

The influence of nursing leaders' behavior on nurses' job satisfaction: A quantitative study in Hail, Saudi Arabia

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ABSTRACT

This cross-sectional quantitative study investigates the intricate relationships between the demographic characteristics of nurses and their perceptions of leader behavior and job satisfaction within the healthcare context of Hail, Saudi Arabia. The primary aim is to establish the pertinence of nursing leaders' behaviors in shaping the perceptions and job satisfaction levels of nursing professionals. A sample of 716 nurses was selected using a simple random sampling method, with participants completing questionnaires administered through online software. Two validated instruments were employed: the 19-item Leadership Behavior Description Questionnaire (LBDQ), exhibiting excellent reliability (Cronbach's alpha of 0.955), and the 20-item Minnesota Satisfaction Questionnaire (MSQ), also demonstrating excellent reliability (Cronbach's alpha of 0.968). Results indicate a moderate level of job satisfaction with a significant association observed with respect to age. However, nurses' perceptions of nursing leaders' behaviors did not exhibit significant variations concerning age, education, or experience. Similarly, no substantial correlations were found between job satisfaction, experience, and education. These findings align with previous studies, emphasizing that job satisfaction is primarily contingent on a supportive work environment rather than organizational structure or nursing care delivery models. Consequently, the behavior of leaders towards their staff emerges as a crucial determinant of staff satisfaction, offering a substantial solution for staff retention and fostering a positive work culture. Such improvements can enhance staff competence, skills, and overall quality, ultimately ensuring the provision of safe patient care.

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1. Introduction

Leadership constitutes an indispensable facet of the managerial domain. It is regarded as the art of discipline, wherein leaders assume the pivotal role of guiding, motivating, directing, and inspiring their staff, fostering collective commitment towards shared objectives aimed at realizing the overarching organizational goals. Leaders play a pivotal role in steering organizations towards success; consequently, the imperative consideration lies in ensuring that employees derive fulfillment and

reward from their roles (Al Khajeh, 2018). The interconnectedness of leadership style and management with job satisfaction bears profound ramifications on performance, care quality, and patient safety (Moneke and Umeh, 2013).

Recent scholarship on job satisfaction underscores its manifold advantages, encompassing heightened employee engagement, which, in turn, begets increased loyalty, profitability, productivity, and mitigated employee turnover. Beyond job satisfaction, the style of leadership wields substantial influence over nurses' satisfaction, turnover rates, and, significantly, their impact on the delivery of patient care (Saleh et al., 2018).

Consequently, this study endeavors to elucidate nurses' perspectives concerning the leadership styles and behaviors exhibited by nurse managers within the Hail Cluster. Additionally, it seeks to scrutinize how the leadership practices of health

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cluster leaders in Hail exert an influence on nurses' job satisfaction, contingent upon various variables.

While diverse definitions of leadership abound, it is generally construed as the skill set of an individual who, through effective interaction and communication with employees, attains organizational goals. It manifests as a multidimensional phenomenon, underpinned by a spectrum of traits, and organically emerges through a fusion of rationality and change management practices, harmoniously aligned across distinct organizational echelons (Iannotta et al., 2020).

Nursing managers who demonstrate strong commitment are important in today's healthcare environment, which has been experiencing unprecedented reform. Nursing leadership demands convincing and effective communication, which includes the need for complete self and social awareness. Unlike past leadership demands for stabilization and growth, today's managers and leaders must metamorphose their organizations' values, beliefs, and behaviors. Nursing leaders are responsible for creating an environment that supports professional and career development among the nursing workforce (Weston, 2022). Çalışkan (2010) noted that the integral benefit of developing leaders is that they drive success to improve financial performance, develop and retain talent, direct strategy execution, and boost success when operating change.

Different types of leadership theories have been proposed, such as great-man theory, trait theory, contingency theory, style and behavior theory, process leadership theory, transactional theory, and transformational theory. These describe the particular effects of different leadership styles, such as the autocratic and democratic styles of leadership. There are certain aspects of the democratic type of leadership; for example, employees tend to have a higher degree of satisfaction, creativity, and motivation and work with enthusiasm with minimal supervision (Nawaz and Khan, 2016). On the other hand, autocratic leaders focus only on the quantity of output of each employee. In accordance with the Path-Goal Theory of leadership, it is posited that the satisfaction, motivation, and performance of team members are intricately influenced by the attributes and conduct of a leader. This theoretical framework underscores the imperative of elevating both staff performance and satisfaction, with an optimal focus on bolstering staff motivation. In contrast, the Situational Leadership Approach directs its attention towards the dynamics of specific situational contexts. In contrast to the Contingency Approach, where the leader's behavior is contingent upon the evaluation or effectiveness of their leadership style, the Situational Leadership Approach considers multifaceted aspects. These encompass the nuanced interplay of the leader-employee relationship, the structural characteristics of tasks, and the delineation of power within the organizational hierarchy (Grimm, 2010). Various nurse managers have demonstrated diverse leadership styles across

different hospital and clinical contexts, encompassing their roles in guiding healthcare personnel. Within the realm of healthcare settings and administration, Transactional and Transformational leadership styles have been acknowledged as optimal approaches, a viewpoint echoed by numerous nurse leaders and managers (Negussie and Demissie, 2013). Transactional leadership is characterized by its endeavors to cultivate and sustain organizational culture while motivating employees to diligently pursue established goals. It entails the allocation of rewards commensurate with individual effort and performance (Xenikou, 2017). This leadership style motivates followers to comprehend and execute their responsibilities with a focus on rules, duties, aspirations, and strengths, thereby mitigating errors and adhering to current or temporary plans (Hamstra et al., 2014). Conversely, Transformational leaders galvanize their followers by sharing a compelling vision and leveraging goals as motivational tools. They inspire the workforce to challenge conventional perspectives, fostering independence. Moreover, a transformational leader embodies directness, integrity, and an unwavering commitment to profoundly influencing their advocates (Lin et al., 2015).

The term "job" is delineated as a position that an individual occupies through an employment contract (Lazear and Oyer, 2004). Within the realm of human resource management, it constitutes the most extensively examined domain. Job satisfaction, construed as a favorable emotional state stemming from one's job assessment, occupies a central position in this context (Čulibrk et al., 2018). Job satisfaction manifests through two principal dimensions: affective and cognitive. Affective work satisfaction pertains to an individual's holistic positive emotional response to their occupational engagement. Meanwhile, cognitive job satisfaction encompasses employees' sentiments concerning specific facets of their job, encompassing financial remuneration, salary, working hours, perks, and benefits. Examining the correlation between nursing leadership styles and job satisfaction, as indicated by prior research, can offer viable solutions to enhance nurse job satisfaction and retention rates. It is incumbent upon nursing leaders to comprehensively comprehend and esteem the viewpoints of nurses. This becomes especially crucial in light of the prevailing presence of millennial nurses within the workforce, a demographic known to exhibit lower levels of job satisfaction in comparison to other generational cohorts (Waltz et al., 2020). Among the many factors of job satisfaction is well established in numerous studies which were found to be work environment, intention to leave, and burnout (Nantsupawat et al., 2017).

2. Methods

This study employed a descriptive, cross-sectional quantitative design to collect data

pertaining to nurse manager behaviors and nurse job satisfaction, as perceived by nurses. The research aimed to investigate the associations between these two variables. The study participants comprised nurses working in primary healthcare centers and government hospitals under the Ministry of Health, situated within the Northern Region of the Kingdom of Saudi Arabia.

To ensure the validity and relevance of the study outcomes, a sample size of 335 was determined using the Raosoft sample size calculator. This calculation was conducted with a 5% margin of error and a 95% confidence level. A simple random sampling technique was adopted, affording nurses an equal opportunity to partake in the survey via social media channels. Collaboration with the director of nursing and the nursing quality supervisor of the head nurses of the hospital facilitated the distribution of the questionnaire. Nurses were encouraged to complete the questionnaire voluntarily, and the study's inclusion and exclusion criteria were elucidated.

Inclusion criteria necessitated that respondents meet the following conditions: (a) employment as nurses in a Ministry of Health hospital within the Hail Health Cluster and Primary Health Care Center, (b) a minimum of 1 year of clinical experience, and (c) proficiency in reading and comprehending English. Exclusion criteria encompassed (a) individuals holding managerial positions such as charge nurse or head nurse, (b) newly hired nurses with less than 1 year of experience in the current hospital, and (c) non-operational nurses (those working outside the purview of nursing administration). The data collection instrument comprised a questionnaire divided into three sections: Demographic profile, leadership behavior, and job satisfaction. The first section encompassed five demographic items: Age, nationality, gender, and years of experience. To assess nurses' perceptions of their managers' leadership styles, the researchers obtained permission from the Fisher College of Business at Ohio State University Columbus to utilize the Leadership Behavior Description Questionnaire (LBDQ). The questionnaire was subsequently adapted to suit the research context, and a pilot study involving 30 individuals was conducted to ascertain the instrument's practicality, feasibility, and efficacy. It consisted of 19 closed-ended questions employing a 5-point Likert scale, and its reliability was confirmed with a Cronbach's alpha of 0.955. Respondents were instructed to use the scale to depict their level of agreement with the specified behaviors in accordance with the LBDQ Manual.

The third section of the questionnaire gauged nurses' job satisfaction in their workplace. This measurement was conducted using the short-form Minnesota Satisfaction Questionnaire (MSQ), comprising 20 closed-ended questions on a 5-point Likert Scale. Its reliability was established with a Cronbach's alpha of 0.91. The questionnaire aimed to capture the sentiments and satisfaction levels of participants concerning their current employment.

2.1. Ethical considerations

The study was approved by the Ethical Approval Committee from the Research Department at Hail Health Cluster No. 2022-74. An electronic platform was used to gather the data in coordination with the Directors of Nursing of the Hail Health Cluster, where a proper channel of communication was established. The respondents were assured of anonymity and privacy and that their personal information would be kept confidential. The questionnaire's instruction included the statement that answering the questions reflects voluntary participation in the survey.

3. Data analysis and research results

Following data collection, rigorous procedures were undertaken to ensure data quality. The collected raw data underwent a meticulous process that included verification, cleansing, editing, and subsequent analysis. Statistical analyses were conducted using SPSS software, specifically version 25. To comprehensively describe the characteristics of the respondents, essential statistical measures were employed, including frequencies, percentages, means, and standard deviations.

To assess the statistical significance of disparities in responses among the participants, appropriate statistical tests were utilized. Specifically, the Kruskal-Wallis test and the Mann-Whitney test were applied where relevant. Moreover, Spearman correlation analysis was employed to explore the associations between job satisfaction and nurses' perceptions of leadership. The threshold for statistical significance was established at a P-value of less than 0.05.

Table 1 provides a comprehensive overview of the participant demographics. The total sample size comprised 716 respondents. Among these, female non-Saudi individuals constituted the majority, accounting for 54.3% of the sample. Regarding the age distribution of respondents, 48.3% fell within the 30-39 years age group, while 31.7% were aged between 25-29 years. Additionally, 9.2% were younger than 25 years, and 10.8% were aged 40 years or older. In terms of educational qualifications, the majority of respondents held bachelor's degrees (81.3%), and 16.2% possessed diplomas. In the context of work experience, nearly half of the participants had accumulated more than 6 years of experience (48.2%), while 26.5% had worked as nurses for 3-6 years, and 25.3% had 1-3 years of experience.

3.1. Reliability test via Cronbach's alpha

To assess the reliability of the questionnaire, Cronbach's alpha, a commonly used measure, was employed. Cronbach's alpha values typically fall within the range of 0.0 to 1.0, with higher values indicating greater reliability. To ensure the

questionnaire's reliability, a pilot sample consisting of 30 experts was deliberately selected. Their valuable feedback was instrumental in enhancing and refining the research process. The outcomes of the reliability assessment are presented in [Table 2](#).

[Table 2](#) provides a comprehensive overview of the reliability testing conducted using Cronbach's alpha for each scale within the questionnaire. Specifically, the reliability coefficient for the first scale, which assessed nurses' perceptions of leadership, yielded a score of 0.955. For the second scale, focusing on job satisfaction, the reliability coefficient was 0.968. Notably, the overall reliability of the questionnaire reached a commendable value of 0.970. These results highlight the robust reliability of the questionnaire. All reliability coefficients surpass the substantial threshold of 0.90, underscoring the questionnaire's reliability. Consequently, we can confidently affirm that the final version of the questionnaire demonstrated a remarkably high level of reliability.

4. Findings

Participants answered this part using a 5-point Likert-type scale: Very Dissatisfied=1, Dissatisfied=2, Neutral=3, Satisfied=4, and Very Satisfied=5. The range from 1 to 5 was classified into three subscales: Mean scores ranging from 1.00 to .33 represented low satisfaction; mean scores ranging from 2.34 to 3.66 represented moderate satisfaction; and mean scores above 3.66 represented high satisfaction. A descriptive statistical analysis of the means, standard deviations, and percentages was used to analyze this scale.

Table 1: Demographic characteristics of the participants

Variable	N (716)	%
Gender		
Male	82	11.5
Female	634	88.5
Nationality		
Saudi	327	45.7
Non-Saudi	389	54.3
Age		
<25 years	66	9.2
25-29 years	227	31.7
30-39 years	346	48.3
≥ 40 years	77	10.8
Education		
Diploma	116	16.2
Bachelor	582	81.3
Post-Graduate	18	2.5
Experience		
1-3 years	181	25.3
>3-6 years	190	26.5
>6 years	345	48.2

Table 2: Reliability test using Cronbach's alpha

Scale	No. of items	Cronbach's alpha
Nurses leadership perception	19	0.955
Job satisfaction	20	0.968
Questionnaire	39	0.970

The mean of the sample's job satisfaction was ranked from the most satisfied to the least satisfied. As shown in [Table 3](#), the score for satisfaction was on one level (moderate), where the item with the most satisfaction was item (10) (M=3.46), indicating a moderate level of satisfaction with this statement; item (11) came in second (M=3.40), indicating a moderate level of satisfaction with this statement. The final thing was item (14) (M=3.05). The overall mean (M=3.26) indicated a moderate level of satisfaction with the content of the scale.

Table 3: Percentage, means, and standard deviations of nurses' job satisfaction

No	Item	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied	M	SD	Rank	Level
1	Being able to keep busy all the time	11.0	10.3	40.2	25.7	12.7	3.19	1.130	15	Moderate
2	The chance to work alone on the job	11.0	15.4	35.1	27.7	10.9	3.12	1.138	18	Moderate
3	The chance to do different things from time to time	7.4	12.6	37.8	30.6	11.6	3.26	1.060	11	Moderate
4	The chance to be somebody in the community	7.3	11.6	39.0	29.3	12.8	3.29	1.064	10	Moderate
5	The way my boss handles his/her workers	7.8	11.7	34.1	29.7	16.6	3.36	1.126	5	Moderate
6	The competence of my superior in making decisions	8.1	12.3	33.9	30.7	14.9	3.32	1.118	6	Moderate
7	Being able to do things that don't go against my conscience	7.1	10.5	39.1	30.7	12.6	3.31	1.051	7	Moderate
8	The way my job provides for steady employment	7.3	10.6	39.0	31.1	12.0	3.30	1.049	8	Moderate
9	The chance to do things for other people	5.4	9.2	35.2	34.6	15.5	3.46	1.035	1	Moderate
10	The chance to tell people what to do	6.0	9.1	37.6	33.4	14.0	3.40	1.031	2	Moderate
11	The chance to do something that makes use of my abilities	7.0	10.5	33.1	34.1	15.4	3.40	1.085	3	Moderate
12	The way hospital policies are put into practice	9.8	14.1	35.8	28.4	12.0	3.19	1.124	14	Moderate
13	My pay and the amount of work I do	13.8	15.9	33.5	25.1	11.6	3.05	1.195	20	Moderate
14	The chances for advancement on this job	8.8	11.6	37.3	30.7	11.6	3.25	1.086	12	Moderate
15	The freedom to use my own judgement.	10.8	11.9	40.5	26.8	10.1	3.14	1.097	17	Moderate
16	The chance to try my own methods of doing the job	9.1	13.1	40.5	26.8	10.5	3.16	1.075	16	Moderate
17	The working conditions	12.0	16.2	32.5	26.5	12.7	3.12	1.185	19	Moderate
18	The way my co-workers get along with each other	7.3	10.6	33.5	32.8	15.8	3.39	1.097	4	Moderate
19	The praise I get for doing a good job	10.2	13.5	34.6	27.1	14.5	3.22	1.161	13	Moderate
20	The feeling of accomplishment I get from the job	9.2	11.3	35.6	27.8	16.1	3.30	1.146	9	Moderate
	Overall	9.8	20.4	26.4	18.9	24.5	3.26	0.858		Moderate

4.1. The level of nurses' leadership perception

The participants answered this part by measuring their level of agreeability which includes: Strongly disagree, disagree, neutral, agree, and strongly agree. The range from 1 to 5 was classified into three subscales: Mean scores ranging from 1.00 to 2.33 represented low satisfaction; mean scores ranging from 2.34 to 3.66 represented moderate satisfaction; and mean scores above 3.66 represented high satisfaction. A descriptive statistical analysis of means, standard deviations, and percentages was used to analyze this scale. The mean of the level of the sampled nurses' leadership perception was ranked from the most satisfied to the least satisfied. As shown in Table 4, the score of nurses' leadership perception was on one level (moderate), where the item with the most satisfaction was Q. No. 17 and 28 (M=3.52), indicating a moderate level of satisfaction with this statement. Q. No. 19 came in second

(M=3.49), indicating a moderate level of satisfaction with this statement. The final item was Q. No. 11 (M=2.65). The overall mean (M=3.28) indicated a moderate level of satisfaction with the content of the scale.

4.2. Mean rank of job satisfaction and nurses' leadership perception

The mean rank of job satisfaction and nurses' leadership perception regarding demographic characteristics: Before selecting the appropriate statistical method to analyze the study data, the researcher checked the normality of the data distribution via the Kolmogorov-Smirnov test. The result showed that the data did not follow a normal distribution, and therefore non-parametric methods were used (Table 5).

Table 4: Percentage, means, and standard deviations of degree of nurses' leadership perception

No	Item	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	M	SD	Rank	Level
Consideration scale	1 He does personal favors for group members	15.5	20.1	28.1	15.6	20.7	3.06	1.343	15	Moderate
	3 He does little things to make it pleasant to be a member of the group	8.4	21.4	31.3	18.3	20.7	3.22	1.231	14	Moderate
	8 He finds time to listen to group members	6.3	18.7	25.3	16.5	33.2	3.52	1.292	2	Moderate
	13 He looks out for the personal welfare of individual group members	9.2	20.0	28.5	19.3	23.0	3.27	1.270	13	Moderate
	23 He treats his group members as his equals	9.2	18.4	25.6	18.2	28.6	3.39	1.317	11	Moderate
	26 He is willing to make changes	5.9	17.5	28.1	19.7	28.9	3.48	1.237	5	Moderate
	28 He is friendly and approachable	5.4	19.6	24.6	18.7	31.7	3.52	1.266	1	Moderate
	31 He makes group members feel at ease when talking with them	6.0	19.3	25.4	19.6	29.7	3.48	1.262	6	Moderate
	34 He puts suggestions made by the group into operation	6.8	19.4	25.1	21.8	26.8	3.42	1.258	9	Moderate
	11 He refuses to explain his actions	25.8	22.9	24.6	13.7	13.0	2.65	1.341	19	Moderate
Initiating scale	20 He tries out his new ideas with the group	6.1	20.7	29.7	20.1	23.3	3.34	1.214	12	Moderate
	4 He acts without consulting the group	22.6	24.9	24.4	13.8	14.2	2.72	1.337	18	Moderate
	7 He rules with an iron hand	16.2	22.2	28.5	16.2	16.9	2.95	1.307	16	Moderate
	9 He criticizes poor work	16.9	22.3	27.0	18.6	15.2	2.93	1.301	17	Moderate
	14 He assigns group members to particular tasks and makes sure they understand their role	5.6	18.9	25.1	23.0	27.4	3.48	1.229	7	Moderate
	16 He schedules the work to be done	4.6	19.8	23.6	23.3	28.6	3.52	1.224	3	Moderate
	17 He maintains definite standards of performance	5.2	20.0	25.3	21.8	27.8	3.47	1.232	8	Moderate
	35 He sees to it that group members are working at capacity	4.9	21.4	26.7	21.2	25.8	3.42	1.218	10	Moderate
	19 He sees to it that the work of group members is coordinated	5.3	19.4	25.3	20.5	29.5	3.49	1.244	4	Moderate
	Overall	9.8	20.4	26.4	18.9	24.5	3.28	0.994		Moderate

A Kruskal-Wallis test was used to determine whether there were statistically significant differences in the means of the rank of job satisfaction and nurses' leadership perception based on the demographic variables, except for the variables of gender and nationality, where a Mann-Whitney test was used. The test revealed that there were statistically significant differences (H=8.44, P=0.038) in job satisfaction based on age. Age thus appears to have an effect on job satisfaction (Table 6). Significance values were adjusted by the Bonferroni correction for multiple tests, in various age groups. The results showed that the mean rank at the age >=40 (421.81) was much less than at the

ages of 25-29 years (345.8) and 30-39 years (352.68).

Table 5: Kolmogorov-Smirnov test

	Kolmogorov-Smirnov		
	Statistic	df	Sig.
Nurses leadership perception	0.060	716	0.000
Job satisfaction	0.060	716	0.000

The results in Table 6 do not show a significant effect of age, education, or experience on nurses' leadership perception. Nor does there appear to be a significant effect of education and experience on job satisfaction. The Mann-Whitney test revealed that there were significant differences (Z=-2.713, P=0.007) in nurses' leadership perception based on

gender in favor of males (416.79). On the other hand, nationality didn't appear to make a difference in nurses' leadership perception based on gender (Table 6). Also, the results reveal that there was a statistically significant difference (Z=-2.028,

P=0.043) in job satisfaction based on nationality in favor of non-Saudis (372.86). However, gender didn't appear to make a difference in job satisfaction (Table 6).

Table 6: Analysis of variance (Kruskal-Wallis H) and Mann-Whitney (Z) for statistically significant differences in the means of the rank of job satisfaction and nurses' leadership perception according to the demographic characteristics

	Job satisfaction		Nurses' leadership perception	
	Mean rank	Test statistic (P)	Mean rank	Test statistic (P)
Age				
<25 years	357.53	H=8.44 (0.038)	410.08	H=5.087 (0.166)
25-29 years	345.84		352.51	
30-39 years	352.68		357.22	
>=40	421.81		337.88	
Education				
Diploma	339.01	H=2.735 (0.255)	328.27	H=3.664 (0.16)
Bachelor	360.45		365.59	
Post-graduate	421.14		324.08	
Experience				
1-3 years	355.78	H=0.091 (0.956)	389.06	H=5.368 (0.068)
>3-6 years	362.09		351.46	
>6 years	357.95		346.34	
Gender				
Male	391.79	Z=-1.55 (0.121)	416.79	Z=-2.713 (0.007)
Female	354.19		350.96	
Nationality				
Saudi	341.41	Z=-2.028 (0.043)	366.13	Z=-0.905 (0.366)
Non-Saudi	372.86		352.09	

4.3. Relationship between leadership behavior and job satisfaction

As the data do not follow a normal distribution, the relationship between leadership behavior and job satisfaction, Spearman's correlation was used (Table 7).

Table 7: Spearman's correlation

		Job satisfaction
Nurses leadership perception	Correlation coefficient	.331**
	P-value	.000
	N	716

** : Correlation is significant at the 0.01 level

As shown in Table 7, the Spearman correlation revealed that there was a statistically significant correlation (r=-0.331, P=0.000) between job satisfaction and nurses' leadership perception.

5. Discussion

The outcomes of this study, which delved into leadership behavior, job satisfaction, and demographic variables, offer valuable insights into each of these dimensions, with direct relevance to both the hospital bedside setting and managerial and administrative services within healthcare. While numerous studies have examined job satisfaction, only a limited subset have explored its relationship with leadership behavior. Furthermore, job satisfaction itself has been subject to diverse definitions, as evident from the extensive array of resources available.

Nonetheless, one particular study provides a comprehensive definition of nurses' job satisfaction, characterizing it as the fulfillment of specific needs within the workplace. These needs encompass three primary dimensions. Firstly, there is a need for

professional growth and development. Secondly, job satisfaction entails experiencing happiness and positive emotional responses related to working conditions. In this regard, employees prioritize a positive workplace environment over higher compensation. Lastly, job value or equity represents an employee's sense of fulfillment when discussing their work with others, indicating their perception of the worth and significance of their job role (Liu et al., 2016).

In the pursuit of the first objective of this study, namely to explore nurses' perception of the behavior of nurse leaders, we found a moderate degree of agreement across all the variables, on both the consideration and initiating scales on LBDQ, arriving at an overall mean of 3.28 and an SD of 0.994. Based on the ranking, nurses find the most important characteristics of leaders as being (1) friendly and approachable, (2) having the time to listen to group members, and (3) scheduling the work to be done. Our results are supported by the findings on the relationship between leadership behavior and the job satisfaction variables of "feeling" and "employee orientation", which showed the strongest correlation when work climate and job satisfaction were explored (Sellgren et al., 2008). In a similar study, transformational leadership behavior (r=.396) was positively related to satisfaction with supervision and opportunities for promotion as well as transactional leadership behavior (r=.686) and supervision (r = .484), (Bormann and Abrahamson, 2014). Meanwhile, in a systematic review of selected studies correlating job satisfaction and leadership style, 9 out of 9 cases, transformational style had the greatest positive correlation which supports the first 3 ranks in the findings because transformational leaders share or spend time teaching and coaching nurses, dedicated to develop and enhance their

strength and provides advice and listens to their concerns and doubts (Specchia et al., 2021).

A moderate level of satisfaction, as indicated by responses on the LBDQ, is suggestive of a corresponding moderate level of staff satisfaction with regard to leadership. This finding is closely associated with the relational leadership style, which encompasses elements such as encouraging staff input, empowering employees, demonstrating purposefulness, upholding ethical conduct, and emphasizing process orientation. Research by McCay et al. (2018) underscores the substantial contribution of this leadership style to enhanced nurse satisfaction.

Furthermore, a moderate level of perceived control over nursing practice, coupled with its correlation to job satisfaction and the perception of care quality (Al-Hamdan et al., 2019), signifies a positive disposition of nurses toward the leadership practices of their managers. This underscores the significant influence of leadership style on nursing performance and job satisfaction. This aligns with previous studies that identified transformational leadership styles as strongly correlated with staff satisfaction, characterized by attributes such as respect, compassion, professional development, and appreciation (Morsiani et al., 2017).

Similarly, when examining the collective findings of 318 research studies involving 148,501 participants through a random-effect model, a medium-level positive effect on job satisfaction is revealed. These collective results affirm the integral role of leadership behavior and style in shaping the job satisfaction of employees in diverse contexts (Cakmak et al., 2015). Moreover, the degree of staff satisfaction demonstrated an equal level of staff insight toward nursing leaders, denoting that the two variables are directly related; this means that when staff nurses' perception of the leadership style of their leaders is high, then their job satisfaction will also improve. This picture is consistent with Ibraheem's et al. (2011) study in Jordan private hospitals, which revealed that intrinsic job satisfaction has the strongest relationship with transformational leadership. This signifies that this type of leadership creates a good working environment, leading to a more advanced level of job satisfaction. This also mirrors what was found for nurses working in critical care in Aseer, Saudi Arabia, where higher job satisfaction resulted from the transformational style of leadership while teachers in Taiwan from 18 programs and with 286 samples were more satisfied with transactional type of leadership than in transformational type (Chen and Silverthorne, 2005). These studies find support in a comprehensive investigation involving 500 nurses in the Alexandria governorate, which illuminates a discernible positive correlation. This correlation is observed between nurses' perceptions of their work environment, the support provided by their organizations, and their overall job satisfaction (Hashish and Aly, 2017). Additionally, the findings presented in the study conducted by Lei et al. (2022)

further affirm this relationship. In their research, they report a mean job satisfaction score of 173.47 and a range of leadership styles spanning from 13.29 to 28. These observations underscore the pivotal role played by leadership style as a significant determinant affecting job satisfaction.

On the one hand, the demographics of the participants indicated a substantial relationship between age (≥ 40 years) and job satisfaction, which signifies that job satisfaction rises as people age and gain better income and benefits. This finding is similar to pediatric nurses, who are often older and have more experience and are thus less stressed than younger nurses, and this is considered to be an essential factor for the retention of nurses in pediatric settings. Contrary to a previous study (Suresh and Kodikal, 2015), this study showed age group had no influence on job satisfaction ($p > 0.05$). In terms, of gender majority of the respondents were female (mean rank=350.96) and moderate level of job satisfaction comparatively true to the previous study where most of the respondents were also female with mean overall satisfaction (mean 3.92) which signifies slightly satisfied/moderately satisfied (Huang et al., 2023).

6. Conclusion

In light of the research findings, two conclusions may be drawn: (1) In relation to the rankings noted in the results, the majority of the leaders in Hail City demonstrated a positive correlation between the two dimensions of leadership behavior (initiation and consideration); thus, in order to preserve high-quality nursing care and nurses' job happiness, hospitals must improve the working conditions. (2) This study established the necessity of assessing nursing leaders' behavior in order to implement a proper leadership style at work and build an ideal workplace culture. Hence, it is highly recommended that educational institutions increase managers' understanding and provide them with appropriate training so that they may effectively manage and improve the organization's affairs and employee job performance. Future researchers might benefit from examining the connection between leadership style and nursing job performance. This will help nursing managers who directly supervise staff nurses and hospital administrators concerned with staff retention, retaining qualified staff, and reducing recruitment and training costs. It is also implicated that hospitals or nursing managers shall invest in training to be a model of being a transformative leader that continuously shapes and encourages the staff member to improve for the benefit of the nursing profession and the organization which will also contribute to perceived effectiveness and job satisfaction.

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Compliance with ethical standards

Ethical consideration

The study was approved by the Ethical Approval Committee from the Research Department at Hail Health Cluster No. 2022-74.

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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