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Transformational Leadership Practices of Chief Nursing Officers in Magnet® Organizations

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Objective: This study describes the transformational leadership practices of Magnet® chief nursing officers (CNOs).
Background: It is believed that transformational leadership practices influence quality and are integral to Magnet designation.
Methods: E-mail surveys of 384 Magnet CNOs were conducted in 2011 using the leadership practices inventory (LPI).
Results: Enabling others to act and modeling the way are top practices of Magnet CNOs. Those 60 years or older and those with doctorate degrees scored significantly higher in inspiring a shared vision and challenging the process. There was a significant positive relationship between total years as a CNO and inspiring a shared vision and between total scores on the LPI and number of beds in the organization.
Conclusions: As CNOs gain experience and education, they exhibit more transformational leadership characteristics. Magnet organizations should take steps to retain CNOs and support their development and advancement.

Chief nursing officers (CNOs) are increasingly challenged to effectively lead in today's turbulent healthcare environment. The context for CNO leadership practice includes positioning for value-based purchasing, meeting regulatory requirements, implementing information technology, designing new care delivery models and clinical roles, and implementing the Institute of Medicine's (IOM) Future of Nursing Report recommendations.[1-3] In Magnet® organizations, the leadership characteristics of the CNO are integral to achieving clinical quality and patient care outcomes through the creation of structures and processes supporting nurse empowerment and evidence-based practice.[4-6]

The American Nurses Credentialing Center (ANCC) Magnet Recognition Program® places considerable emphasis on the CNO as a transformational leader, one who develops a strong vision and philosophy, communicates expectations effectively, develops others, and leads the organization to meet strategic priorities.[7] The CNO's effectiveness as change agent is dependent upon effective, transformational leadership (TL) practices, such as creating a shared vision, inspiring others, and empowering others to lead.[5,6] Transformational leadership is a core component of the Magnet model, along with structural empowerment, exemplary professional practice, new knowledge, innovations and improvement, and empirical outcomes.[7] Transformational leadership practices of CNOs in Magnet organizations have not been widely studied. As organizational leaders recognize the value of Magnet as an effective organizing framework for nursing excellence, the ability to assess and develop TL characteristics of CNOs will be integral to successfully achieving and sustaining Magnet designation.

Foundational to the Magnet model, the American Nurses Association Scope and Standards of Nursing Practice for Nursing Administration[8] identify

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TL as a key component of nurse administrator practice, emphasizing open communication, inspiration, enthusiasm, and positive change in an organizational culture of shared decision making. The CNO of a Magnet organization leads by developing a strong vision, communicating expectations effectively, developing others, fostering innovation, leading the organization forward to meet strategic priorities,[9-11] empowering nurses, and supporting autonomous decision making.[12,13]

Transformational leadership style, as described through the seminal work of Burns'[14] theory of leadership and, later, Bass et al,[15,16] is closely aligned to the 5 practices of exemplary leadership described by Kouzes and Posner.[17,18] Practices include the following: leaders are at their best when they are able to model the way, challenge the process, encourage the heart, inspire a shared vision, and enable others to act (Table 1).[17]

Review of the Literature

The TL style of nurse managers and CNOs has significant impact upon nursing and organizational outcomes—improving job satisfaction, strengthening organizational commitment, increasing productivity, reducing turnover, and enhancing work group effectiveness. In studies related to the impact of nurse manager TL and nurse outcomes, Chiok Foong Loke,[19] Failla and Stichler,[20] Larrabee et al,[21] and Casida and Parker[22] each demonstrated significant positive correlations between TL and job satisfaction ($r = 0.44$, $P = .01$; $r = 0.35$, $P < .05$; $r = 0.53$, $P < .0001$; $r = 0.82$, $P < .0001$). Chiok Foong Loke[19] also identified significant positive relationships between nurse manager TL practices and productivity ($r = 0.19$, $P = .01$). Drenkard[23] found an inverse relationship between total TL characteristic scores of nurse managers and anticipated turnover scores of staff nurses ($r = -0.39$, $P < .0001$). Three studies examined the impact of CNO TL practices on organizational outcomes. Dunham-Taylor[6] demonstrated a strong positive correlation between TL practices and work group effectiveness ($r = 0.81$, $P < .0001$), and Chiok Foong Loke,[19] Leach,[24] and McGuire and Kennerly[25] identified significant relationships between TL practices and organizational commitment ($r = 0.29$, $P = .01$; $r = 0.22$, $P < .05$; $r = 0.393$ to -0.202, $P < .01$).

Only 1 study[5] focused on the TL practices of CNOs exclusive to Magnet organizations. Porter-O'Grady[5] compared 71 Magnet CNOs (38% of all Magnet CNOs at the time) and 90 non-Magnet CNOs using the leadership practices inventory (LPI) self. There were no significant differences between Magnet CNOs and non-Magnet CNOs. Mean (SD) LPI scores for Magnet CNOs were as follows: inspiring a shared vision, 8.63 (0.77); challenging the process, 8.61 (0.79); enabling others to act, 9.16 (0.53); modeling the way, 8.86 (0.66); and encouraging the heart, 8.71 (0.76). Total LPI scores and demographics were not reported.

Transformational leadership is an essential characteristic of a Magnet organization,[26] contributing to the achievement of positive nursing and organizational outcomes.[27] With Magnet as organizing framework for nursing and patient care excellence, understanding CNO TL provides new knowledge in the field that can be applied to developing and supporting new leaders. Moreover, transformational CNOs will help to ensure success in obtaining and sustaining Magnet designation.

Methods

Design and Research Question

This was a descriptive study to address the paucity of research, with the question "What are the TL practices of CNOs in Magnet organizations?" The purpose of the study was to describe the practices and develop new knowledge to apply to nursing

Table 1. Definitions of Leadership Practices Subscales[17]

LPI Subscale	Definition
Inspiring a shared vision	Envisioning the future by imagining exciting and ennobling possibilities; enlisting others in common vision by appealing to shared aspirations
Challenging the process	Searching for opportunities by seeking new ways to change, grow, and improve; experimenting and taking risks, generating small wins and learning from mistakes
Enabling others to act	Fostering collaboration by promoting cooperative goals and building trust; strengthening others by sharing power and discretion along the way
Modeling the way	Finding voice and clarifying personal values by setting an example and aligning actions with the shared values of the team
Encouraging the heart	Recognizing individual contributions; showing appreciation for excellence; celebrating victories by creating a spirit of community

leadership practice. For purposes of this study, the definition used to describe TL was as follows: a leadership style that inspires and empowers followers to achieve extraordinary outcomes while transcending individual self-interest, aligning the objectives and goals of the followers, the leader, groups, and the organization.[15] Before creating the survey, the researcher conducted a stakeholder session at a national commission on Magnet meeting. The problem and purpose of the study were reviewed, and the commissioners were engaged in an interactive pair-share exercise to identify additional research questions and background variables. Feedback was incorporated in the final version of the demographic component of the survey, combined with the LPI instrument, and placed on a Web-based platform. Variables added to the instrument because of this exercise included years as a CNO, reporting relationship, and an organizational variable measure of patient satisfaction with nursing (Hospital Consumer Assessment of Healthcare Providers and Systems [HCAHPS]). The protocol for this study was approved by the Case Western Reserve University institutional review board.

Procedure

An invitation to participate in the study was e-mailed to all (n = 384) members of the Magnet Recognition Program CNO listserv by the ANCC executive director. Informed consent to participate was obtained. Essential inclusion criteria were that the CNO have the highest senior executive level accountability for nursing practice in their organization and that the organization was currently Magnet designated. E-mail reminders to participate were sent at 1 and 3 weeks after the initial invitation, with the survey collection period spanning 6 weeks. Data collected via the Web-based platform was downloaded into the Statistical Package for the Social Sciences (SPSS 18.0; Chicago, Illinois) software for analysis.

Instrument: LPI-Self

The LPI-self instrument was used to measure 5 leadership practices: enabling others to act, encouraging the heart, inspiring a shared vision, challenging the process, and modeling the way. These practices were 1st identified by Kouzes and Posner[28] through case study analyses of more than 1,100 managers and their self-declared personal best experiences, which were then integrated into the LPI framework. The LPI has been used as an assessment tool to measure leadership practices associated with TL style, as identified by nurse leaders and their staff.[5,29] The 30-item LPI-self instrument assesses behaviors in each of the 5 practices, with 6 questions measuring each of the 5 leadership practices on a scale of 1 to 10, with 1 being low and 10 being high, and has a high level of internal consistency. Posner[30] found the LPI-self instrument to have Cronbach α of .91 for enabling others to act, .86 for encouraging the heart, .91 for inspiring a shared vision, .86 for challenging the process, and .84 for modeling the way. This study determined Cronbach α to be .74 for enabling others to act, .87 for encouraging the heart, .66 for inspiring a shared vision, .77 for challenging the process, and .70 for modeling the way.

Variables

Chief nursing officer demographic variables included age, gender, education, certification, total years as a CNO, years as CNO in current organization, and reporting relationship. In addition, participants were asked to report the following organizational attributes: years as a Magnet organization, number of times designated as a Magnet organization, bed size, RN full-time equivalents (FTEs), nursing turnover rate, nursing vacancy rate, operating margin, ownership and control, union status, and currently publicly posted (www.hospitalcompare.hhs.gov) percentage of scores of 4 or greater for HCAHPS question about nurses always communicating well.

Data Analysis

Total LPI score was calculated as the mean of the responses to the 30 questions in the instrument. Subscale scores for each of the 5 leadership practices were calculated as means of the responses to the 6 relevant questions for each subscale. Descriptive statistics including means, standard deviations, and ranges were calculated for all variables. To determine differences in individual responses between the LPI subscales, paired *t* tests were conducted. To identify relationships between the means of the total and 5 subscale scores and number of beds, years as a Magnet organization, and age groups, analysis of variance (ANOVA) tests were conducted. To examine the relationships between total LPI and subscale score means and years as a CNO, years as a CNO in current organization, age, number of hospitals, years as a Magnet organization, number of beds, operating margin, RN FTEs, RN turnover rate, RN vacancy rate, and HCAHPS score, Pearson correlations were calculated. To compare means for the LPI total and subscale scores between those 59 years or younger and those 60 years or older, to compare mean scores between CNOs with master's degrees and those with doctorate degrees, to compare mean scores by the CNO's reporting relationship, and to compare mean scores by presence or absence of a nursing union, independent-samples *t* tests were used. For-profit status was considered, but because 91% of respondents

worked at not-for-profit facilities, this factor could not be analyzed.

Results

Of the 384 CNOs of Magnet organizations, 225 (58.6%) completed the survey. Of those who answered the demographic questions, 206 (92.4%) were women and 17 (7.6%) were men; ages ranged from 35 to 71 years. Sample characteristics are included in Table 2. The top 2 TL practices of Magnet CNOs were enabling others to act and modeling the way. Ranges, means, and standard deviations for each the 5 subscales as well as total score for the LPI were calculated, with mean (SD) values as follows: enabling others to act, 8.70 (0.674); modeling the way, 8.39 (0.872); inspiring a shared vision, 8.22 (1.05); challenging the process, 8.16 (0.909); and total LPI score, 8.33 (0.752). Results are summarized in Table 3.

To determine if there were significant differences between the individual LPI subscales, paired *t* tests were conducted. The LPI subscale score of enabling others to act was significantly higher than that of modeling the way ($t = 6.78$, $P < .001$), encouraging the heart ($t = 8.85$, $P < .001$), inspiring a shared vision ($t = 7.33$, $P < .001$), and challenging the process ($t = 10.50$, $P < .001$). The LPI subscale score of modeling the way was the 2nd highest and was significantly higher than that of challenging the process ($t = 4.70$, $P < .001$), encouraging the

Table 2. Background Variables

Variable	n	Minimum	Maximum	Mean	SD
Age, y	223	35	71	55.67	6.22
Total years as CNO	223	1	38	11.32	8.15
Years as CNO in current organization	223	1	38	8.44	7.43
Years as Magnet	144	1	21	5.21	3.55
Number of times designated	144	1	5	1.61	.853
Number of beds	144	30	1,750	459.68	313.67
RN FTEs	144	87	5,000	1,050.98	841.03
Nursing turnover, %	144	1	22	7.65	3.86
Nursing vacancy, %	144	0	18	3.76	3.05
HCAHPS top box, %	128	0	100	70.73	20.163
Operating margin, %	125	0	17	5.19	3.80

Variable	n	%
Gender		
Male	17	7.6
Female	206	92.4
Ownership/control		
Nonprofit	131	91
Government owned	7	4.9
For-profit	6	4.2
Union		
No	120	83.3
Yes	24	9.6
Educational degrees (all that apply)		
ADN	17	6.8
Diploma	41	16.3
BSN	110	43.8
MSN	143	57
Master's, other	81	32.3
DNP	19	7.6
PhD nursing	17	6.8
Other doctorate	18	7.2
Highest degree		
Master's degree	169	75.8
Doctoral degree	54	24.2
Certification		
NE-BC	38	15.1
NEA-BC	129	51.4
FACHE	30	12
None	48	19.1
Reporting relationship		
CEO	159	71.3
COO	64	28.7

Abbreviations: ADN, associate degree in nursing; CEO, chief executive officer; COO, chief operating officer.

Table 3. LPI Results on a Scale of 1 to 10

	Total LPI Score	Inspire a Shared Vision	Challenge the Process	Enable Others to Act	Model the Way	Encourage the Heart
n	223	223	223	223	223	223
Minimum	6.27	5.17	5.83	6.67	4.67	4.67
Maximum	10.00	10.00	10.00	10.00	10.00	10.00
Mean	8.33	8.22	8.16	8.70	8.39	8.17
SD	0.752	1.05	0.909	0.674	0.872	1.10
Master's degree	8.27	8.12	8.07	8.70	8.34	8.11
Doctoral degree	8.47	8.49*	8.39*	8.70	8.50	8.31
<60 y	8.25	8.17	8.06	8.67	8.32	8.10
>60 y	8.48*	8.45*	8.38*	8.76	8.51	8.32

*$P < .05$.

heart ($t = 3.87$, $P < .001$), and inspiring a shared vision ($t = 3.030$, $P = .003$). There were no significant differences between the LPI subscale scores of inspiring a shared vision, encouraging the heart, and challenging the process (Table 4).

Additional Analyses

To determine differences between age groups and LPI total and subscale scores, ANOVA tests were conducted, identifying significant differences for the practices of inspiring a shared vision ($F = 2.704$, $P = .046$) and enabling others to act ($F = 3.078$, $P = .028$). To further examine the differences, individual-samples t tests were conducted, with the result of CNOs 60 years or older scoring significantly higher than the other age groups on LPI total score (8.48 compared with 8.25; $t = 2.071$, $P = .04$) and the LPI subscales of inspiring a shared vision (8.45 compared with 8.12; $t = 2.146$, $P = .033$) and challenging the process (8.38 compared with 8.06; $t = 2.418$, $P = .016$). To examine the relationship between total years as a CNO and TL practices, Pearson correlations were conducted, finding a highly significant positive relationship between total years as a CNO and the LPI subscale of inspiring a shared vision ($r = 0.23$, $P = .001$) and a significant relationship between total years as CNO and the LPI total score ($r = 0.15$, $P = .029$). To determine if there was a relationship between highest degree earned and CNO leadership practices, independent-samples t tests were conducted, identifying that CNOs with doctoral degrees scored significantly higher than those with master's degrees for inspiring a shared vision ($t = 2.26$, $P = .025$) and challenging the process ($t = 2.23$, $P = .027$). Pearson correlations were conducted at 95% confidence intervals to explore the relationships between mean LPI scores and other variables. There was no relationship between years as a CNO in current organization, years as a Magnet organization, number of times designated, RN FTEs, nursing turnover rate, nursing vacancy rate, HCAHPS top box (%4s) scores, operating margin, union status, certification, or

Table 4. Differences Between LPI Subscales

Pairs	Mean	SD	SEM	95% CI Lower	95% CI Upper	*t*	*df*	*P* (2 Tailed)
Enabling others to act/modeling the way	0.314	0.695	0.046	0.223	0.405	6.78	224	.000
Enabling others to act/encouraging the heart	0.534	0.905	0.60	0.415	0.653	8.85	224	.000
Enabling others to act/inspiring a shared vision	0.481	0.986	0.66	0.352	0.611	7.33	224	.000
Enabling others to act/challenging the process	0.540	0.771	0.051	0.437	0.641	10.50	224	.000
Modeling the way/challenging the process	0.226	0.720	0.048	0.131	0.320	4.70	224	.000
Modeling the way/encouraging the heart	0.220	0.854	0.057	0.108	0.332	3.87	224	.000
Inspire a shared vision/model the way	−0.167	0.829	0.055	−0.276	−0.059	−3.03	224	.003

reporting relationship. There was a significant positive relationship between total LPI score and number of beds (r = 0.15 P = .029).

Discussion

This study provides new evidence that the top 2 TL practices of CNOs in Magnet organizations are enabling others to act and modeling the way. By taking steps to ensure that nurses work in an empowering work environment and leading by example, Magnet CNOs create an esprit de corps—foundational to creating a culture of collaboration, team-building, and shared governance and aligned with the Magnet model components of TL and structural empowerment.[7] Aspiring and current Magnet CNOs and their organizations might want to consider using the LPI to assess current TL practices, identify gaps, create development plans, and support education.

This is the 1st study to examine the relationship between age and TL practices of CNOs in Magnet organizations. Older, more experienced Magnet CNOs are unique in how they enlist others in supporting a common vision (inspiring a shared vision) and seek new ways to change, grow, and improve (challenging the process) and would be ex cellent mentors for less experienced Magnet CNOs. The longer CNOs are in their roles, the more inspirational they are and the more they demonstrate a stronger TL style. Organizations may wish to take steps now to retain these CNOs; assess current organizational structures and support, including the development of formal succession programs; and consider associate CNO roles and flexible work schedules that could prevent CNO turnover and reduce overextension and burnout. Chief nursing officers with doctoral degrees demonstrate higher levels of TL practices, particularly in the areas of inspiring a shared vision and challenging the process. This finding is aligned with the IOM Future of Nursing Report[1] recommendations on doubling the number of nurses with doctorates and supporting lifelong learning. Chief nursing officers can use this evidence to support their decision to go back to school and organizations may wish to consider sponsoring their CNO to do so.

Limitations

The LPI was administered as self-assessment, not combined with an observational 360-degree data collection process (peer, subordinate, boss), so the findings are limited to how Magnet CNOs view their own leadership style. This study lacked a comparison group, examining the leadership practices of Magnet CNOs only. Obtaining a larger sample size may have supported testing of differences between CNOs with different types of doctoral degrees. Detail on type of master's preparation may have been beneficial. There was no relationship found between TL characteristics and many of the nurse and organizational outcomes assessed in the survey. This may be attributed to the fact that the LPI was administered as self-assessment only, that other outcomes need to be considered, and/or that there are a number of variables outside CNO influence that could impact these outcomes. Finally, the review of the literature was limited primarily to nursing, and information from other fields may have provided insights to guide the development of and better inform the survey.

Recommendations for Future Research

This study could be expanded to non-Magnet organizations. Since the top TL practice of Magnet CNOs is "enables others to act," it may be interesting to probe the relationship between this characteristic and shared governance structures and processes. Further research is recommended that would identify additional attributes of the Magnet CNO workforce, including retirement horizon, whether they are mentoring a successor, prior leadership experiences, work plans, and current educational advancement plans. This study identified differences between master's and doctorally prepared CNOs; thus, further exploration of differences could be warranted. Additional behaviors associated with the top practices beyond the work of Heuston and Wolf[18] could be explored with Magnet CNOs. A new model of TL for Magnet CNOs could be developed and tested, with elements in the Magnet model and sources of evidence later refined. A new tool to assess Magnet CNO TL could be developed and tested. With the paucity of current literature assessing the impact of Magnet CNO TL on nursing and organizational outcomes, an opportunity exists to assess this and sort the results by cohort, particularly related to educational preparation, years of CNO experience, age, and number of beds in the organization. Finally, an opportunity exists to thoroughly review the nonnursing literature to identify additional leadership characteristics and models and to further develop the conceptual framework for nurse executive leadership in Magnet organizations.

Conclusion

In today's complex and challenging healthcare environment, the TL practices of CNOs in Magnet organizations significantly influence the quality of nursing practice and patient care.[7] This study provides new evidence that identifies enabling others to act and modeling the way as the top TL practices

exhibited by Magnet CNOs. As Magnet CNOs become older and more experienced, they are more transformational—inspiring others, encouraging initiative, and fostering innovation and change.[17] With more than half of Magnet CNOs 56 years or older, the impending retirement wave that is set to occur should sound the alarm for healthcare organizations that wish to obtain, or sustain, Magnet designation. Efforts to effectively retain and develop current and future Magnet CNOs will be integral to supporting the Magnet model component of TL and continued success of the ANCC Magnet Recognition Program. The findings bring new awareness to the relationship between Magnet CNOs with doctorate degrees and the ability to effectively envision the future, enlist others in new opportunities, and take risks. This new knowledge should encourage nurse leaders to continue to advance their education and provide a needed catalyst for organizations to support them.

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