Leadership Practices as Perceived by Emergency Nurses during the COVID-19 Pandemic: The Role of Structural and Psychological Empowerment

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Leadership Practices as Perceived by Emergency Nurses during the COVID-19 Pandemic: 

The Role of Structural and Psychological Empowerment

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Declarations:

**Ethical Approval**
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HK: Conceptualization; Data curation; and Formal analysis; Methodology; and Project administration.
HK, AJN: Writing - original draft; Writing - review & editing.
Leadership Practices as Perceived by Emergency Nurses during the COVID-19 Pandemic: The Role of Structural and Psychological Empowerment

Abstract

Background: To the best of our knowledge, no studies have explored the leadership practices in relation to structural and psychological empowerment among nurses during COVID-19. Therefore, the purpose of this study was to examine those relationships in Jordanian nurses working in Emergency Departments (ED) during the COVID-19 pandemic.

Methods: A descriptive correlational cross-sectional design was used in this study. The participants were ED nurses working at three large hospitals in Jordan. The participants were surveyed via an online questionnaire between September 2021 and January 2022. Three valid scales were included in the questionnaire to assess nurses' clinical leadership practices in relation to perceived structural and psychological empowerment.

Results: A total of 193 ED nurses were surveyed; most participants were male 116 (60.1%), and their average age was 29.64 (SD, 4.74) years. Nurses have a moderate level of clinical leadership practices 12.50 (SD, 1.65), moderate level of perceived structural empowerment 3.67 (SD, 0.44), and a high moderate level of perceived psychological empowerment 5.96 (SD, 0.65). Clinical leadership practices were shown to have a significant positive relationship with structural (r = 0.658; P < 0.01) and psychological (r = 0.745; P < 0.01) empowerment. Predictors of clinical leadership practices of Jordanian ED nurses during COVID-19 were ranked in order of significance; structural and psychological empowerment was the highest significant predictors. However, patient to nurse ratio (> 6 patients/nurse) was the lowest significant predictor.

Conclusion: Structural and psychological empowerment are playing a pivotal role in predicting the leadership practices of the emergency nurses in Jordan, still, they should
enhance their leadership style for a better management and effective communication during critical situations such as pandemics.

**Keywords:** COVID-19; Structural empowerment; Psychological empowerment; Leadership practices; Nursing leadership; Nursing

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**Introduction**

Since the outbreak of the COVID-19 virus in December 2019 and its declaration as a global pandemic by the World Health Organization (WHO) in March 2020, the healthcare systems have witnessed many significant clinical and social changes. The rapid spread of the virus, increased numbers of critical cases, and the continuous shortage of nursing staff have created unprecedented demand on healthcare providers, necessitating urgent expansion of hospitals’ capacities and staffing in many countries (Çınar, Kılıç Akça, Zorba Bahçeli, & Bağ, 2021).

It has been reported that nurses’ clinical leadership practices are vital to creating safe health care environments (Nieuwboer, van der Sande, van der Marck, Olde Rikkert, & Perry, 2019). Cook has defined clinical leadership as “a nurse directly involved in providing clinical care that continuously improves care through influencing others” (Cook, 2001, p. 39). Further, it had been defined as “staff nurse behaviors that provide direction and support to patients and the health care team in the delivery of patient care” (Patrick, Laschinger, Wong, & Finegan, 2011, p. 450). These definitions highlight the capacity of nurses to lead and affect patients’ care by using specific leadership skills.
A significant body of research indicates that clinical leadership practices are linked to nurses’ perceptions of a particular work environment. Nurses who perceive that they are working in a place with structural and/or psychological empowerment may experience better outcomes, including less job stress, more job satisfaction, and better organizational commitment (DiNapoli, O’Flaherty, Musil, Clavelle, & Fitzpatrick, 2016).

Structural empowerment is defined as an organization’s ability to provide employees access to six vital organizational structures, including information, resources, support, development opportunities, formal and informal power (R. Kanter, 1993). However, psychological empowerment refers to nurses’ abilities to engage and feel congruence between their personal values and those of the organization (Laschinger, Finegan, Shamian, & Wilk, 2001). Additionally, when nurses perceive that their work environment is providing them with opportunities to advance their career, they feel structurally and psychologically empowered (Schermuly, et al 2022).

Clinical Leadership Practices

Due to the enormous complexity of today’s health care organizations, the roles of clinical nurses have been expanded to lead in all aspects of patient care. Leadership is known as the process of influencing others to achieve specific goals (Cummings et al., 2021). Leadership is often conceptualized as a top-down phenomenon, many health care organizations empower front-line nurses to make clinical decisions, coordinate workflow, and maintain group processes at the point-of-care. Accordingly, studies have shown that most health organizations have leaders from all units and at different organizational
levels whose actions have helped achieve quality and safe healthcare outcomes (Bahadori, Peyrovi, Ashghali-Farahani, Hajibabaee, & Haghani, 2018; Ma, Shang, & Bott, 2015).

Clinical leadership roles may vary; it is a combination of nursing roles and general leadership skills. This study conceptualized the clinical leadership constructs based on Kouzes and Posner’s leadership model. They suggest that leadership is not a rank or position; rather, it is a collection of individuals’ practices that guide leaders to accomplish their goals. These approaches include questioning the process, inspiring a shared vision, empowering people to act, leading by example, and encouraging the heart. (Kouzes & Posner, 2003). According to this viewpoint, nurse managers' employment of the five leadership practices, as well as the amount of structural and psychological empowerment in their work settings, would have an impact on nurses’ clinical leadership practices (Boamah, 2018).

**Structural Empowerment**

Empowerment is defined as a process of identifying disempowering factors, removing them, and improving individuals’ self-efficacy. Structural empowerment indicates that changes in the organization’s structure can affect nurses’ behaviors and decisions. Kanter supposed that there are two sources of power in organizations: “formal power” and “informal power” (R. M. Kanter, 1977). Kanter asserts that both powers must be used to provide employees with access to organizational structures that empower workers. These empowering structures include: "support" (feedback from peers and managers), "information" (data required to work efficiently), "resources" (money, time, materials needed to accomplish tasks, and "opportunity" (chance to grow and develop). Research reveals that these components of structural empowerment are important to
decrease nurses’ burnout, maintain a culture of trust, and improve patient outcomes

(Connolly, Jacobs, & Scott, 2018).

**Psychological Empowerment**

Psychological empowerment is referred to as an individuals’ attitude to gain control at the workplace; it is a sense of empowerment that occurs due to cognitive processes within the individual. There are two dimensions of psychological empowerment: 1) “meaning” which reflects the perception of being valued and feeling freedom at the workplace; 2) “impact” which is the perception of being able to affect the work process. Research recognizes that psychological empowerment may contribute positively to organizational and individual outcomes (Wang & Lee, 2009).

**Study Significance**

There are, however, few studies that investigated leadership practices in connection to structural and psychological empowerment. As a result, the purpose of this study was to look at those links among Jordanian nurses working in EDs during the COVID-19 epidemic. In this study, the following particular objectives were investigated:

1. Examine the levels of perceived clinical leadership practices, structural and psychological empowerment of ED nurses in Jordan.
2. Test the relationship between clinical leadership practices, structural and psychological empowerment of ED nurses in Jordan.
3. Identify the factors predicting clinical leadership practices of ED nurses in Jordan.

**Methods**
The care of COVID-19 patients, especially in the emergency departments, requires a high integration of clinical and leadership skills to support patients and families. In Jordan, Registered Nurses (RN) undertake the majority of health care activities in the emergency departments. Although, there are no specialized certificates required to be emergency nurses, however, Jordanian nurses are well qualified to work in the ED due to the continuous training courses provided by their hospitals. Overall, RNs handle the majority of healthcare tasks in Jordan's emergency rooms; however, basic nursing activities such as monitoring vital signs could be performed by the practical nurses (Alslman, 2017). In Jordan, emergency nurses work about 48 hours / week in rotating shift schedules of either 8 or 12 hours. In most cases ED nurses are providing care for one patient at a time, however, due to the heavy workload and staff shortage, nurses may service more patients than expected. Nurses are dealing with cases from different acuity levels, and all necessary resources (especially medications) are always available in most emergency departments. However, there is a lack of updated guidelines of emergency treatments and management (Al-Hadeethi et al., 2022; Suleiman, Hijazi, Al Kalaldeh, & Sharour, 2019; Nusairat, 2006).

Sample and Design

A descriptive, correlational, cross-sectional design was used in this study. The participants were ED nurses working at three large hospitals in Amman, Jordan. The three hospitals are educational and serving as training centers for many nursing and medical students. Also, as they contain most of the surgical and medical specialties, the hospitals are transformative and receiving Jordanian and non-Jordanian patients. The participants
were surveyed via an online questionnaire. Three valid scales were included in the
questionnaire to assess nurses' clinical leadership practices and perceived structural
and psychological empowerment.

The study was reviewed and approved by the Institutional Review Board (IRB) at
XXX and the three main hospitals. Data were collected between September 2021 and
January 2022, Google Form was created, and the link to the form was shared with nurse
managers in each hospital, and then, they forwarded that link to nurses. All nurses
employed in the ED in the three hospitals were invited to participate in the study. Nurses
provided their consent by agreeing to complete the questionnaire. Participants were
anonymized, and all collected data were stored, electronically transcribed and kept secure
using password-protected files in a Windows computer to assure confidentiality. Only the
researcher had access to raw data. All collected data were stored, electronically transcribed, and
kept secure using password-protected files in a Windows computer.

In total, 350 questionnaires were distributed, 193 (55%) nurses returned and
completed the questionnaires accurately. The minimum required sample size was
calculated through the power analysis procedure described by Cohen (Cohen, 1992).
Considering a 5% margin of error, 90% confidence level, medium effect size, and multiple
regression analysis as the highest needed statistical procedure, the minimum required
sample was 165 nurses.

**Instruments**

**Clinical Leadership Inventory (CLI)**

The CLI was used to measure the clinical leadership practices of nurses working in
the ED (Patrick et al., 2011). The tool was developed by Patrick (2011) based on Kouzes
and Posner’s model (1995) and consists of 15 items on a 5-point Likert scale. The items
are distributed into five subscales with a potential range of total scores ranging from scores 173 to 15 for each subscale; the higher scores indicate better perceptions of clinical leadership 174 practices. The Cronbach’s alpha for this instrument was .86 in the original study (Patrick 175 et al., 2011), and it was .89 in this study.

*Conditions for Work Effectiveness Questionnaire –II (CWEQ-II)*

The CWEQ-II was developed to measure the four structural empowerment dimensions based on Kanter’s theory of structural empowerment (Laschinger et al., 2001). The scale consists of four subscales which include access to information, support, resources, and opportunity. Each item measured on a 5-point Likert scale, the total score 182 was calculated by summing the subscale means. The total score range is between 1 and 5. 183 Higher scores represent stronger perceptions of structural empowerment. Many studies 184 have validated the scale and the Cronbach’s alpha ranging from .78 to .93 (Laschinger et 185 al., 2001, 2013); the Cronbach’s alpha is .87 in this study.

*Psychological Empowerment Scale (PES)*

The scale was developed by Spreitzer (1995) and composed of 4 subscales: meaning, competence, self-determination, and impact (Spreitzer, 1995). The scale consists 189 of 12 items in which three questions were asked for each subscale. Participants responses 190 are ranged on a 7-point Likert scale valued numerically from 1 – 7 points wherein: “Very 191 Strongly Disagree = 1,” “Strongly Disagree = 2,” “Disagree = 3,” “Neutral = 4,” “Agree = 192 5,” “Strongly Agree = 6,” “Very Strongly Agree = 7.” The total psychological 193 empowerment score is calculated by taking the means of the four subscales means. The 194 range of possible total score is between 1 and 7. Higher scores represent better perceived 195 psychological empowerment. The PES has been validated in over 50 different studies. Lyu
et al. obtained a Cronbach’s alphas of .85-.88 when using this questionnaire in their study, and the Cronbach’s alphas of the subscales in this study are ranged from .86 to .90.

**Statistical Analysis**

SPSS 23.0 was used to analyze the data. The leadership practices, structural empowerment, and physiological empowerment levels of ED nurses were analyzed using different descriptive statistics. The Shapiro-Wilk test was used to check the normality of the study variables. Also, the relationship among leadership practices, structural empowerment, and physiological empowerment were analyzed using Pearson r correlations.

Multiple leaner regressions were used to analyze factors predicting leadership practices of ED nurses. Before running the analysis, the variance inflation factor (VIF) was used to test the absence of multicollinearities. Also, the assumptions of linearity, normality, and homoscedasticity were assessed for any potential violations.

**Results**

The final sample consisted of 193 ED nurses; most participants were males, 116 (60.1%), and their average age was 29.64 (SD, 4.74) years. More than half of the participants were married 103 (53.3%) and had bachelor’s degrees in nursing 113 (58.5%). The average years of experience was 8.79 (SD, 2.24). The average number of COVID-19 patients in the ED was 11.16 (SD, 4.61). Concerning bed capacity in the ED, 66.8% of nurses worked in units with more than 20 beds, and 71.6% worked with a nurse/patient ratio of more than 6 due to the COVID-19 pandemic.

Means and standard deviations were used to analyze the three surveys (Table 1). Nurses had a moderate level of clinical leadership practices 12.50 (SD, 1.65), moderate
level of perceived structural empowerment 3.67 (SD, 0.44), and a high moderate level of perceived psychological empowerment 5.96 (SD, 0.65).

Table 2 presents bivariate analyses using the Pearson r correlation to examine the relationships between clinical leadership practices, structural empowerment, and psychological empowerment. Clinical leadership practices was shown to have a significant positive relationship with structural empowerment (r = 0.658; P < 0.01) and psychological empowerment (r = 0.745; P < 0.01).

Multiple regression analyses were performed to determine the predictive ability of the total structural empowerment score, total psychological empowerment score, and staff characteristics variables (P < .05) on the dependent variable, clinical leadership practices. After performing the preliminary bivariate analyses, age (F = 1.214, P = .032), gender (F = 0.745, P = .041), marital status (F = 0.837, P = .074), and educational level (F = 1.361, P = .142) were excluded from further analyses because clinical leadership practices was not significantly associated with these variables. However, total structural empowerment score, total psychological empowerment score, total years of experience, number of COVID-19 patients, bed capacity (> 20 bed), and patient to nurse ratio (> 6 patients/nurse) were included in multivariate analyses. The subscales of structural empowerment and psychological empowerment were dropped from the model because their overall scores and the subscales were highly correlated. As presented in Table 3, results showed that at least one or more predictors had a significant association with clinical leadership practices $F (5, 187) = 12.345, P < 0.001$. Predictors of clinical leadership practices of Jordanian ED nurses during COVID-19 were ranked in order of significance; structural empowerment and psychological empowerment were the highest significant
predictors. However, patient to nurse ratio (> 6 patients/nurse) was the lowest significant predictor. Together, these variables accounted for 37.4% of the variance in clinical leadership practices.

**Discussion**

This study is mainly focused on examining the levels of perceived clinical leadership practices and structural and psychological empowerment of ED nurses in Jordan. The research also examined the relationship between the three variables and predicted the clinical leadership practices of ED nurses. The results show that the nurses feel they perform clinical leadership practices. Also, ED nurses perceive that they are structurally and psychologically empowered; the results are in line with previous studies (Backman, Sandman, & Sköldunger, 2021; Singh & Sarkar, 2018; Stewart, McNulty, Griffin, & Fitzpatrick, 2010). During the COVID-19 pandemic in Jordan, ED nurses were challenged to develop new practices autonomously and support patients care. That is, nurses were allowed to innovate and contribute greatly to the care of COVID-19 patients. They used this opportunity to practice their leadership skills and to make an impact on patient care. Also, Jordanian nurses received supportive resources, which made them feel valued with the desire to contribute more.

The findings of this study validate and support the previous studies in the matter of clinical leadership practices having a positive and significant relationship with structural and psychological empowerment (Boamah, 2018; DiNapoli et al., 2016). However, this finding contradicts a previous study conducted in New Zealand (Connolly et al., 2018), where nurses’ leadership behaviors levels were low and did not significantly correlate with their perceived structural and psychological empowerment. Empowered nurses exhibit
leadership behavior that promotes and supports patient care and brings forth desired vibrancy in their settings. Being structurally and psychologically empowered in the workplace implies that the workplace offers nurses not only hard work but also the opportunity to learn new clinical and management abilities. However, structural and psychological empowerment levels vary across organizations due to many factors, including organizational structure and culture, organizational policies and procedures, and leadership styles.

In predictors of clinical leadership practices, structural and psychological empowerment showed the greatest contribution. Also, this study suggests that some personal factors and characteristics of the work environment, such as nurses’ years of experience, number of COVID-19 patients, bed capacity, and patient-to-nurse ratio, may affect nurses’ leadership practices. The result supported the proposition of Kouzes and Posner’s leadership model (Kouzes & Posner, 2003), and was also similar to studies that revealed that nurses’ who perceive a strong structural and psychological empowerment felt more independent and motivated in their work (Chang & Liu, 2008) and demonstrated leadership behaviors (Bish, Kenny, & Nay, 2015; Kida, Togari, Yumoto, & Ogata, 2021). These findings indicated that structural/psychological empowerment is key for nurses to develop and practice leadership activities. In addition, the results suggest that supporting the employee with opportunities, information, and resources is highly valued by nurses and fosters them to work better.

Furthermore, a Canadian study found a relationship between nurses’ leadership practices and their years of experience (Lavoie-Tremblay, Fernet, Lavigne, & Austin, 2016). Novice nurses focus on challenges in their new jobs; they want to be directed,
motivated, and coached continuously with constructive feedback. Over time, they become more self-oriented, lead others, and practice independently (Bakir, Rahman, Haji-Ali, & Abdul-Mumin, 2022).

This study suggested the number of COVID-19 patients, bed capacity, and patient-to-nurse ratio might predict nurses’ leadership practices. The result is consistent with other studies (Anton et al., 2021; Aquilia et al., 2020; Savci, Akinci, & Keles, 2021), which confirmed that nurses have learned how to make quick decisions within uncertain situations. Early in the COVID-19 pandemic, little was known about the disease. The crisis brought many challenges to healthcare managers, including a high volume of COVID-19 patients and a continuous need for additional beds and supplies. This critical situation, especially in the ED, developed significant concerns and challenges for nursing staff. However, nurses found innovative strategies to lead and practice independently to enhance patients’ quality of care over time. A study conducted in Turkey found that the clinical leadership skills of nurses were higher than normal during the COVID-19 pandemic. The crisis helped nurses to be more autonomous and investigate new options under difficult situations (Khrais, & Alsadi, 2021; Savci et al., 2021).

Limitations

There are some limitations to be considered in this study. First, the sampling method was convenient. Second, only emergency nurses were recruited to participate in the study; therefore, the results cannot be generalized to other nurses. Third, data were collected online, which decreased the control on the data collection procedure. Fourth, it is always difficult to draw a causal inference from cross-sectional studies.
Conclusion

This study was intended to examine the levels of perceived clinical leadership practices and explore the relationships between clinical leadership practices, structural and psychological empowerment in Jordanian nurses working in EDs during the COVID-19 pandemic. Overall, the findings revealed that Jordanian ED nurses believe they perform clinical leadership practices and are structurally and psychologically empowered during the COVID-19 epidemic, however, organizational levels of structural and psychological empowerment differ due to various factors such as organizational structure and culture, policies and procedures, and leadership styles. Building on this knowledge, nursing leaders should continue to focus on the elements necessary to empower clinical nurses, including better communication and management skills during critical situations such as pandemics.

References


Al-Hadeethi, O., Al Nsour, M., Khader, Y., Alkhaifat, O. K., Al Jawaldeh, H., & Hayajneh, A. (2022). The capacity of primary health care centers in Jordan to...


<table>
<thead>
<tr>
<th>Surveys</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinical Leadership Inventory (CLI)</strong></td>
<td></td>
</tr>
<tr>
<td>Challenging</td>
<td>12.55 (1.54)</td>
</tr>
<tr>
<td>Enabling</td>
<td>12.62 (2.34)</td>
</tr>
<tr>
<td>Inspiring</td>
<td>12.31 (2.32)</td>
</tr>
<tr>
<td>Modeling</td>
<td>12.54 (1.61)</td>
</tr>
<tr>
<td>Encouraging</td>
<td>12.48 (1.78)</td>
</tr>
<tr>
<td>Total</td>
<td>62.50 (8.29)</td>
</tr>
<tr>
<td>Total mean</td>
<td>12.50 (1.65)</td>
</tr>
<tr>
<td><strong>Conditions for Work Effectiveness Questionnaire –II (CWEQ-II)</strong></td>
<td></td>
</tr>
<tr>
<td>Opportunity</td>
<td>3.22 (0.54)</td>
</tr>
<tr>
<td>Information</td>
<td>3.62 (0.71)</td>
</tr>
<tr>
<td>Support</td>
<td>3.89 (0.47)</td>
</tr>
<tr>
<td>Resources</td>
<td>3.74 (0.62)</td>
</tr>
<tr>
<td>Formal power</td>
<td>3.68 (0.37)</td>
</tr>
<tr>
<td>Informal power</td>
<td>3.88 (0.77)</td>
</tr>
<tr>
<td>Total</td>
<td>22.03 (2.64)</td>
</tr>
<tr>
<td>Total mean</td>
<td>3.67 (0.44)</td>
</tr>
<tr>
<td><strong>Psychological Empowerment Scale (PES)</strong></td>
<td></td>
</tr>
<tr>
<td>Meaning</td>
<td>6.41 (0.52)</td>
</tr>
<tr>
<td>Competence</td>
<td>5.26 (0.24)</td>
</tr>
<tr>
<td>Self-determination</td>
<td>6.42 (0.26)</td>
</tr>
<tr>
<td>Impact</td>
<td>5.78 (0.56)</td>
</tr>
<tr>
<td>Total</td>
<td>23.87 (2.62)</td>
</tr>
<tr>
<td>Total mean</td>
<td>5.96 (0.65)</td>
</tr>
</tbody>
</table>
Table 2: Correlations coefficients between CLI, CWEQ, and PES (n = 193)

<table>
<thead>
<tr>
<th></th>
<th>CLI total</th>
<th>CWEQ total</th>
<th>PES total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLI total</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CWEQ total</td>
<td>0.658**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>PES total</td>
<td>0.745**</td>
<td>0.261</td>
<td>1</td>
</tr>
</tbody>
</table>

**P < 0.01
Table 3: Predictors of clinical leadership practices (n = 193)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE of B</th>
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</thead>
<tbody>
<tr>
<td>CWEQ</td>
<td>0.023</td>
<td>0.021</td>
<td>0.115</td>
<td>4.325***</td>
</tr>
<tr>
<td>PES</td>
<td>0.054</td>
<td>0.004</td>
<td>0.135</td>
<td>4.274***</td>
</tr>
<tr>
<td>Total years of experience</td>
<td>0.024</td>
<td>0.009</td>
<td>0.241</td>
<td>3.215***</td>
</tr>
<tr>
<td>Number of COVID-19 patients in the unit</td>
<td>0.054</td>
<td>0.010</td>
<td>0.151</td>
<td>2.756**</td>
</tr>
<tr>
<td>bed capacity ( &gt; 20 bed)</td>
<td>0.026</td>
<td>0.008</td>
<td>0.134</td>
<td>2.614*</td>
</tr>
<tr>
<td>Patient to nurse ratio ( &gt; 6 patients / nurse)</td>
<td>0.148</td>
<td>0.032</td>
<td>0.261</td>
<td>3.031*</td>
</tr>
</tbody>
</table>

Model Summary: R = 0.567, R² = 0.374, Adj R² = 0.317, F = 12.345***

*P < 0.05, **P < 0.01, ***P < 0.001
Highlights

- During COVID-19 pandemic, nurses have moderate levels of clinical leadership practices, structural empowerment, and a high moderate level of psychological empowerment.
- Clinical leadership practices have been significantly correlated and predicted by structural and psychological empowerment.
- Number of COVID-19 patients, bed capacity, and patient-to-nurse ratio have predicted nurses’ leadership practices.