

ORIGINAL ARTICLE

Exploring the leadership styles of nurse managers in Hail, Saudi Arabia: A cross-sectional analysis

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ABSTRACT

Objective: Leadership's impact in healthcare is crucial as it notably shapes the experiences and performance of nursing staff. This study explores the dominant leadership styles among nurse managers in Hail, Saudi Arabia, as experienced by their nursing staff. The inquiry also examines how these leadership approaches directly influence critical organizational outcomes, including leader effectiveness, employee satisfaction, and staff's willingness to exert extra effort.

Methods: A cross-sectional design involving participants recruited via convenience sampling from four government hospitals in Hail, Saudi Arabia. Data were collected using the 45-item Likert-type Multifactor Leadership Questionnaire (MLQ) and analyzed using SPSS Statistics.

Results: Among the 372 nurses analyzed, transformational leadership (2.56 ± 0.75) significantly outscored other styles ($p < .001$) and had the highest correlation with the leadership outcomes of effectiveness, extra effort, and satisfaction (R^2 of 0.828, 0.786, and 0.760, respectively) compared to the transactional and laissez-faire leadership styles. Additionally, linear regression analysis revealed that transformational leadership explained 69% of effectiveness, 61.7% of extra effort, and 58% of satisfaction variances. Within the transformational framework, "inspirational motivation" strongly correlated with positive outcomes.

Conclusions: This study emphasizes transformational leadership's essential role in healthcare, urging nurse leaders to embrace this style, with a focus on strategies that boost motivation. It also recommends that healthcare institutions initiate targeted programs to develop their leaders' transformational leadership characteristics.

Key Words: Nursing leadership, Leadership styles, Transformational, Critical care, Inpatient

1. INTRODUCTION

Leadership's profound influence in the healthcare sector is indisputable, especially due to its ripple effect on all tiers of hospital staff, with nurses at the forefront. Nursing, which is central to patient safety and ensuring quality care, is a profession deeply rooted in human interaction, making leadership an essential competency for nurses across all levels of the hierarchy.^[1] Leadership encompasses the capacity to

influence followers by offering direction, inspiration, and supervision, thereby contributing to productive organizational achievement.^[2] The leadership approaches embraced by nurse managers were shown to play a crucial role in fostering an empowered and satisfied nursing workforce which also contributes significantly to bolstering nurse retention.^[3] When encouraged and given authority by effective nursing leaders to pursue individual or team objectives, nurses have

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been shown to be highly driven, knowledgeable, more inclined to adopt evidence-based practices, and more committed to the institution's objectives.^[1] These factors are in turn intrinsically linked to the quality of patient care, underscoring the pivotal role of effective leadership in ensuring positive healthcare outcomes.^[4]

Comprehensive studies within numerous healthcare institutions have delved into the nursing leadership styles, drawing insights from the perspectives of both nursing leaders and their staff. Notably, some of this research has specifically investigated scenarios within healthcare settings in Saudi Arabia,^[5-10] while further insights have been contributed by a variety of global studies.^[11-17] Among the various leadership styles, transformational leadership stands out as one of the most highly valued leadership patterns in the realm of nursing management^[4] due to its capacity to foster and amplify nurses' inherent professional traits. The term transformational leadership, initially introduced by James MacGregor Burns, encapsulates a leadership approach where leaders and their followers synergistically elevate each other to advanced levels of drive and ethical standards. Burns's seminal work in 1978^[18] revolutionized the understanding of leadership dynamics, highlighting the benefits of symbiotic leader-follower relationships in organizational settings.

Transformational leadership is often identified as the dominant style in various studies. Yet, a deviation from this is noted in other research narratives, where a preference for transactional methods surfaces among Italian nursing leaders, which adversely affected the job satisfaction levels of staff nurses.^[12] This spectrum of leadership styles extends to include a mix of transformational and transactional strategies in other studies.^[7,8] In a notable contrast within the USA, staff nurses perceive their nurse managers to exhibit lower levels of both transformational and transactional leadership traits than what is typically observed at national levels in a magnet hospital.^[11]

The contrasting findings of leadership styles in Hail's healthcare sector, as reported by Albagawi in 2019 and Al-Shammari in 2014, suggest a potential evolution in management approaches over five years. Albagawi^[9] discovered that nurses perceived their leaders' style as transformational, a view that was consistent with the leaders' self-perceptions, suggesting alignment in leadership practices and awareness. In contrast, the earlier study by Al-Shammari^[10] pointed to a predominance of laissez-faire leadership, despite this, transformational leadership stood out as being effective. These differences raise the question of whether the shift towards transformational leadership witnessed in the latter study reflects a deliberate change in leadership strategies over time,

potentially influenced by shifting perceptions and expectations among nursing staff.

Several studies from Saudi Arabia, Pakistan, Ethiopia, USA, Indonesia, and Greece have indicated a strong inclination among nursing personnel towards leaders who primarily demonstrate transformational leadership qualities.^[5,8,13,15] This leadership paradigm not only significantly bolsters nurse job satisfaction but also instils a robust propensity among staff to go beyond their conventional duties. Predominantly, these studies have revealed a positive relationship between transformational leadership and nurses' enhanced job satisfaction, organizational commitment and quality of work life^[5-8,10,14-16,19,20]. However, it is worth noting that transactional leadership has also received recognition for its positive resonance with job satisfaction in various countries, albeit to a lesser extent.^[8,12,21]

Despite the contrasting findings across various research endeavors, it remains evident that distinct leadership styles wield unique influences on various aspects of nursing management and practice. This observation underscores the rationale behind some researchers' call for the adoption of diverse leadership styles to achieve specific healthcare outcomes.^[22] Furthermore, recognizing the dynamic interplay between leadership styles and the contextual factors inherent to different healthcare settings is imperative. As such, adapting and tailoring leadership styles to align with the specific contextual nuances of healthcare organizations is strongly recommended, as this can substantially enhance the effectiveness of leadership within these diverse healthcare environments.

The purpose of this study is to explore the dominant nursing leadership style of nurse managers in Hail city as perceived by their nursing staff. Additionally, the study examines the impact of leadership behaviors on organizational outcomes, such as leader effectiveness, employee satisfaction and staff willingness to put in extra effort.

Conceptual framework

The conceptual framework is based on the Full Range of Leadership model introduced by Avolio and Bass.^[23] This model presents a comprehensive view of leadership that encompasses the three primary styles of transformational, transactional, and laissez-faire leadership.

Transformational leadership, which involves leaders inspiring change, innovation, and personal development within their teams, is known for its positive influence on team performance and satisfaction. Key aspects include leaders' charismatic appeal (idealized influence), ability to motivate (inspirational motivation), encouragement of creativity (in-

tellectual stimulation), and support for individual needs (individual consideration).^[24]

Transactional leadership is more structured, with leaders providing clear expectations and using rewards or penalties to encourage performance. This approach is often effective for achieving specific tasks or goals, but it may not encourage effort that goes beyond the call of duty.^[25]

Laissez-faire leadership is marked by a general absence of direct leadership. Leaders provide substantial autonomy, which can be beneficial for highly skilled professionals but may lead to lower cohesion and productivity if team members lack self-direction.^[25]

Each style has a specific context for effectiveness and can profoundly impact various organizational outcomes, including employee productivity, job satisfaction, and organizational commitment.

2. METHODS

2.1 Design

The study utilized a cross-sectional correlational design to explore the dominant nursing leadership style as perceived by nurses in public hospitals in Hail city. Data were collected between April and September 2020.

2.2 Setting

Four public hospitals were randomly selected from seven hospitals inside Hail city, namely King Khalid Hospital (KKH), Hail General Hospital (HGH), King Salman Specialist Hospital (KSSH), and Maternity and Children's Hospital (MCH). The hospitals chosen for this study are established tertiary medical facilities, each with a capacity ranging from around 200 to 300 beds.

2.3 Sampling

Regarding the study's demographics, out of a total of 677 nurses, a sample of 372 individuals, representing 57.6%, participated in the research. The required sample size was determined to be 385, calculated using the equation 1, as outlined by Pourhoseingholi.^[26]

$$\frac{z^2 P(1 - P)}{d^2} \quad (1)$$

The assumption regarding the proportion of nursing leadership style is set to 50%, with a 95% confidence interval and a 5% marginal error. The collected 372 completed surveys provide a substantial representation of the target population,

nearly meeting the anticipated sample size and thus ensuring a solid data foundation for the research.

The sampling strategy employed non-probability convenience sampling. Inclusion criteria were nursing personnel present during the day shift at the time of data collection, specifically those serving in critical care units and inpatient wards, thereby excluding nurses stationed in other settings. Participants were asked to voluntarily complete an anonymous self-reported web-based questionnaire.

2.4 Data collection

The survey instrument was meticulously structured into two sections: the initial part capturing the demographic details such as gender, age, years of experience, and nationality, distinguishing between Saudi or international (non-Saudi) participants. The following segment employing the Multifactor Leadership Questionnaire (MLQ) — a nuanced tool formulated by Bass and Avolio.^[27] The MLQ is designed to disentangle and understand leadership dynamics, focusing on nine specific styles categorized within the overarching themes of the transactional, transformational, and laissez-faire leadership frameworks. This detailed 45-item questionnaire utilizes a five-point Likert scale, extending from 0 ("Not at all") to 4 ("Frequently, if not always"), to gauge the regularity of certain leader behaviors and actions as perceived by the respondents. The reliability of the scale is confirmed by its Cronbach's alpha of 0.85.

2.5 Ethical considerations

The study was approved by the Research Ethics Committee at the University of Hail dated 24/2/2020, approval number Nr 40006. Informed consents were obtained from all nurses involved in the study and pre-study information sheets were provided.

2.6 Data analysis

Data analysis was performed using IBM SPSS Statistics 25, summarizing the leadership aspects with mean, median, and standard deviation metrics. Simple linear regression was used to probe the relationship between leadership styles and specific outcomes, while correlation coefficients analyzed the ties between leadership behaviors and styles.

3. RESULTS

In a survey of 372 nurses from Hail City's main public hospitals, the majority (70.4%) were under 35 and female (88.2%), and nearly half (45.7%) had 1-2 years of clinical experience, as detailed in Table 1.

Table 1. Demographical characteristics and leadership styles among nurses in Hail hospitals 2020 (n = 372)

Variables	N (%)	Transformational						
		Transformational	Transactional	Idealized attributes	Idealized behaviors	Inspiration motivation	Intellectual stimulation	Individual consideration
		Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Total	372 (100)	2.56 ± 0.75	2.27 ± 0.68***	2.57 ± 0.87	2.53 ± 0.79	2.63 ± 0.87	2.53 ± 0.82	2.55 ± 0.86
Age group								
< 35 years	262 (70.4)	2.53 ± 0.76 ^{ns}	2.26 ± 0.68 ^{ns}	2.54 ± 0.89 ^{ns}	2.49 ± 0.79 ^{ns}	2.61 ± 0.85 ^{ns}	2.48 ± 0.84 ^{ns}	2.53 ± 0.89 ^{ns}
35-40 years	93 (25.0)	2.63 ± 0.73	2.29 ± 0.63	2.66 ± 0.82	2.59 ± 0.77	2.63 ± 0.91	2.68 ± 0.76	2.58 ± 0.80
40 years	17 (4.6)	2.70 ± 0.74	2.34 ± 0.82	2.34 ± 0.82	2.69 ± 0.78	2.87 ± 0.75	2.54 ± 0.87	2.60 ± 0.86
Gender								
Male	44 (11.8)	2.86 ± 0.59**	2.60 ± 0.53**	2.91 ± 0.67**	2.78 ± 0.67 [†]	2.91 ± 0.68 [†]	2.80 ± 0.78 [†]	2.86 ± 0.67**
Female	328 (88.2)	2.52 ± 0.76	2.23 ± 0.67	2.53 ± 0.89	2.50 ± 0.79	2.60 ± 0.88	2.49 ± 0.82	2.50 ± 0.87
Nationality								
Saudi	179 (48.1)	2.72 ± 0.78***	2.4 ± 0.67***	2.81 ± 0.88***	2.61 ± 0.81 ^{ns}	2.79 ± 0.91***	2.71 ± 0.82***	2.67 ± 0.90**
Non-Saudi	193 (51.9)	2.42 ± 0.69 [†]	2.15 ± 0.66	2.35 ± 0.80	2.46 ± 0.76	2.47 ± 0.79	2.36 ± 0.78	2.43 ± 0.81
Experience								
≤ 1 year	90 (24.2)	2.69 ± 0.85 [†]	2.28 ± 0.68 ^{ns}	2.69 ± 0.99 [†]	2.62 ± 0.86 ^{ns}	2.83 ± 0.94 [†]	2.61 ± 0.96 [†]	2.69 ± 0.95 ^{ns}
2-5 years	170 (45.7)	2.44 ± 0.73	2.22 ± .65	2.43 ± 0.84	2.44 ± 0.76	2.50 ± 0.81	2.39 ± 0.77	2.44 ± 0.84
6-10 years	73 (19.6)	2.65 ± 0.65	2.32 ± 0.68	2.71 ± 0.74	2.54 ± 0.71	2.67 ± 0.81	2.71 ± 0.71	2.62 ± 0.76
10 years	39 (10.5)	2.62 ± 0.79	2.41 ± 0.76	2.65 ± 0.91	2.71 ± 0.81	2.63 ± 0.94	2.59 ± 0.83	2.50 ± 0.90
Hospital								
King Khalid	98 (26.3)	2.51 ± 0.65 ^{ns}	2.21 ± 0.58 ^{ns}	2.57 ± 0.77 ^{ns}	2.41 ± 0.58 ^{ns}	2.62 ± 0.82 ^{ns}	2.41 ± 0.74 ^{ns}	2.52 ± 0.78 ^{ns}
Hail General	97 (26.2)	2.67 ± 0.82	2.35 ± 0.75	2.69 ± 0.97	2.65 ± 0.91	2.72 ± 0.91	2.71 ± 0.85	2.59 ± 0.90
Maternity & Children	107 (28.8)	2.54 ± 0.77	2.35 ± 0.67	2.55 ± 0.88	2.54 ± 0.76	2.57 ± 0.88	2.50 ± 0.83	2.53 ± 0.89
King Salman	70 (18.8)	2.52 ± 0.78	2.14 ± 0.69	2.43 ± 0.84	2.53 ± 0.87	2.59 ± 0.85	2.49 ± 0.84	2.54 ± 0.88

Note. Symbols show the level of statistical significance: ns > .05; [†] < .05; ** < .01 *** < .001.

Table 2. Correlation between leadership behavior and leadership outcomes among nurses in Hail hospitals 2020 (n = 372)

Leadership style	Leadership outcome		
	Extra effort, β	Effectiveness, β	Satisfaction, β
Transformational	0.786***	0.828***	0.760***
Transformational (Attributes)	0.661***	0.718***	0.656***
Transformational (Behaviors)	0.715***	0.729***	0.674***
Transformational (Inspirational motivation)	0.743***	0.776***	0.734***
Transformational (Intellectual stimulation)	0.681***	0.721***	0.665***
Transformational (Individual consideration)	0.719***	0.764***	0.669***
Transactional	0.565***	0.595***	0.551***
Transactional (Contingent reward)	0.641***	0.702***	0.692***
Transactional (Active)	0.546***	0.585***	0.556***
Transactional (Passive)	0.329***	0.332***	0.287***
Laissez-Faire	0.247***	0.243***	0.195***

Note. Symbols reveal the level of statistical significance: β = correlation coefficient; *** < .001

Table 3. Simple linear regression between leadership style and outcomes among nurses in Hail hospitals 2020 (n = 372)

Leadership outcome	Leadership style									
	Transformation					Transactional				
	R	R ²	β	F	p	R	R ²	β	F	p
Extra effort	0.786	0.617	0.94	596.8	< .001	0.57	0.32	0.75	173.5	< .001
Effectiveness	0.83	0.69	1.02	807.6	< .001	0.59	0.36	0.82	203.2	< .001
Satisfaction	0.76	0.58	0.96	506.5	< .001	0.55	0.31	0.77	161.4	< .001

Note. R = correlation coefficient; β = coefficient

A comparison of leadership styles reveals an overall higher average score for transformational leadership (2.56 ± 0.75) versus transactional leadership (2.27 ± 0.68), suggesting a preference for or greater alignment with transformational qualities among the participants leaders ($p < .001$). Notably, the perception of transformational leadership was more pronounced among males, Saudi nationals, and those with less than one year of experience. Meanwhile, transactional leadership scores were markedly higher among the male and Saudi participants ($p < .01$) compared to their female and non-Saudi counterparts.

Dissecting the transformational leadership components, we see that the perception among males outperformed females in categories like idealized attributes and behaviors, inspirational motivation, intellectual stimulation, and individualized consideration, as evidenced by the higher mean scores ($p < .05$). Similarly, Saudi participants scored higher in these components compared to their non-Saudi counterparts ($p < .05$), as shown in Table 1.

Table 2 presents a robust correlation between transformational leadership and positive leadership outcomes (effectiveness, extra effort, satisfaction), with R^2 values of 0.828, 0.786, and 0.760, respectively, overshadowing those of the transactional and laissez-faire styles. Within the transformational framework, inspirational motivation emerges as the most potent component, correlating strongly with positive outcomes. Conversely, transactional leadership, though less influential than transformational methods, still maintains a stronger relationship with positive outcomes than laissez-faire approaches ($p < .001$).

Table 3 synthesizes the impact of leadership styles on various outcomes through linear regression analysis. Transformational leadership explains a significant proportion of positive outcomes, accounting for 69% of effectiveness, 61.7% of extra effort, and 58% of participant satisfaction. In comparison, the influence of transactional leadership is discernible but less pronounced, contributing to 36% of effectiveness, 32% of extra effort, and 31% of participant satisfaction.

4. DISCUSSION

The study's findings shed light on the prevailing leadership styles among nurse managers. It emerged that a predominant transformational leadership style was prevalent, with transactional leadership following as the next most common approach. This discovery aligns with similar studies in Saudi Arabia and Ethiopia,^[9, 17, 28] in which the consensus among staff nurses is that they are primarily led by transformational and transactional leaders.

In terms of leadership outcomes, this study yielded noteworthy results. Nurses reported high levels of job satisfaction,

perceived their leaders as effective, and felt motivated to exert extra effort when they were exposed to a transformational leadership style. These findings are consistent with multiple studies from Saudi Arabia, Pakistan, and the USA.^[5-8, 10, 14-16, 28] For instance, Choi's^[29] research indicated that job satisfaction among nurses increases with transformational leadership, mainly due to its empowering effects. Suratno et al.^[20] also underscored how transformational leadership improves nurses' quality of work life, resulting in enhanced work quality, employee well-being, and work relationships. Furthermore, transformational leadership was found to be inversely related to the intention of employees to leave the organization.^[30] Moreover, nurse managers' adoption of transformational leadership styles empowers staff nurses to act as catalysts of positive change within their healthcare settings. Underscoring the significance of transformational leadership in the healthcare context, particularly in the provision of high-quality nursing care.^[3]

The study emphasizes the integral role of transformational leadership components, such as idealized behaviors, attributes, and inspirational motivation, in shaping effective nursing leadership, with Bass and Avolio^[27] highlighting the influential power of a leader's charisma in guiding team actions. In fact, inspiring leadership has been found to be correlated with nurses' reports of fewer work issues and improved team satisfaction.^[31] Furthermore, the cruciality of robust nursing performance in sustaining effective nursing leadership^[32] necessitates that nurse leaders adopt practices that enhance intrinsic motivation and overall performance in their teams. As shown by Cummings et al.,^[3] these leadership approaches are essential in steering individual and organizational goals, thereby contributing to enhanced healthcare quality. By fostering a culture of inspiration and high performance, nurse leaders can significantly influence broader institutional success, driving superior patient care through their leadership styles.

Limitations

This study has several limitations. First, it uses self-reported data, potentially leading to bias, while its cross-sectional nature prevents the determination of causality. In addition, its focus on specific nursing departments in Hail, Saudi Arabia, restricts the findings' applicability. Despite these issues, the research provides important insights into healthcare leadership, underscoring the critical role of cultivating effective leadership styles among nurse leaders.

5. CONCLUSIONS

This study highlights transformational leadership's critical importance in healthcare. Therefore, nurse leaders are urged

to adopt this approach by concentrating on motivational strategies. Such strategies, which have been proven to amplify commitment and satisfaction among staff, are vital in the demanding healthcare sector. This further asserts the need for healthcare facilities to implement specific programs aimed at nurturing transformational traits within their leadership cadre, acknowledging the substantial impact that these qualities have on staff enthusiasm and institutional excellence. By establishing a culture of inspiration and high performance, this approach can become instrumental in enhancing healthcare outcomes, confirming that the heart of superior care lies in empowering leadership.

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AUTHORS CONTRIBUTIONS

All authors contributed equally to the research.

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The authors declare they have no conflicts of interest.

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No additional data are available.

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CONFLICTS OF INTEREST DISCLOSURE

The authors declare they have no conflicts of interest.

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