

# Original Article

## Transformational leadership in nurses' practice in a university hospital

Liderança transformacional na prática dos enfermeiros em um hospital universitário

Liderazgo transformacional en la práctica de enfermería en un hospital universitario

Vanêska Brito Ferreira<sup>1</sup>  
 Simone Coelho Amestoy<sup>1</sup>  
 Gilberto Tadeu Reis da Silva<sup>1</sup>  
 Ridalva Dias Martins Felzemburgh<sup>1</sup>  
 Neuranides Santana<sup>1</sup>  
 Letícia de Lima Trindade<sup>2</sup>  
 Ises Adriana Reis dos Santos<sup>1</sup>  
 Patrícia Alves Galhardo Varanda<sup>1</sup>

### Keywords

Leadership; Health services; Nursing staff; Hospital, university

### Descritores

Liderança; Serviços de saúde; Recursos humanos de enfermagem; Hospitais universitários

### Descriptor

Liderazgo; Servicios de salud; Personal de enfermeira; Hospitales universitarios

### Submitted

September 1, 2018

### Accepted

October 29, 2018

### Abstract

**Objective:** To analyze the exercise of transformational leadership in nurses' practice in a university hospital.

**Methods:** Mixed-method explanatory sequential study. In the quantitative phase, a questionnaire of attitudes towards leadership styles adapted to the frequency of adoption of transformational leadership behaviors was applied to a non-probabilistic convenience sample of 152 nurses from the university hospital. Descriptive and analytical statistical tests were used for data treatment. In the qualitative phase, 25 participants from the first phase were randomly selected (draw) and responded to a semi-structured interview that was analyzed by thematic content analysis.

**Results:** The practice of transformational leadership was identified frequently among nurses. However, they had difficulties to exercise this leadership model, because of lack of institutional support, since vertical leadership is the most adopted style, as well as lack of training for care nurses, and weaknesses in communication and discussion of problems before decision making.

**Conclusion:** The managers' greater exercise of vertical leadership offers resistance to the transformational leadership practice. However, nurses believe that leadership with horizontal behavior can favor structural and behavioral institutional changes.

### Resumo

**Objetivo:** Analisar o exercício da liderança transformacional na prática dos enfermeiros em um hospital universitário.

**Métodos:** Estudo de métodos mistos explanatório sequencial. Na etapa quantitativa, com amostra não probabilística por conveniência, aplicou-se um questionário de atitudes frente a estilos de liderança adaptado para a frequência de adoção dos comportamentos de liderança transformacional a 152 enfermeiros do referido hospital. Estes dados passaram por testes estatísticos descritivos e analíticos. Na etapa qualitativa, 25 participantes da primeira etapa foram sorteados e responderam a uma entrevista semiestruturada, analisadas mediante análise temática de conteúdo.

**Resultados:** Identificou-se a prática da liderança transformacional de forma frequente entre os enfermeiros. Entretanto, eles apresentam dificuldades para exercer esse modelo de liderança, devido a carência de apoio da instituição que, majoritariamente adota uma liderança verticalizada, pela falta de capacitação para os enfermeiros assistenciais, e fragilidades na comunicação e discussão dos problemas antes das tomadas de decisões.

**Conclusão:** A prática da liderança transformacional encontra resistências pelo maior exercício da liderança verticalizada pelos gestores, entretanto os enfermeiros acreditam que uma liderança com comportamento horizontalizado pode favorecer mudanças estruturais e comportamentais da instituição.

### Resumen

**Objetivo:** Analizar el ejercicio del liderazgo transformacional en la práctica de enfermería de un hospital universitario.

**Métodos:** Estudio de mixtos métodos explicativos secuenciales. En la etapa cuantitativa, con muestra no probabilística por conveniencia, se aplicó cuestionario de actitudes frente a estilos de liderazgo adaptados a la frecuencia de adopción de conductas de liderazgo transformacional en 152 enfermeras del hospital. Datos sometidos a pruebas estadísticas descriptivas y analíticas. En la etapa cualitativa, 25 participantes de la primera etapa fueron sorteados, y respondieron a entrevista semiestructurada, revisada por análisis de contenido temático.

**Resultados:** La práctica del liderazgo transformacional fue identificada frecuentemente entre los enfermeros. Sin embargo, presentan dificultades para ejercer este modelo de liderazgo debido a falta de apoyo institucional, que mayoritariamente adopta un liderazgo vertical, por falta de capacitación de los enfermeros de atención y debilidades comunicacionales y de discusión de problemas antes de tomar decisiones.

**Conclusión:** La práctica del liderazgo transformacional encuentra resistencia por el mayor ejercicio de liderazgo vertical de los gestores, sin embargo, los enfermeros creen que un liderazgo de tipo horizontal podría favorecer cambios estructurales y conductuales en la institución.

### Corresponding author

Vanêska Brito Ferreira  
 0000-0003-0454-0621  
 E-mail: vaneskaferreira@outlook.com

### DOI

<http://dx.doi.org/10.1590/1982-0194201800088>

### How to cite:

Ferreira VB, Amestoy SC, Silva GT, Felzemburgh RD, Santana N, Trindade LL, et al. Transformational leadership in nurses' practice in a university hospital. Acta Paul Enferm. 2018;31(6):644-50.

<sup>1</sup>Universidade Federal da Bahia, Salvador, BA, Brazil.

<sup>2</sup>Universidade Federal de Santa Catarina, Florianópolis, SC, Brazil.

**Conflicts of interest:** This manuscript is part of the master's studies of Vanêska Brito Ferreira.



## Introduction

The current situation of health services is characterized by scarcity of material resources, weaknesses in people management, overcrowding of beds and reduction of public investments.<sup>(1)</sup> In addition, managers of hospital institutions do not have the means to solve health demands satisfactorily, which leads to the hardening of available alternatives and highlights the need for leaders' collaboration in the care management. To this end, these professionals must have relational skills, take decisions based on a critical eye, and continuously develop leadership potential in order to improve clinical practice and meet the population's health needs.<sup>(2)</sup>

As leadership is one of the main managerial skills and essential for nurses' practice, it must be developed and improved permanently.<sup>(2)</sup> Knowing nurses' leadership styles can help and boost the improvement of this important professional skill. The organization can influence the style of leadership by presenting negative or positive points that will facilitate or hinder the development of people's roles, which requires practical and effective solutions from the leader.<sup>(3,4)</sup> In spite of this, some authors defend that the work environment does not interfere in the leader's behavior towards collaborators.<sup>(5)</sup>

The transformational leadership style involves transformative actions aimed at improving people's perception on the importance of work and the activities performed. This way, people will effectively engage with the cause of the organization and act towards the achievement of their goals. The leader can identify the personal and professional needs of others, develop their own moral characteristics and follow professional ethics, as well as a set of skills.<sup>(6)</sup>

Studies<sup>(7,8)</sup> report the benefits of institutions where there is concern with forming and empowering transformational leaders, since this is positively associated with higher levels of job satisfaction and care delivery.<sup>(9,10)</sup> Particularly in Nursing, nurses must recognize leadership as an essential skill for the professional practice related to organization, trust and guidance of the team.<sup>(11)</sup>

From this perspective, arises the following research problem: "how does the nurse exercise lead-

ership in a university hospital?". The aim was to analyze the exercise of transformational leadership in nurses' practice in a university hospital.

Given the relevance of leadership in Nursing, the aim of this study is to contribute to a greater reflection and awareness of this issue. Furthermore, it allows the identification of the leadership style adopted by nurses, which may impact in institutional leadership and interpersonal relationships among team members, thus favoring the care provided,<sup>(4)</sup> and indicating elements for leaders' development and improvement.

## Methods

This is a mixed-method explanatory sequential study.<sup>(12)</sup> It was conducted in a reference university hospital located in the state of Bahia that has been administered by a public company under private law since 2012.

In the quantitative phase, was adopted a non-probabilistic convenience sample. The inclusion criterion was being a nurse in the studied scenario. The exclusion criterion was being on vacation and/or away from work for any reason during the data collection period (between August and November 2017). Three nurses could not participate because they were on work leave. On average, there are three nurses on vacation per month in the hospital, which did not affect the collection, because whoever was not approached in the month of vacation, was approached in the following month. In total, 234 (98.7%) nurses working at the institution were invited to participate, out of whom 124 were professionals under a formal employment contract and 113 were statutory employees. Participation in the study was accepted by 152 (64.1%) professionals, which was more than the minimum sample of 147 nurses. The confidence interval was set at 95% and a sample error of 5%.

In the quantitative data collection instrument, was requested a telephone number to assist in the qualitative phase. It included two sociodemographic variables, namely sex and employment agreement, and a validated questionnaire adapted for

investigating the frequency of adoption of transformational leadership and transactional leadership behaviors.<sup>(13)</sup>

The questionnaire contains 22 variables, out of which 14 are related to transformational leadership, and eight related to transactional leadership. Responses were given in a Likert-type scale ranging from 0 to 10, with 0 = never, 1 = almost never, 2 = rarely, 3 = few times, 4 = occasionally, 5 = sometimes, 6 = often, 7 = usually, 8 = very often, 9 = almost always, and 10 = always. The quantitative data collection instrument was handed in the workplace or sent by email via Google Forms. The online form was recommended for professionals who were leaving the office (end of work shift) or for those who reported lack of time. Six professionals preferred this method.

The collected data were analyzed through the Statistical Package for the Social Sciences (SPSS), version 21.0. Categorical variables were presented in absolute and relative frequency, and numerical variables in measures of dispersion and measures of central tendency. After treatment and analysis of data through the SPSS 21.0, the median was used as the central measure, and the interquartile range was the measure of dispersion. The level of significance was set at 0.05 (5%).

The variables of the Likert scale were defined as follows: 0-3 score was considered as 'nonexistent or little practice' of the transformational leadership style; 4-7 score was 'usual practice'; and 8-10 score was 'frequent practice'. Data of variables that for some reason were not answered by participants, were not analyzed. Absence of response was between 0.0% and 1.3% (n = 2) for variables of transformational leadership, and between 0.0% and 2.0% (n = 1,9) for transactional leadership variables. The reliability coefficients (Guttman's lambda-2) of the questionnaire were 0.82 and 0.78 for transformational and transactional leadership factors, respectively.<sup>(13)</sup>

For adaptation of the questionnaire, the person responsible for validation of the instrument was contacted.<sup>(13)</sup> The only change was made in the score of answers that previously measured the attitude towards the leadership style, and began to

measure the frequency with which transformational and transactional leadership behaviors are practiced, that is, leadership style.

With the data found was identified the predominant leadership style. The aim of the qualitative phase was to investigate the transformational leadership, and was used the semi-structured interview technique. Interviews were conducted individually in a private room at the institution with date and time previously scheduled with participants, and use of two tape recorders.

The guiding question was "how do you usually exercise your leadership?" During the interview, when the transformational leadership behavior appeared in the testimonies, other questions were formulated in order to provide further clarification and facilitate the researcher's understanding on how leadership was exercised by nurses within the university hospital. The interviews lasted 30 minutes on average, and were conducted by undergraduate students in scientific initiation or by the researcher.

The corresponding 'n' of this phase was based on the criterion of information saturation,<sup>(14)</sup> and there were 25 participants. They were chosen through simple random draw and only those who signed the Informed Consent form participated in the first phase. The content analysis technique in the thematic modality was used for analysis of data collected<sup>(15)</sup> together with the Nvivo 11 software.

This study was submitted to the Plataforma Brasil and approved by the Research Ethics Committee of the Universidade Federal da Bahia. The ethical approval of the macro project entitled "Transformational Leadership of Nurses in a University Hospital" was granted under number 2.056.861, thereby meeting the ethical principles of Resolution 466/12. For anonymity, in the qualitative phase, interviewees were identified by the letter E followed by a sequential number given in the previous phase.

## Results

In the first phase of the study, 152 nurses participated and most were female (88.2%) (n = 134). The

majority of these professionals, 70.4% (n = 107) were under a formal employment contract, and statutory employees accounted for 29.6% (n = 45) of the sample. The scores of median of variables and the frequency with which transformational leadership and transactional leadership practices were exercised are described in tables 1 and 2, respectively.

**Table 1.** Median and frequency of Transformational Leadership characteristic behaviors (n = 152)

Variable	Median (IQR)*	Little practice n(%)	Usual practice n(%)	Frequent practice n(%)	n
1- Search for new opportunities for the unit/department/organization	7(5-9)	12(8.0)	74(49.7)	63(42.3)	149
2- Show that you have high expectations in relation to the team.	8(6-9)	4(2.6)	61(40.1)	87(57.3)	152
4- Consider the personal needs of team members.	8(7-9)	1(0.6)	64(42.7)	85(56.7)	150
6- Encourage individuals to think about old problems in new ways.	8(6-9)	9(5.9)	64(42.4)	78(51.7)	151
7- Praise when team members do a job above average.	9(8-10)	0(0.0)	25(16.6)	126(83.4)	151
8- Lead by 'doing' rather than by simply 'saying'.	9(8-10)	0(0.0)	28(18.5)	123(81.5)	151
10- Get the group to work together in pursuit of the same goal.	8(7-10)	2(1.3)	59(38.8)	91(59.9)	152
12- Insist on the team's best performance.	8(7-10)	1(0.6)	55(36.2)	96(63.2)	152
14- Present new ways of looking at things that used to be confusing for team members.	8(6-9)	5(3.3)	67(44.7)	78(52.0)	150
15- Lead by example.	9(7-10)	1(0.6)	37(24.7)	112(74.7)	150
16- Always give positive feedback when a team member performs well.	9(8-10)	0(0.0)	35(23.2)	116(76.8)	151
18- Show respect for the team members' feelings.	10(8-10)	1(0.6)	23(15.2)	127(84.2)	151
20- Clearly understand where the team is going.	8(6-9)	6(4.0)	57(37.7)	88(58.3)	151
21- Encourage employees to work as a team.	9(8-10)	1(0.6)	24(15.8)	127(83.6)	149

\*IQR –Interquartile range; n – number; % – percentage

The transformational leadership style variables express a 'frequent practice' in more than 50.0% of participants in 13 out of the 14 common behaviors to this type of leader, which demonstrates the presence and predominance of the transformational leadership style. Regarding the eight variables related to the transactional leadership style, five of them revealed an 'usual practice' superior to 50.0% of participants. In no variable the 'non-existent practice or little practice' and 'frequent practice' were above 50.0% of participants, which could highlight the behavior of this style of leadership as excluding or vividly present in the daily life of at least half of the nurses surveyed, when compared to the transformational leadership.

**Table 2.** Median and frequency of practice of Transactional Leadership characteristic behaviors (n = 152)

Variable	Median (IQR)*	Little practice n(%)	Usual practice n(%)	Frequent practice n(%)	n
3- Alert when the performance of team members is unsatisfactory.	7(6-9)	7(4.6)	79(52.0)	66(43.4)	152
5- Negotiate with team members about what they can expect to receive in return for their accomplishments.	8(7-10)	18(11.8)	65(42.8)	69(45.4)	152
9- Show discontent when the work of team members is below acceptable levels.	7(6-9)	5(3.3)	81(53.6)	65(43.0)	151
11- Give team members what they want in exchange for their support.	5(4-8)	36(23.8)	77(51.0)	38(25.2)	151
13- Tell team members what to do to be rewarded for their efforts.	6(4-8)	29(19.4)	80(53.3)	41(27.3)	150
17- Indicate disapproval if the performance of team members is below what they are capable of.	7(5-8)	14(9.3)	75(50.0)	61(40.7)	150
19- Make arrangements with team members about what they will receive if they do what has to be done.	5(2-7)	60(39.7)	61(40.4)	30(19.9)	151
22- Reprimand team members if their work is below standards.	5(3-8)	40(26.7)	70(46.6)	40(26.7)	150

\*IQR – Interquartile range; n – number; % – percentage

The objective of the qualitative phase was to investigate how the leadership was exercised by nurses within the university hospital. Since this is a macro project, was chosen the category that contributed to answer the guiding question and allowed the integration between quantitative and qualitative results: fragilities in the institutional contribution in the formation of leaders. This category demonstrated nurses' difficulty in exercising leadership with transformational behaviors, and of being seen as leaders within the institution regardless of their role (coordination or assistance). At the same time, was observed the institutional fragility in developing this practice and seeing it as necessary for all nurses, while nurses perceive the importance of leadership for the profession.

*The lack of stimulation in the management process. Because, for example, I think a leadership course should not be done just for referral nurses. It's like I said, everyone is a leader! Then, why not offer it to everyone? In order to try to strengthen this sense of leadership? Sometimes it's missing some of that. (E 61)*

*There is a referral nurse here, who is more in administrative tasks. They are having leadership*

*training. They have had it, but we are in five nurses, one is attending this training, and our profession demands this, then we should have it. That's missing. (E 10)*

According to participants, the reason for the institutional low commitment with contributing to the formation of leaders is the lack of support and the difficulty of understanding the relevance of this training for employees:

*In my view, the institution is not very concerned about the leader directly. They're just worried about having a nurse-leader who guides that team, that sector. (E 7)*

*I see the implementation of leadership, more and more, being pruned in this process. (E 61)*

The lack of institutional support for the formation of leaders may be related to a vertical and authoritarian management with the belief that this is the best way to reach the goals. Thus, no time/opportunity was provided for any questioning or negotiation, as some statements show:

*I do not see much of the ideas, demands, let's say, the orders, the flows, come from there to here. And we participate very little, very small really is the participation of the assistance team. (E 34)*

*And all information, all commands, they come vertically and kind of with no room for a conversation, a negotiation. Currently, I don't think the coordination is exercising leadership coordination because I personally don't feel involved in the process as a whole. (E 124)*

The management performance focused on exercising leadership through behaviors based on vertical decisions was perceived as something to be avoided:

*Often, we are not represented by our leadership, but it's not because we have a vertical leadership that we will reproduce this model. (E 110)*

## Discussion

In the quantitative phase, the transformational leadership practice was identified frequently in the university hospital. However, when the qualitative phase sought to deepen and understand how this practice happened and was received, the results diverged.

Nurses have to be aware of the benefits derived from the continuous practice of transformational leadership, favor the relationship between employees and the achievement of larger goals<sup>(9)</sup> in order to develop leadership and manage relationships equally and by taking into consideration their uniqueness.<sup>(16)</sup> With a view to improving team satisfaction and ensuring a healthy working environment, the leader can motivate and increase performance at work and strengthen the clinical view, and these factors impact on the care provided.<sup>(10,17,18)</sup>

The results also showed the management's interference in the exercise of transformational leadership, since managers tend to adopt a vertical attitude, and decisions are often made without nurses' involvement. This model is harmful and bad for the leadership practice. It can affect employees negatively by keeping them unmotivated, since institutions do not evaluate the actual conditions of their requests and offer no space for listening to those in the 'frontline'.

On the other hand, institutions that invest in leaders' training and support, can positively influence their employees, improve productivity and motivate them constructively.<sup>(7,19)</sup> Situations opposed to this type of relationship may be linked to weaker institutional support for the formation of leaders, which opens space for authoritarian and vertical management. This is strongly influenced by traditional management models that are still common in many organizations.

In this study, the exercise of leadership was not perceived as something inherent to nurses' professional practice, and both the institution and those in management and coordination positions (called referral nurses or nurse leaders by the interviewees) demonstrated difficulty with perceiving the leading role played by care nurses towards the nursing team.

However, in institutions that invest in developing nurses' leadership potential regardless of their hierarchical position, professionals become prepared for confronting everyday situations in the hospital setting assertively, whether in resolution or management of conflicts.<sup>(18)</sup>

Studies<sup>(20,21)</sup> conducted in Germany and Australia highlight the importance of the applicability of leadership in hospital clinics routine and of implementing programs for improvement of leader-nurses. This result shows that leadership is primordial for the profession, and educational practices should be provided for strengthening leadership among nurses of the university hospital.

However, not all institutions have the organizational culture of valuing the formation of leaders. They may see the act of performing work with excellence and responding to the boss's expectations, as the responsibility of employees who are interested in keeping their jobs. Other institutions may even accept the importance of this type of training, but because of possible extra expenses, do not consider it a priority.<sup>(22)</sup> However, a study<sup>(8)</sup> conducted in Japan on transformational leadership reveals that nurses are more committed when the institution invests in professional training.

In institutions that understand the importance of adopting and promoting a leadership style, there are gains, since nurses can have support from the team, encourage them and, together, all have conditions to face adverse situations. It is also essential that nurses engage with transformational leadership in order to improve team satisfaction, ensure a harmonious working environment that can strengthen clinical vision, and improve care delivery.<sup>(4,17,19)</sup>

Transformational leadership is one of the styles that best matches the needs of an organization by enabling employees' voluntary mobilization without causing pressure or anxiety, and achieving the stated purpose. In the case of Nursing, this means meeting the health needs of the population through an efficient care management.

Adopting the mixed-method design is beneficial, because it allows the exploration of more complex leadership issues. Quantitative data provide a detailed evaluation of the patterns of answers,

while qualitative data offer a deep understanding of the phenomenon investigated from participants' speeches, which contributes to better reach the study objective.

Limitations of this study were the adoption of a convenience sample and the difficulty with contacting people who participated in the qualitative phase, since they did not provide a telephone contact, or refused to take part in this phase. Another aspect is that it was performed only with nurses, since it would be vitally important to confirm if the transformational leadership exercised was perceived by other members of the nursing team.

## Acknowledgements

Thanks to the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) by the master's scholarship granted to Ferreira VB.

## Collaborations

Ferreira VB collaborated in the study design, writing, analysis, interpretation of data, critical review of the article and final approval of the version to be published. Amestoy SC contributed in the study design, writing, analysis, interpretation of data, critical review of the article and final approval of the version to be published. Silva GTR and Felzemburgh RDM cooperated in the writing, analysis, interpretation of data, critical review of the article and final approval of the version to be published. Santana N, Trindade LL, Santos IAR and Varanda PAG participated in the relevant critical review of the intellectual content and final approval of the version to be published.

## Conclusion

This research enabled the analysis of the exercise of transformational leadership in nurses' practice in a university hospital. Initially, was identified the leadership style adopted at the institution. The

quantitative phase revealed the presence of transformational leadership in 13 out of the 14 behavioral variables on the subject, which presented frequent practice of over 50%, that is, more than 50% of participants adopted transformational behaviors at some point in their professional practice. However, difficulties have emerged in the exercise of transformational leadership, and they may be related to the lack of recognition of leadership as an inherent attribute of nurses' practice regardless of their role. Institutional support in the formation of leaders is essential in order that team guidance is performed with competence. Anything that flees from this path may be a loss for the development of care based on quality, besides favoring a lower progress of the team with consequent reduction in the achievement of institutional goals. However, this lack of support may be linked to a vertical and hierarchical management, opposed to the precepts of transformational leadership, which seeks to transform the organizational culture and environment.

## References

1. Scherer MD, Conill EM, Jean R, Taleb A, Gelbcke FL, Pires DE, et al. Challenges for work in healthcare: comparative study on University Hospitals in Algeria, Brazil and France. *Ciênc Saude Coletiva*. 2018;23(7):2265–76.
2. Amestoy SC, Trindade LL, Silva GT, Santos BP, Reis VR, Ferreira VB. Leadership in nursing: from teaching to practice in a hospital environment. *Esc Anna Nery*. 2017;21(4):1–7.
3. Brewer CS, Kovner CT, Djukic M, Fatehi F, Greene W, Chacko TP, et al. Impact of transformational leadership on nurse work outcomes. *J Adv Nurs*. 2016;72(11):2879–93.
4. Lavoie-Tremblay M, Fernet C, Lavigne GL, Austin S. Transformational and abusive leadership practices: impacts on novice nurses, quality of care and intention to leave. *J Adv Nurs*. 2016;72(3):582–92.
5. Balsanelli AP, David DR, Ferrari TG. Nursing leadership and its relationship with the hospital work environment. *Acta Paul Enferm*. 2018;31(2):187–93.
6. Fischer SA. Transformational leadership in nursing: a concept analysis. *J Adv Nurs*. 2016;72(11):1–10.
7. Asiri SA, Rohrer WW, Al-Surimi K, Da'ar OO, Ahmed A. The association of leadership styles and empowerment with nurses' organizational commitment in an acute health care setting: a cross-sectional study. *BMC Nurs*. 2016;15(38):1–10.
8. Kodama Y, Fukahori H, Sato K, Nishida T. Is nurse managers' leadership style related to Japanese staff nurses' affective commitment to their hospital?. *J Nurs Manag*. 2016;24(7):887–92.
9. Morsiani G, Bagnasco A, Sasso L. How staff nurses perceive the impact of nurse managers' leadership style in terms of job satisfaction: a mixed method study. *J Nurs Manag*. 2017;25(2):119–28.
10. Lin P-Y, MacLennan S, Hunt N, Cox T. The influences of nursing transformational leadership style on the quality of nurses' working lives in Taiwan: a cross-sectional quantitative study. *BMC Nurs*. 2015;14(33):1–9.
11. Alghamdi MG, Topp R, AlYami MS. The effect of gender on transformational leadership and job satisfaction among Saudi nurses. *J Adv Nurs*. 2018;74(1):119–27.
12. Creswell JW, Clark VL. *Pesquisa de métodos mistos*. 2a ed. Porto Alegre (RS): Penso; 2013. 288 p.
13. Fonseca AM, Porto JB. [Factorial validation of scale of attitudes toward leadership styles]. *Aval Psicológica*. 2013;12(2):157–66. Portuguese.
14. Nascimento L, Souza TV, Oliveira IC, Moraes JR, Aguiar RC, Silva LF, et al. Theoretical saturation in qualitative research: an experience report in interview with school children. *Rev Bras Enferm*. 2018;71(1):228–33.
15. Minayo MC. *O Desafio do conhecimento - pesquisa qualitativa em saúde*. 14a ed. São Paulo: Hucitec; 2014. 407 p.
16. Giddens J. Transformational leadership: What every nursing dean should know. *J Prof Nurs*. 2017;34(2):117–21.
17. Boamah SA, Laschinger HK, Wong C, Clarke S. Effect of transformational leadership on job satisfaction and patient safety outcomes. *Nurs Outlook*. 2017;66(2):180–9.
18. Al-Yami M, Galdas P, Watson R. Leadership style and organisational commitment among nursing staff in Saudi Arabia. *J Nurs Manag*. 2018;26(5):531–9.
19. Cheng C, Bartram T, Karimi L, Leggat S. Transformational leadership and social identity as predictors of team climate, perceived quality of care, burnout and turnover intention among nurses]. *Perspect Rev*. 2016;45(6):1200–16.
20. Paterson K, Henderson A, Burmeister E. The impact of a leadership development programme on nurses' self-perceived leadership capability. *J Nurs Manag*. 2015;23(8):1086–93. A
21. Tewes R, Fischer T. Too busy to lead? current challenges for German nurse leaders]. *J Nurs Manag*. 2017;25(1):1–3.
22. Gutierrez LA, Arruda CS, Sales T, Mathias MC, Coelho RM. [The importance of leadership in organizations: literature review]. *Rev FAIPE*. 2014; 4(2):9–16. Portuguese.