

## A study of staff nurses' perceptions of nursing leadership styles and work engagement levels in Saudi general hospitals

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### ABSTRACT

Leadership styles are meaningful in facing obstacles in healthcare, such as improving quality of care and performance of safety, minimizing expense, and keeping high-performing nursing staff; as a result, they can positively or negatively affect nursing work engagement, which has an impact on employee satisfaction, patient satisfaction, and organizational productivity. Thus the objective of this study is to determine the perception of the relationship between nurse managers' leadership styles and the levels of work engagement of the staff nurses in the Kingdom of Saudi Arabia. This study used a quantitative, descriptive, cross-sectional, and correlational design. A convenience sampling technique was used to select 383 staff nurses working in governmental hospitals in Saudi Arabia. The Utrecht Work Engagement Scale and the Multifactorial Leadership Questionnaire 5X short form were used to collect data. The study found that transformational leadership style ( $M \pm SD$ :  $2.34 \pm 0.946$ ) and transactional leadership style ( $M \pm SD$ :  $2.03 \pm 0.686$ ) had the highest mean scores from staff nurses' perceptions, while laissez-faire leadership style ( $M \pm SD$ :  $1.4 \pm 0.991$ ) had the lowest mean score. Moreover, the highest mean score of staff nurses' work engagement was dedication ( $M \pm SD$ :  $4.80 \pm 1.380$ ), and the lowest mean score for vigor ( $M \pm SD$ :  $4.02 \pm 1.424$ ). There was a strong statistically significant positive relationship between transformational and transactional leadership styles and staff nurses' levels of work engagement ( $r=0.591$ ,  $r=0.517$ ,  $P=0.000$ ), respectively, while there was a negative but not statistically significant relationship between laissez-faire leadership style and staff nurses' levels of work engagement ( $r=-0.023$  and  $p=0.64$ ). Nurse managers who utilize transformational and transactional leadership approaches to empower and collaborate with staff nurses can improve organizational performance.

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### 1. Introduction

The recent COVID-19 pandemic has the potential to affect the healthcare sector (Ayati et al., 2020). Many medical professionals working in hospitals are worried about their well-being and the possible effects of COVID-19, which could lead to nursing staff disengagement (Rana et al., 2020; Moyo, 2020). Additionally, the uncertainty of healthcare reform, regulatory requirements, technological progress, possible labor shortages, demographic variations, financial burden, and resource allocation are

becoming increasingly serious challenges for nurse managers (Tomajan and Hatmaker, 2019). To address these challenges, the engagement of staff nurses to work is needed (Adler-Milstein et al., 2017; Baghdadi et al., 2021). Previous studies have suggested that work engagement is important to the achievement of the organization, and this achievement is the result of a higher level of commitment to the organization, a higher rate of satisfaction, and a lower level of intent (Poulsen et al., 2016; Manning, 2016).

Nurse managers seek to fulfill organizational objectives by empowering and encouraging staff through their leadership style. Many Studies indicated that the leadership style of a nurse manager is crucial in engaging staff nurses (Kim and Yoo, 2018; Rana et al., 2016; Manning, 2016; Al-Yami et al., 2018). Through nurse managers' leadership style, progress in achieving organizational goals can be deliberate and successful (Northouse, 2015).

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National Transformation Program (NTP) in Saudi Arabia aims to increase employee engagement and reduce job turnover to meet Saudi Arabia's Vision 2030. In addition, studies suggest that work engagement improves employee performance and is influenced by leadership style. A key objective of this study is to determine the perception of the relationship between nurse managers' leadership styles and the levels of work engagement of the staff nurses in the Kingdom of Saudi Arabia.

## 2. Conceptual framework

The researcher uses two previously developed conceptual frameworks: The work engagement conceptual framework and the full range leadership model (FRLM) to highlight the strategies that nurse leaders can use to engage their employees to be productive and effective for the organizations (Bakker and Albrecht, 2018). The FRLM was chosen as the study's guide because it illustrates three distinct leadership styles. The impact of these styles on staff nurse work engagement will be studied by nurse managers (Popli and Rizvi, 2015; Manning, 2016).

The FRLM was developed by Bass and Avolio (1995). This model describes three styles of leadership in a continuum from transformational to transactional to passive-avoidant (PA). Nine factors are divided into three leadership styles. There are five factors associated with transformational leadership style: Idealized influence (behaviors), idealized influence (attributes), inspirational motivation, intellectual stimulation, and individual consideration (Bass and Avolio, 1995). There are three factors of the transactional leadership style: Contingent reward, management by exception (active), and management by exception (passive). This type of leader keeps an eye out for faults and corrects them when they occur (Bass and Avolio, 1995). Passive-avoidant leadership is defined as a lack of leadership. The leader takes a hands-off method, deferring decisions, giving no feedback, and making no effort to meet the demands of his or her employee (Bass and Avolio, 1995).

The work engagement conceptual framework is the second framework chosen to guide this study. This framework was developed by Laschinger et al. (2009) and consists of three subscales: Vigor, dedication, and absorption. Vigor is defined by mental strength and energy in the workplace. Dedication is defined by strong participation in the work. Absorption is characterized by a full concentration on work, in which time will pass quickly and it is difficult for a person to leave work (Laschinger et al., 2009).

## 3. Methods

This study utilized a descriptive, cross-sectional, and correlational design. The study was conducted in three governmental hospitals in the southwestern region of the Kingdom of Saudi Arabia. The three

hospitals were chosen because they are affiliated with the Ministry of Health (MOH), have accreditation, non-profit status, and similar locations.

The researcher has selected samples by using the convenience sampling technique of staff nurses working in the three hospitals. The inclusion criteria were (a) capable of understanding and reading English or Arabic; (b) they should have worked for at least one year; (c) they should work under the direct supervision of a head nurse. The exclusion criteria were new nursing staff who attended the orientation program in the hospital and their experience of less than one year is omitted because they may have spent little time with their nurse manager to adequately assess their leadership styles.

The sample size was calculated electronically from the whole target population by using the Raosoft website<sup>†</sup>, the whole population is 2000, and staff nurses give us a confidence level of 95% and 5% margin of error, a sample size of at least n=383.

### 3.1. Study instruments

#### 3.1.1. Multi-factor leadership questionnaire

The Multi-factor Leadership Questionnaire (MLQ-5X) was developed by Bass and Avolio (1995). It aims to measure three different styles of leadership, and consists of 45 items under nine subscales used in the MLQ-5X. Five subscales measure items of Transformational Leadership (idealized influence-behavior, idealized influence-attributes, intellectual stimulation, inspirational motivation, and individual consideration), 3 subscales measure items of transactional leadership (management by exception-passive, and management by exception-active, contingent reward) and 1 subscale is used to measure items of Laissez-Faire (passive/avoidant leadership). Each subscale of leadership styles has four items, and every item measures one of the three leadership styles on a 5-point Likert scale (0=Not at all to 4=frequently, if not always).

#### 3.1.2. Utrecht work engagement scale

Utrecht Work Engagement Scale (UWES) was developed by Schaufeli et al. (2006) to measure staff nurses' level of work engagement. It includes 17 items that have been extensively used in a variety of countries and professions, including nursing. The questionnaire is rated using a 7-point Likert scale ranging from 0 (never) to 6 (always). The UWES consists of three subscales: Vigor (six items), dedication (five items), and absorption (six items) (Schaufeli et al., 2006). The total scale ranges from 0 to 102, with higher scores indicating a greater nurse's level of work engagement. Each of the work engagement subscales was averaged to get the total engagement score. The overall level of job satisfaction might range from very low to very high.

<sup>†</sup> <http://www.raosoft.com/samplesize.html>

Low work engagement is indicated by a score of less than 1.93. Scores ranging from 1.94 to 3.06 indicate low work engagement. Average work engagement is indicated by scores ranging from 3.07 to 4.66. High work engagement is indicated by scores ranging from 4.67 to 5.53. Work engagement is very strong when the score is more than 5.54 (Schaufeli and Bakker, 2004). The participants in this study had an average degree of work engagement, with a score of 4.08.

### 3.2. Psychometric proprieties of the instruments

The researchers from the study confirmed that the reliability of the questionnaires is excellent based on the Cronbach alpha analysis of MLQ 5X short form which was 0.89 (Bass and Avolio, 2004), and UWES was 0.90 (Schaufeli et al., 2006). The Cronbach alpha for the MLQ-5X short form and UWE in the current study were 0.94 and 0.93, respectively. This indicated that the questionnaires of the current were trustworthy. This questionnaire was validated using content validity methods by a panel of five experts in nursing administration specialties filed from supporting Universities and no modifications were needed. The index of content validity in the current study was 0.92.

### 3.3. Data collection procedure

The researcher visits the Chief Nursing Officer (CNO) of each hospital to explain the study's goal and verify the hospital's interest in participating. Online questionnaires were developed using google forms and the CNO in each hospital submitted the questionnaires to their staff nurses using their official E-mail addresses. All staff nurses at each hospital received invitations to complete the questionnaires via email. For six weeks, the questionnaires were available for online answers. The CNOs at each of the three hospitals issued a reminder email to their staff nurses at the end of weeks two and four, reminding them to participate if they had not already. Following the initial invitation E-mail, the questionnaires were closed after six weeks.

The E-mail included an invitation to staff nurses with attached a Universal Resource Link (URL) of questionnaires. This invitation included consent and an informational letter to staff nurses. Staff nurses will be asked to select the "I agree and do consent" option at the bottom of the consent, which means they have provided consent and have chosen to participate. Staff nurses who have agreed to participate will be able to access the questionnaires by clicking on the (URL). The questionnaires took approximately 15-20 minutes to complete.

### 3.4. Data analysis

The Windows Statistical Package for Social Science (SPSS) SPSS ® -PC version 28 was used to

analyze data. For all statistical analyses, the significance level was set at  $\leq 0.05$ . Descriptive statistics were computed for the MLQ 5X short-form factors measured in this study to identify nurse manager leadership styles as perceived by staff nurses and to assess the levels of work engagement among staff nurses. Pearson-Product-Moment correlation analysis examined the relationships between the independent variable (nurse manager leadership styles) and the dependent variable (work engagement levels of staff nurses).

## 4. Results

### 4.1. Sociodemographic information

The questionnaire was administered to 383 staff nurses in various wards throughout the three hospitals, and 383 responses were complete, representing a 100% response rate. Table 1 shows that approximately half of the staff nurses (49.6%) were between the ages of 20 and 29 years old.

**Table 1:** Sociodemographic characteristics of the staff nurses (n=383)

Variable	N	%
<b>Age</b>		
≥20-29	190	49.6
> 29-39	153	39.9
> 39 -49	28	7.3
> 49	12	3.1
<b>Gender</b>		
Male	21	5.5
Female	362	94.5
<b>Nationality</b>		
Saudi	219	57.2
Non-Saudi	164	42.8
<b>Marital status</b>		
Married	222	58.0
Un-married	161	42.1
<b>Education</b>		
Diploma	108	28.2
Bachelor's degree	266	69.5
Master's degree	9	2.3
<b>Experience</b>		
≥1-3 years	149	38.9
> 3-6 years	75	19.6
> 6 and above	159	41.5
<b>Type of shift</b>		
Morning	234	61.1
Evening	27	7.0
Night	122	31.9
<b>Working hours per day</b>		
8 hrs.	142	37.1
12 hrs.	241	62.9
<b>Unit</b>		
Medical	12	3.1
Surgical	24	6.3
ICU	33	8.6
NICU	84	21.9
ER	87	22.7
Burn	12	3.1
Hemodialysis	28	7.3
Delivery room	11	2.9
Isolation	8	2.1
OPD	37	9.7
Pediatric	8	2.1
General ward	16	4.2
OR	9	2.3
Oncology	14	3.7

ICU: intensive care unit; NICU: neonatal intensive care unit; ER: emergency room; or: operation room; OPD: outpatient department

The majority of staff nurses (94.5%) from the three hospitals were female, and more than half of them (57.2%) were Saudis and married (58%). About three-thirds (69.5%) of the staff nurses had a bachelor's degree in nursing. They reported work experience in their current job for more than six years (41.5%), and three to six years (19.6%). Approximately two-thirds of staff nurses worked the morning shift (61.1%), with 12 hours of work a day. The majority of the staff nurses worked in both emergency departments (22.7%) and Neonatal Intensive Care Unit (21.9%).

#### 4.2. Leadership styles

The staff nurses perceived their nurse managers to have a strong transformative, transactional leadership style, based on the scale means and standard deviations. Table 2 illustrates the MLQ leadership style factors and mean (SD) scores. The transformational leadership style factor of Idealized Influence (Behaviors) had the highest means (mean±SD), (2.46±.96); with a scale ranging from 0 to 4). The passive avoidant leadership style had the lowest means (mean±SD), (1.49±.99).

#### 4.3. Staff nurses' work engagement

Table 3 shows the total 383 staff nurses classification based on their weighted mean for work

engagement scale (WES) domains. The vigor score revealed the lowest number of staff nurses 12.53% and 34.20% under the average level with 13.57% under the very high level.

**Table 2:** MLQ leadership factors descriptive statistics (n=383)

Leadership styles	Mean	±SD
Transformational	2.34	±.94
Idealized influence (Attributes)	2.38	±1.02
Idealized influence (Behaviors)	2.46	±.96
Inspirational motivation	2.42	±1.07
Intellectual stimulation	2.26	±1.00
Individual consideration	2.16	±1.04
Transactional	2.03	±.68
Contingent reward	2.27	±1.00
Management by exception (Active)	2.23	±.88
Management by exception (Passive)	1.58	±.90
Laissez-faire (passive avoidant)	1.49	±.99
Total leadership style score	1.95	±.63

Regarding dedication, the maximum number of staff nurses 36.81% was under a very high level, and the least number of staff nurses was 4.43% under a very low level with an average level of 30.02%. Whereas, in the absorption, most staff nurses are 34.98% under average level with the lowest and maximum levels being 4.43% and 25.59% respectively. The p-value 0.000 (<0.01) is highly significant. In conclusion, staff nurses' total work engagement level was highest under average level with 99.21% and a very high level with 75.97%.

**Table 3:** Levels of staff nurses' work engagement

WES	Very low (%)	Low (%)	Average (%)	High (%)	Very high (%)	Total (%)
I	II	III	IV	V	VI	
Vigor (VI)	48 (12.53%)	63 (16.44%)	131 (34.20%)	89 (23.23%)	52 (13.57%)	383 (100.00%)
Dedication (DE)	17 (4.43%)	28 (7.31%)	115 (30.02%)	82 (21.40%)	141 (36.81%)	383 (100.00%)
Absorption (AB)	17 (4.43%)	38 (9.92%)	134 (34.98%)	96 (25.06%)	98 (25.59%)	383 (100.00%)
Total	82 (21.40%)	129 (33.68%)	380 (99.21%)	267 (69.71%)	291 (75.97%)	1149 (100.00%)

Chi-Square=82.149, degrees of freedom=8, Level of significance=5% and P-Value=0.000 (Highly significant (<0.01); I: Weighted mean for WES domains; II: vigor (≤ 2.17); dedication (≤ 1.60); absorption (≤ 1.60); total score 1.93; III: Vigor (2.18-3.20); dedication (1.61-3.0); absorption (1.61-2.75); total score (1.94-3.06); IV: Vigor (3.21-4.80); dedication (3.01-4.90); absorption (2.76-4.40); total score (3.07-4.66); V: Vigor (4.81-5.60); dedication (4.91-5.79); absorption (4.41-5.35); total score (4.67-5.53); VI: Vigor (≥ 5.61); dedication (≥ 5.80); absorption (≥ 5.36); total score (5.54)

#### 4.4. Leadership styles and work engagement levels

The association between the nurse manager leadership style components and the staff nurse work engagement subscales was analyzed using Pearson-Product-Moment correlation analysis. Table 4 reveals that the subscales of staff nurse work engagement are significantly correlated with transformational leadership style factors. Each factor of transformational leadership (idealized influence behavior and attributes, inspirational motivation, individual consideration, and intellectual stimulation) had a strong positive and significant relationship with staff nurse work engagement (P<.001).

The subscales of staff nurse work engagement were significantly correlated with transactional leadership style factors (Table 5). Each transactional

leadership style factor (contingent reward, Management by Exception (Active), and Management by Exception (Passive) had a high positive and significant relationship with staff nursing work engagement (P<.001). There is no significant relationship between total work engagement and the laissez-faire leadership style (Table 5).

#### 5. Discussion

The study results revealed that the transformational leadership style showed a significantly highest mean score while the lowest mean was for laissez-faire as perceived by staff nurses. This is in line with prior research findings and supports the existing studies. Aboshaiqah et al. (2014), Al-Yami et al. (2018), Mousa et al. (2019), Manning (2016), and Raja (2012) stated that



transformational leadership had a positive correlation with staff nurse work engagement. The supportive and collaborative leadership behaviors associated with transformational leadership styles

may explain this positive relationship with staff nurse work engagement (Decuyper and Schaufeli, 2020).

**Table 4:** Associations between transformational leadership styles and work engagement levels (n=383)

		TF	II (A)	II (B)	IM	IS	IC	UWES	VI	DE	AB
*TF	r	1									
	P	.000									
*II (A)	r	.936*	1								
	P	.000	.000								
*II (B)	r	.902*	.802*	1							
	P	.000	.000	.000							
*IM	r	.938*	.860*	.828*	1						
	P	.000	.000	.000	.000						
*IS	r	.941*	.850*	.806*	.854*	1					
	P	.000	.000	.000	.000	.000					
*IC	r	.909*	.818*	.748*	.790*	.844*	1				
	P	.000	.000	.000	.000	.000	.000				
*UWES	r	.591*	.562*	.558*	.555*	.558*	.502*	1			
	P	.000	.000	.000	.000	.000	.000	.000			
*VI	r	.574*	.531*	.529*	.548*	.551*	.499*	.945*	1		
	P	.000	.000	.000	.000	.000	.000	.000	.000		
*DE	r	.553*	.534*	.526*	.513*	.505*	.481*	.911*	.790*	1	
	P	.000	.000	.000	.000	.000	.000	.000	.000	.000	
*AB	r	.530*	.513*	.512*	.494*	.507*	.431*	.946*	.845*	.794*	1
	P	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Transformational: TF, Idealized Influence (Attributes): II (A), Idealized Influence (Behaviors): II (B), Inspirational Motivation: IM, Intellectual Stimulation: IS, Individual Consideration: IC Utrecht Work Engagement Scale: UWES, Vigor: VI, Dedication: DE, Absorption: AB

\*Highly significant (p < 0.001) level (2-tailed), \*\* significant (p<0.05) level (2-tailed); r: Person correlation; (strength of association: Weak positive 0.1 to 0.29 and weak negative - 0.1 to - 0.29; medium positive 0.3 to 0.49 and medium negative -0.3 to -0.49; strong positive 0.5 to 1 and strong negative - 0.5 to -1)

**Table 5:** Association between transactional style and work engagement levels (n=383)

		TA	CR	MBEA	MBEP	LF	UWES	VI	DE	AB
*TA	r	1								
	P	.000								
*CR	r	.775*	1							
	P	.000	.000							
*MBEA	r	.817*	.548*	1						
	P	.000	.000	.000						
*MBEP	r	.610*	.112*	.268*	1					
	P	.000	.028	.000	.000					
*LF	r	.299*	-.097	.130*	.662*	1				
	P	.000	.057	.011	.000	.000				
*UWES	r	.546*	.630*	.422*	.125*	-.023	1			
	P	.000	.000	.000	.014	.649	.000			
*VI	r	.517*	.610*	.387*	.117*	-.015	.945*	1		
	P	.000	.000	.000	.022	.773	.000	.000		
*DE	r	.476*	.583*	.383*	.058	-.080	.911*	.790*	1	
	P	.000	.000	.000	.259	.119	.000	.000	.000	
*AB	r	.531*	.574*	.412*	.165*	.018	.946*	.845*	.794*	1
	P	.000	.000	.000	.001	.724	.000	.000	.000	.000

Transactional: TA, Contingent Reward: CR, Management by Exception (Active): MBEA, Management by Exception (Passive): MBEP. Laissez-faire: LF. Utrecht Work Engagement Scale: UWES, Vigor: VI, Dedication: DE, Absorption: AB

\*Highly significant (p<0.001) level (2-tailed), \*\* significant (p<0.05) level (2-tailed); r: Person correlation; (strength of association: Weak positive 0.1 to 0.29 and Weak negative - 0.1 to - 0.29; medium positive 0.3 to 0.49 and medium negative -0.3 to -0.49; strong positive 0.5 to 1 and strong negative - 0.5 to -1)

Supportive leadership behaviors include role modeling, having a clear vision, modernization, creativity, and supporting autonomy (Manning, 2016; Raja, 2012; Decuyper and Schaufeli, 2020; Negussie and Demissie, 2013). On the other hand, disagreement between the present results with a study performed on staff nurses in Spain by García-Sierra and Fernández-Castro (2018), and another study conducted in a Jordanian bank by Al-Daibat (2017), who found that transactional leadership style in the highest mean than the transformational. Idealized influence behavior of transformational leadership style is considered a strong predictor for leaders wielding power and influencing their staff and has a higher effect on employees' work attitude and behavior because transformational leaders

mainly provoke intrinsic work (Abdelrazek, 2016). This is not in the same line with a study conducted in KSA on staff nurses by Al-Yami et al. (2018) which revealed that inspirational motivation was the highest mean score and the lowest mean was intellectual stimulation.

The study found a strong positive relationship between transactional leadership style features and the study variables. This is in line with prior study, which found that transactional leaders' incentives might motivate staff nurses (Aboshaiqah et al., 2014; Manning, 2016; Al-Yami et al., 2018). Work engagement was positively correlated with the transactional leadership style factors of contingent reward and management by exception (active). Management by exception (passive) of transactional

leadership style factor revealed a significant weak positive correlation with staff nursing work engagement. When a nurse manager demonstrated a transactional, passive leadership style, the impact on job engagement was limited. Passive behaviors of nurse managers include deferring feedback and communicating seldom (Manning, 2016).

The study findings for passive avoidant leadership style in nurse managers revealed a negative but not statistically significant correlation with staff nurse work engagement. This is congruent with Manning's (2016) study findings, which revealed the detrimental impact of PA leaders, such as deferring decision-making and offering little to no feedback to staff.

This study's findings highlight the necessity of leaders communicating with their staff. Staff nurse work engagement is higher when nurse managers provide regular feedback. Ineffective communication and feedback from the nurse manager resulted in lower staff nurse work engagement. The cornerstone of the transformational leadership style is communication, and this leadership style in nurse managers has the power to favorably alter organizational performance through staff nurse work engagement. Transformational leadership should serve as the foundation for future leaders since it empowers, inspires, and motivates staff to take responsibility, eventually enhancing satisfaction and organizational performance (Manning, 2016; Aboshaiqah et al., 2014; Mousa et al., 2019).

## 6. Conclusion

Transformational and transactional leadership styles had the highest mean score among staff nurses' perceptions of nursing leadership styles, whereas laissez-faire leadership styles had the lowest mean score. Strong significant positive correlations between the nurse manager's transformational and transactional leadership styles and the level of work engagement of staff nurses. Nurse managers who use transformational and transactional leadership styles to offer support and communication can have a beneficial influence on staff nurse work engagement and job satisfaction and consequently improve nursing care and organizational outcomes. Nurse managers should demonstrate transformational and transactional leadership behaviors in order to build an appealing environment, and collaborative relationship with staff nurses, and teams to encourage job engagement.

## 7. Limitations

The study's limitations include the use of a convenience sample and the use of a survey. The use of a convenience sample strategy limits the findings from being applied to the entire staff nursing population. The study assessed staff nurses' perceptions of nurse manager leadership style and staff nurse engagement. There is a limitation to one-

time surveys since participants might not answer the survey honestly and might score based on their nurse manager's selective memory. This study relied on a one-time sampling of the study variables, and engagement perceptions may vary over time. Future studies should involve using multiple settings with varying sample sizes to generalize results, as well as offering longitudinal and experimental investigations to help determine the direction of a causal relationship.

## 8. Implications for nursing practice

The study's findings have immediate implications for nurse leadership development in nursing practice. Efforts should be made to help nurse managers develop their leadership skills by emphasizing transformational and transactional management by exception (active) behavior and reducing management by exception (passive) and passive-avoidant behavior. Supportive leadership practices and enhanced communication with employees are the main differences between these leadership styles. Giving good or negative comments can be part of communication. Nurse managers should strengthen their leadership skills through leadership training courses, self-evaluation, reflection, and coaching; all of these skills have the potential to improve organizational outcomes such as work performance, job satisfaction, and organizational commitment.

## Compliance with ethical standards

### Ethical considerations

The current research has been approved by the supporting university and the Health Affairs Directorate of participating hospital. Moreover, the authors have obtained official permission to use the study tools. Staff nurses were assured that filling out the questionnaires had no bearing on their job status. Each staff nurse was given an invitation and consent form to review at the time of data collection. Staff nurses were advised that participation in the study is completely optional, that privacy and confidentiality are guaranteed, and that they can withdraw at any time. After the data was gathered and coded, the researcher kept it on a password-protected computer. Furthermore, the answers of the staff nurses in the questionnaires were through the link attached to the E-mail, and this link was specially created only for the researcher no allowed to another one read the information, and this guarantees the privacy of the staff nurses who participated in the study.

### 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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