

# LEADERSHIP PRACTICES AS PERCEIVED BY EMERGENCY NURSES DURING THE COVID-19 PANDEMIC: THE ROLE OF STRUCTURAL AND PSYCHOLOGICAL EMPOWERMENT

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## Contribution to Emergency Nursing Practice

- During the -COVID-19 pandemic, nurses had 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 patients with COVID-19, bed capacity, and patient-to-nurse ratio have predicted nurses' leadership practices.

## Abstract

**Introduction:** To our knowledge, no studies have explored 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 during the COVID-19 pandemic.

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**Methods:** A descriptive, correlational cross-sectional design was used in this study. The participants were emergency nurses working at 3 large hospitals in Jordan. The participants were surveyed via an online questionnaire between September 2021 and January 2022. A total of 3 valid scales were included in the questionnaire to assess the nurses' clinical leadership practices in relation to perceived structural and psychological empowerment.

**Results:** A total of 193 emergency nurses were surveyed, of which 116 participants (60.1%) were male, and their average age was 29.64 (SD 4.74) years. 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). Clinical leadership practices were shown to have a significant positive relationship with structural ( $r = 0.65$ ;  $P < .01$ ) and psychological ( $r = 0.74$ ;  $P < .01$ ) empowerment. Predictors of clinical leadership practices of the Jordanian emergency nurses during COVID-19 were ranked in order of significance; structural and psychological empowerments were the highest significant predictors. However, patient to nurse ratio (>6 patients/nurse) was the lowest significant predictor.

**Discussion:** Although structural and psychological empowerments play a pivotal role in predicting the leadership practices of the emergency nurses in Jordan, the nurses should enhance their leadership style for better management and effective communication during critical situations such as pandemics.

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

## Introduction

Since the outbreak of the COVID-19 virus in December 2019 and its declaration as a global pandemic by the World Health Organization in March 2020, health care systems

have witnessed many significant clinical and social changes. The rapid spread of the virus, increased number of critical cases, and the continuous shortage of nursing staff have imposed an unprecedented demand on health care providers, necessitating urgent expansion of hospital capacities and staffing in many countries.<sup>1</sup>

It has been reported that nurses' clinical leadership practices are vital to creating safe health care environments.<sup>2</sup> Cook has defined clinical leadership as "a nurse directly involved in providing clinical care that continuously improves care through influencing others."<sup>3</sup> 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."<sup>4</sup> These definitions highlight the capacity of nurses to lead and affect patient 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.<sup>5</sup> Structural empowerment is defined as an organization's ability to provide employees access to 6 vital organizational structures, including information, resources, support, development opportunities, and formal and informal power.<sup>6</sup> However, psychological empowerment refers to nurses' abilities to engage and feel congruence between their personal values and those of the organization.<sup>7</sup> In addition, when nurses perceive that their work environment provides them with opportunities to advance their career, they feel structurally and psychologically empowered.<sup>8</sup>

### 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.<sup>9</sup> 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, and their actions have helped achieve quality and safe health care outcomes.<sup>10,11</sup>

Clinical leadership roles may vary; they are a combination of nursing roles and general leadership skills. This study

conceptualized the clinical leadership constructs based on the Kouzes and Posner<sup>12</sup> leadership model. The authors suggest that leadership is not a rank or position; rather, it is a collection of the individual's 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 and Posner<sup>12</sup>). According to this viewpoint, nurse managers' employment of the 5 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.<sup>13</sup>

### STRUCTURAL EMPOWERMENT

Empowerment is defined as the process of identifying disempowering factors, removing them, and improving individual self-efficacy. Structural empowerment indicates that changes in the organization structure can affect nurses' behaviors and decisions. Kanter supposed that there were 2 sources of power in organizations: "formal power" and "informal power."<sup>14</sup> Kanter asserted that both powers must be used to provide employees with access to organizational structures that empower them. 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.<sup>15</sup>

### 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 2 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.<sup>16</sup>

### STUDY SIGNIFICANCE

Few studies have investigated leadership practices in relation to structural and psychological empowerment. Therefore, the purpose of this study was to look at those links among

Jordanian nurses working in emergency departments during the COVID-19 epidemic. In this study, the following particular objectives were investigated:

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

## Methods

The care of patients with COVID-19, especially in the emergency department, requires a high integration of clinical and leadership skills to support patients and families. In Jordan, registered nurses undertake the majority of health care activities in the emergency department. Although there are no specialized certificates required for emergency nurses, Jordanian nurses are well qualified to work in the emergency department due to the continuous training courses provided by their hospitals. Overall, registered nurses handle the majority of health care tasks in Jordan's emergency rooms; however, basic nursing activities such as monitoring vital signs could be performed by the practical nurses.<sup>17</sup> In Jordan, emergency nurses work about 48 hours per week in rotating shift schedules of either 8 or 12 hours. In most cases, emergency nurses provide care for 1 patient at a time; however, due to heavy workload and staff shortage, nurses may service more patients than expected. Nurses deal with cases with 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.<sup>18-20</sup>

## SAMPLE AND DESIGN

A descriptive, correlational, cross-sectional design was used in this study. The participants were emergency nurses working at 3 large hospitals in Amman, Jordan. The 3 hospitals are educational and serve as training centers for many nursing and medical students. In addition, because they contain most of the surgical and medical specialties, the hospitals are transformative and receive Jordanian and non-Jordanian patients. The participants were surveyed via an online questionnaire. A total of 3 valid scales were included in the questionnaire to assess the nurses' clinical leadership

practices and perceived structural and psychological empowerment.

The study was reviewed and approved by the Institutional Review Board at Zarqa University and the 3 main hospitals. Data were collected between September 2021 and January 2022. A Google Form (Google) was created, and the link to the form was shared with nurse managers in each hospital who then forwarded it to the nurses. All the nurses employed in the emergency department in the 3 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 (Microsoft) computer to assure confidentiality. Only the researcher had access to raw data.

A total of 350 questionnaires were distributed, and 193 nurses (55%) completed the questionnaires accurately and returned them. The minimum required sample size was calculated using the power analysis procedure described by Cohen.<sup>21</sup> 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 size was 165 nurses.

## INSTRUMENTS

### *Clinical Leadership Inventory*

The clinical leadership inventory questionnaire was used to measure the clinical leadership practices of the nurses working in the emergency department.<sup>4</sup> This tool was developed by Patrick et al<sup>4</sup> based on the Kouzes and Posner model<sup>22</sup> and consists of 15 items on a 5-point Likert scale. The items are distributed into 5 subscales with a potential range of total scores ranging from 5 to 15 for each subscale; higher scores indicate better perceptions of clinical leadership practices. The Cronbach alpha for this instrument was 0.86 in the original study<sup>4</sup> and 0.89 in this study.

### *Conditions for the Work Effectiveness Questionnaire-II*

The conditions for work effectiveness questionnaire-II was developed to measure the 4 structural empowerment dimensions based on the Kanter theory of structural empowerment.<sup>7</sup> The scale consists of 4 subscales, which include access to information, support, resources, and opportunity. Each item was measured on a 5-point Likert scale, and the total score was calculated by summing the subscale means. The total score range is between 1 and 5. Higher scores represent stronger perceptions of structural empowerment.

Many studies have validated the scale, with the Cronbach alpha ranging from 0.78 to 0.93<sup>23</sup>; Cronbach alpha was 0.87 in this study.

### *Psychological Empowerment Scale*

The scale was developed by Spreitzer<sup>24</sup> and comprises 4 subscales: meaning, competence, self-determination, and impact. The scale consists of 12 items, with 3 questions for each subscale. Participant responses are ranged on a 7-point Likert scale valued numerically from 1-7 points wherein: "Very Strongly Disagree = 1," "Strongly Disagree = 2," "Disagree = 3," "Neutral = 4," "Agree = 5," "Strongly Agree = 6," "Very Strongly Agree = 7." The total psychological empowerment score is calculated by taking the means of the 4 subscale means. The range of possible total score is between 1 and 7. Higher scores represent better perceived psychological empowerment. The psychological empowerment scale has been validated in over 50 different studies. Lyu et al<sup>25</sup> obtained a Cronbach alpha of 0.85-0.88 when using this questionnaire in their study. The Cronbach alphas of the subscales in this study ranged from 0.86 to 0.90.

### STATISTICAL ANALYSIS

IBM SPSS Statistics 23.0 was used to analyze the data. The leadership practices, structural empowerment, and physiological empowerment levels of emergency 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 linear regressions were used to analyze factors predicting leadership practices of the emergency nurses. Before running the analysis, the variance inflation factor was used to test for 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 emergency nurses; 116 participants were male (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 a bachelor's degrees in nursing 113 (58.5%). The average experience was 8.79 (SD 2.24) years. The average number of patients with

TABLE 1  
Mean and SD of the study variables ( $n = 193$ )

Surveys	Mean (SD)
Clinical leadership inventory	
Challenging	12.55 (1.54)
Enabling	12.62 (2.34)
Inspiring	12.31 (2.32)
Modeling	12.54 (1.61)
Encouraging	12.48 (1.78)
Total	62.50 (8.29)
Total mean	12.50 (1.65)
Conditions for work effectiveness questionnaire-II	
Opportunity	3.22 (0.54)
Information	3.62 (0.71)
Support	3.89 (0.47)
Resources	3.74 (0.62)
Formal power	3.68 (0.37)
Informal power	3.88 (0.77)
Total	22.03 (2.64)
Total mean	3.67 (0.44)
Psychological empowerment scale	
Meaning	6.41 (0.52)
Competence	5.26 (0.24)
Self-determination	6.42 (0.26)
Impact	5.78 (0.56)
Total	23.87 (2.62)
Total mean	5.96 (0.65)

COVID-19 in the emergency departments was 11.16 (SD, 4.61). Regarding bed capacity in the emergency departments, 66.8% of nurses worked in units with more than 20 beds, and 71.6% worked with a nurse/patient ratio of >6 because of the COVID-19 pandemic.

Means and standard deviations were used to analyze the 3 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 were shown to have a significant positive relationship with structural empowerment ( $r = 0.658$ ;  $P < .01$ ) and psychological empowerment ( $r = 0.745$ ;  $P < .01$ ).

TABLE 2  
Correlations coefficients between CLI, CWEQ, and PES  
( $n = 193$ )

Variables	CLI total	CWEQ total	PES total
CLI total	1		
CWEQ total	0.658*	1	
PES total	0.745*	0.261	1

CLI, Clinical leadership inventory; CWEQ, conditions for work effectiveness questionnaire; PES, psychological empowerment scale.

\*  $P < .01$ .

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 ( $F = 1.21$ ,  $P = .03$ ), gender ( $F = 0.74$ ,  $P = .04$ ), marital status ( $F = 0.83$ ,  $P = .07$ ), and educational level ( $F = 1.36$ ,  $P = .14$ ) were excluded from further analyses, because clinical leadership practices were not significantly associated with these variables. However, total structural empowerment score, total psychological empowerment score, total years of experience, number of patients with COVID-19, 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, the results showed that 1 or more predictors had a significant association with clinical leadership practices  $F_{(5, 187)} = 12.34$ ,  $P < .001$ . Predictors of clinical

leadership practices of Jordanian emergency 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 was mainly focused on examining the levels of perceived clinical leadership practices and the structural and psychological empowerment of emergency nurses in Jordan. The research also examined the relationship among the 3 variables and predicted the clinical leadership practices of emergency nurses. The results showed that the nurses felt that they performed clinical leadership practices. In addition, emergency nurses perceived that they were structurally and psychologically empowered; the results are in line with those of previous studies.<sup>26-28</sup> During the COVID-19 pandemic in Jordan, emergency nurses were challenged to develop new practices autonomously and support patient care. That is, nurses were allowed to innovate and contribute greatly to the care of patients with COVID-19. 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 those of previous studies in the matter of clinical leadership practices having a positive and significant relationship with structural and psychological empowerment.<sup>5,13</sup> However, this finding contradicts that of a previous study conducted in New

TABLE 3  
Predictors of clinical leadership practices ( $n = 193$ )

Predictor	B	SE of B	Beta	T
CWEQ	0.023	0.021	0.115	4.325*
PES	0.054	0.004	0.135	4.274*
Total years of experience	0.024	0.009	0.241	3.215*
Number of COVID-19 patients in the unit	0.054	0.010	0.151	2.756†
Bed capacity (>20 bed)	0.026	0.008	0.134	2.614‡
Patient to nurse ratio (>6 patients/nurse)	0.148	0.032	0.261	3.031‡
Model summary: $R = 0.567$ , $R^2 = 0.374$ , $AdjR^2 = 0.317$ , $F = 12.345^*$				

CWEQ, conditions for work effectiveness questionnaire-II; PES, psychological empowerment scale; SE, standard error.

\*  $P < .001$ .

†  $P < .01$ .

‡  $P < .05$ .

Zealand,<sup>15</sup> where nurses' leadership behavior 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 patients with COVID-19, bed capacity, and patient-to-nurse ratio, may affect nurses' leadership practices. The result supported the proposition of the Kouzes and Posner leadership model,<sup>12</sup> and also was similar to those of studies that revealed that nurses who perceive a strong structural and psychological empowerment felt more independent and motivated in their work<sup>29</sup> and demonstrated leadership behaviors.<sup>30,31</sup> These findings indicated that structuralpsychological 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.<sup>32</sup> 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.<sup>33</sup>

### 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.

### Implications for Emergency Nurses

This study suggested that the number of patients with COVID-19, bed capacity, and patient-to-nurse ratio might predict nurses' leadership practices. The result is consistent with those other studies<sup>34-36</sup> that confirmed that nurses had learned how to make quick decisions in uncertain situations. Early in the COVID-19 pandemic, little was known about the disease. The crisis brought many challenges for health care managers, including a high volume of patients with COVID-19 and a continuous need for additional beds and supplies. This critical situation, especially in the emergency department, developed significant concerns and challenges for the nursing staff. However, nurses found innovative strategies to lead and practice independently to enhance the 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.<sup>36,37</sup>

### Conclusion

This study was intended to examine the levels of perceived clinical leadership practices and explore the relationships between clinical leadership practices and structural and psychological empowerment in Jordanian nurses working in emergency departments during the COVID-19 pandemic. Overall, the findings revealed that Jordanian emergency nurses believed they performed clinical leadership practices and were 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 with better communication and management skills, during critical situations such as pandemics.

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## Author Disclosures

Conflicts of interest: none to report.

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