (COPPEAD/UFRJ), Masters in Business Administration (COPPEAD/UFRJ) and Graduation in Economics from The Catholic University of Rio de Janeiro PUC/RJ. She was a visiting researcher at Maryland University (USA) in 2004. Claudia Affonso Silva Araujo is the corresponding author and can be contacted at: claraujo@coppead.ufrj.br

Kleber Fossati Figueiredo has a Doctorate in Business Administration from IESE Business School - Instituto de Estudios Superiores de la Empresa (1987), masters from the COPPEAD Graduate School of Business (Federal University of Rio de Janeiro) and graduated from Federal University of Rio Grande do Sul. He is currently the Associate Professor II at the Federal University of Rio de Janeiro (UFRJ), Director of COPPEAD/UFRJ and Administrative Coordinator of the Centre for Studies in Management of Healthcare – CESS/COPPEAD/UFRJ. He assesses articles for journals and national and international events. He was editor of teaching cases RAC – *Journal of Management Contemporary* (2008-2011). He was a visiting professor at the Instituto de Empresa in Madrid from 1999 to 2010.