Evaluation of the Impact of an Education Program on Self-Reported Leadership and Management Competence Among Nurse Managers

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Abstract

Background: Developing leadership and management competencies for nursing managers is critical to the effective leadership of others and driving team and organizational performance. This paper aimed to evaluate the impact of a system-wide nursing leadership quality improvement initiative in a network of four public hospitals and one specialized outpatient center in the United Arab Emirates (UAE). The initiative was designed to enhance nursing middle managers' leadership and managerial competencies.

Methods: This is a quantitative evaluation following the Standards for Quality Improvement Reporting Excellence (SQUIRES) guidelines. Secondary Data analysis of a pre- and post-course self-assessment for 105 middle nursing managers who attended a nursing leadership quality improvement training program between December 2017 and April 2019.

Results: Following participation in this quality improvement initiative, the paired sample *t*-test analysis demonstrated a statistically significant difference between the pre- and post-assessments total and individual leadership domains mean scores.

Conclusion: Attending well-structured nursing leadership quality improvement programs positively enhances nurse managers' professional abilities and perception of their management and leadership competencies. Leadership development programs should equip managers with the skills and tools to achieve their professional goals effectively and support their transition to becoming expert nurse leaders. Healthcare institutions' ethical obligation is to provide them with the necessary resources and training to achieve this goal.

Keywords

quality improvement, nurse managers, United Arab Emirates, leadership development, management, professional development, nursing

Introduction

Health care is a complex and rapidly growing field globally with growing quality expectations. The World Bank urged all governments to have a national policy and strategy demonstrating a commitment to delivering safe and high-quality health services and achieving universal health coverage by 2030 (The World Bank, 2018). In the United Arab Emirates (UAE), the country's strategic vision outlines an ambitious plan for world-class healthcare services in which the country aims to become among the best countries in the world in terms of healthcare quality by the year 2021 (The

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UAE Government, 2018). The aspiration for healthcare sector transformation expects all government health entities, including the UAE Ministry of Health and Prevention at the federal level, to develop and launch leadership quality improvement programs to build the sector's leadership and innovation capacity (Ministry of Health and Prevention, 2017). The programs are intended to positively impact the leaders' abilities, which will, in turn, help achieve a better patient experience and deliver services matching those internationally renowned. A UAE example is a program administered by Cleveland Clinic Abu Dhabi in collaboration with the American Organization of Nurse Executives. The program provided multinational inter-professional staff with the required knowledge and skills to build their leadership and shared governance abilities and incorporate them into their daily practice (Hancock, 2018).

The role of nurse managers is particularly important in the continuum of health care reform. Nurse managers play a critical role in effectively managing the workplace and guiding nurses to deliver high-quality and cost-effective care that ensures positive patient and clinical outcomes (Drew & Pandit, 2020; Guedes dos Santos et al., 2018; Salmond & Echevarria, 2017). The COVID-19 pandemic has caused a significant shortage of nurses and other healthcare providers due to the rapidly rising demand for healthcare services (Fernandez et al., 2020). As the COVID-19 pandemic's impact intensifies globally, the need for effective and resilient nurse leaders is also exacerbated. Leaders must be more innovative and responsive to any demands from the organizations and the communities they serve. Given the current healthcare crisis, hospitals' leadership has no option but to establish and implement a culture where staff nurses and nurse managers feel valued and well supported. Without this support, nurses are more likely to experience burnout and will end up moving out of the nursing workforce (Fernandez et al., 2020).

Leadership is the most significant factor in shaping the organizational culture, and it is fundamental to ensuring that the necessary leadership behaviors, strategies, and qualities are developed (West et al., 2015). Nursing executive leadership and middle managers must possess strategic skills and knowledge to solve complex issues and problems. Several studies support the opinion that strong leadership is a key driver in addressing global healthcare concerns (Figueroa et al., 2019; Roche et al., 2015). However, Daly et al. (2015) noted that nurses must possess the knowledge, skills, and a caring and compassionate attitude to be successful leaders or managers in today's rapidly changing healthcare systems.

Implementing quality improvement initiatives to develop the leadership and management competencies should focus on equipping the nurse managers with the essential skills, behaviors, and tools needed to effectively lead others and drive their team and organization performance confidently (Wright, 2019). Leadership development is a strategy that can help them build their skills, guide them in overcoming work-related obstacles, and make changes that benefit the patient and the entire organization. Developing nursing managers' leadership and management skills is not an easy task, considering the overwhelming workload they must deal with and continual organizational change. Hospitals' executives must view leadership development as one of the basic needs and requirements for their organization's success. Several healthcare organizations have launched leadership and management quality improvement programs for their managers and those aspiring to become managers, which significantly improved these organizations' service quality and positive outcomes (Baron, 2016; Holmberg et al., 2016; Reitz et al., 2020; Swearingen, 2009; Vatan & Temel, 2016).

Purpose

The purpose of this paper is to evaluate the impact of the development and implementation of leadership and management quality improvement program aimed at enhancing the leadership capacity and managerial competence of nursing middle managers in a network of public hospitals in the UAE.

Methods

Design and Setting

Quantitative evaluation following the Standards for Quality Improvement Reporting Excellence (SQUIRE) Guidelines (Davies et al., 2015) has been utilized. The evaluation covered secondary data analysis of cross-sectional pre-and-post assessment scores. The assessment was conducted as part of a leadership professional development program for nursing middle managers in a network of public hospitals in the UAE consisting of four hospitals and one specialized outpatient center. The programs were implemented between December 2017 and April 2019.

Data Collection

The programs participants' anonymized dataset was obtained after permission from the Nursing Education Team of the hospitals' network. The dataset was stripped of all identifying information before it was provided to the study team. Participants' names were replaced with serial numbers, and the study team could not link the data to the participants from whom it was originally collected. The dataset included only the pre- and post- assessment scores and the demographic data.

Participants

The hospitals' network had a total of 1,320 budgeted nursing positions. Nearly 20% of those positions were assigned managerial responsibilities (Assistant Director, Manager, Senior Charge Nurse, Clinical Resource Nurse). Each training

session was attended by 21 participants, with 105 participants attended over nearly a year and a half. Candidates were enrolled in the program as part of their professional development activity and based on a recommendation from the nurse executive. The main criteria for attending were working in the hospitals' network in a nursing middle management position for more than 3 months.

Description of the Quality Improvement Program

In September 2016, the Nursing Education Steering Committee in the hospitals' network conducted the annual learning needs evaluation for all nursing staff, including nurses carrying managerial responsibilities. The purpose of the evaluation was to identify educational and training requirements needed to prepare the nursing staff annual professional development schedule. The schedule aims to improve the network nursing staffs' performance, skills, and abilities and to help them earn the necessary continuing education hours for license renewal. Identifying these requirements would also allow the nursing executive leadership to channel available resources to areas of most tremendous demand, which would, in turn, enhance the nursing workforce productivity and quality of nursing services. The learning needs evaluation results demonstrated a great need for leadership and management training programs. The steering committee, which included representatives from all hospitals and was chaired by one of the nursing executives, further analyzed this finding and decided to build and execute a leadership and management development program that satisfies the nurse managers' specific requirements. The team established the program outlines, goals, material, methodology, duration and tailored the content based on the organization's context. The intensive 3-day program covered a total of 24 training hours. The content focused on the day-to-day management skills and utilized interactive and hands-on group sessions, case studies, and live scenarios. All speakers in the program were nurse executives and senior administrators. The program was approved for continuing education hours.

Before each training session and as part of the program requirements, participants completed a generic Management Competency Self-Assessment. Upon completing the assessment, selected speakers from the program privately discussed the assessment results with each participant so they become aware of their leadership and management abilities. Participants feedback in the post-workshop evaluation surveys highly praised the one-on-one sessions since it gave them better insight into their leadership abilities and helped direct their attention to the areas of importance. After completing the training, the workshop coordinator advised participants to implement the skills they learned during the program in their daily work and directed them to develop an attainable set of leadership goals they want to achieve during their supervised leadership experience.

The nursing executives were notified to mentor participants from their respective hospitals and guide them as they implement the skills they have learned. They were also asked to evaluate the candidate's goals and were encouraged to share their knowledge, skills, and experience relevant to their hospitals. To assess the program's effectiveness and its impact on the participants' leadership and management competence, the workshop coordinator communicated with participants three months after completing the program and asked them to complete the post-program Self-Assessment.

Healthcare delivery is continually evolving, and all leaders are charged with the responsibility to improve care through continuous quality improvement activities (Backhouse & Ogunlayi, 2020; Fiscella et al., 2015; Mitty, 2007), and this QI project is designed with that intent. Significant literature exists detailing the unique differences and the overlaps associated with quality improvement projects versus research initiatives (Fiscella et al., 2015; Hall et al., 2020; Hunt et al., 2021; Stiegler & Tung, 2017). Both quality improvement and research projects have the potential to improve care; however, Hunt et al. (2021) stated that "QI projects do not typically require the same ethical approval as research projects" (p. 1). This statement does not mean that QI projects are not rigorously governed with respect to ethical principles (Mitty, 2007). Subsequently, this project was conducted under the governing oversight of the hosting hospital quality assurance and executive leadership committee and in keeping with guidelines such as those detailed in available ethical guidance tools in which principles of transparency, communication, non-coercion, and participant feedback are followed (Alberta Innovates, 2017). For example, completion of the Self-Assessment questionnaires and engagement in interviews was not compulsory, and staff had the right to decline without adverse consequence. However, all chose to participate since they valued the opportunity for individualized feedback as they indicated in their post-workshop evaluation surveys (100% response rate). In further keeping with ethical principles, scores of the assessments were stored in a confidential Excel file, and the results were later de-identified during analysis and within this publication.

Leadership and Management Assessment Measures

Measures included demographic and Management Competency Self-Assessment. The demographic questions included gender, age, job title, nationality, marital status, education level, working area, and years of nursing experience. The Management Competency Self-Assessment is a generic leadership assessment tool that aims to assess manager's perception of their leadership skills in 12 pre-identified domains, including leadership, management, decision making, change management, time management, problem-solving, delegation, motivation, communication, people management, anger management, and creativity skills.

The Management Competency Self-Assessment was developed in-house by a group of senior nursing educators with extensive leadership background through compiling questions from various sources and consists of 195 items. While developing the assessment, the project team's consideration was to better understand participants' perception of their skills rather than focusing on examining the underlying factors that decide the robustness of the assessment. Therefore, the educators performed a systematic and comprehensive evaluation of face validity for all questions to ensure that the self-assessment questions were relevant and suitable for the program. Oluwatayo (2012) presented four criteria for evaluating the face validity of the measuring instrument, including relevant, reasonable, unambiguous, and clear. The feedback shared by the educators with the nurse executive chairing the education steering committee was that the

Table 1. Descriptive Summary of Demographic Variables (*n*-105).

Variable	Frequency	Percentage
Gender		
Male	31	29.5
Female	74	70.5
Age		
31–40 years	62	59.0
41–50 years	38	36.2
>=50 years	5	4.8
Job Title		
Charge nurse	42	40
Senior charge nurse	33	31.4
Clinical resource nurse	29	27.6
Assistant director of nursing	1	1.0
Nationality		
Arab	48	45.7
Asian	49	46.7
Western	4	3.8
African	4	3.8
Marital status		
Married	86	81.9
Single	15	14.3
Divorced	4	3.8
Education		
Diploma	5	4.7
Bachelor	84	80.0
Master	15	14.3
Others	1	1.0
Working unit		
In-patient	77	73.3
Outpatient	28	26.7
Years of experience		
4 years below	1	1.0
5–10	37	35.2
11–15	13	12.4
16–20	40	38
21–25	11	10.5
26 above	3	2.9

questions meet these requirements and are suitable for the identified purpose. Responses for the questions were captured using a Likert scale, with answers ranging from (Not at All—1, rarely—2, Sometimes—3, Often—4, and Very Often—5). Scores are summed for the individual domains and the entire assessment. Higher scores indicate a higher perception of leadership ability in the respective domain, while lower scores indicate a lower perception.

Data Analysis

The evaluative data have been analyzed in version 23 of the Statistical Package of Social Science (SPSS) (IBM Corp, 2015). We utilized descriptive statistics to analyze the participants' demographic data. We calculated each leadership domain's mean score to establish the participants' perception of their leadership and managerial competence in each area. The higher the score for each domain, the higher the participants' perception of their competence. We also calculated the total mean score for all domains. We performed a paired sample *t-test* analysis to assess the difference between the pre- and post-assessments total and individual domains mean scores. We also computed the Pearson Correlation coefficient to evaluate the relationship between attending the training program and participants' post-assessment domains mean scores. To assess the internal consistency reliabilities for the assessment, we calculated Cronbach's alpha coefficient.

Results

As shown in Table 1, nearly 70% of the participants in this quality improvement were females, and 30% were males. Eighty-seven percent was between the age of 31 and 40. Most of the participants (80%) had a bachelor's degree in nursing, and nearly 73% had served in an in-patient setting. Approximately 72% were either Charge Nurses or Senior Charge Nurses. About 82% reported being married. Nearly 38% of participants had years of experience ranging from 16 to 20, and nearly 35% fell within the 5–10 years range.

Graph 1 shows that the managers' post-assessment total mean score was better than the pre-assessment score after finishing the training program (pre 58.55, post 61.25). Moreover, the graph is showing a better post-assessment mean score for each leadership domain in the assessment. Out of the 12 domains analyzed, management skills have the highest mean scores (pre 76.48, post 79.94) followed by decision-making skills (pre 64.22, post 66.78) and motivation skills (pre 63.36, post 66.76). Delegation skills have the lowest scores (pre 40.42, post 43.22). Using paired sample *t-test*, the results in Table 2 displays the statistically significant differences between the pre-assessment and post-assessment total mean scores $t(104) = -4.900$, $p < .001$. The effect size is ($\eta^2 = .51$), which means that the post-assessment total mean scores are nearly half a standard deviation better than the pre-

Table 2. Comparison of Nurse Manager's pre- and post-management competency self-assessment scores (n-105).

Leadership & management traits	Leadership competency scores			
	Pre-course Mean (SD)	Post-course Mean (SD)	t-statistics (df)	P-value[a]
Leadership skills	60.60 (6.05)	63.42 (7.64)	−3.100 (104)	.003[a]
Management skills	76.48 (7.85)	79.94 (8.35)	−4.447 (104)	<.001[a]
Decision making skills	64.22 (7.03)	66.78 (8.58)	−2.942 (104)	.004[a]
Change management skills	58.50 (6.11)	61.29 (8.11)	−3.457 (104)	.001[a]
Time management skills	54.61 (5.2)	57.06 (5.8)	−3.641 (104)	<.001[a]
Problem solving skills	57.55 (7.29)	62.32 (8.54)	−5.517 (104)	<.001[a]
Delegation skills	40.42 (5.07)	43.22 (5.99)	−4.353 (104)	<.001[a]
Motivation skills	63.36 (6.50)	66.76 (6.83)	−4.653 (104)	<.001[a]
Communication skills	56.36 (5.46)	57.62 (7.49)	−1.841 (104)	.03[a]
People skills	57.19 (5.72)	59.84 (7.72)	−4.030 (104)	<.001[a]
Anger management skills	58.23 (6.10)	61.60 (8.12)	−4.119 (104)	<.001[a]
Creativity skills	55.49 (6.00)	58.05 (7.90)	−3.269 (104)	.001[a]
Average mean score for all surveys	58.55 (4.15)	61.25 (6.23)	−4.900 (104)	<.001

SD = Standard Deviation, df = degree of freedom.
[a]Sig-two-tailed test.

Table 3. Paired Sample Correlation (n-105).

Leadership training program overall	Correlation	
	R	P-value
Leadership skills	.163	.112
Management skills	.519	<.001[a]
Decision making skills	.366	<.001[a]
Change management skills	.351	<.001[a]
Problem Solving skills	.383	<.001[a]
Time management skills	.225	.021[a]
Delegation skills	.305	.002[a]
Motivation skills	.371	<.001[a]
Communication skills	.443	<.001[a]
People skills	.529	<.001[a]
Anger management skills	.332	.001[a]
Creativity skills	.363	<.001[a]

[a]Sig-two-tailed Pearson correlation coefficient.

assessment scores, and this is considered a medium effect size (Cohen, 1977). Additionally, the table displays a statistically significant difference between the pre- and post-assessments for the leadership skills $t(104) = −3.100$, $p = .003$; management skills $t(104) = −4.447$, $p < .001$; decision-making skills $t(104) = −2.942$, $p = .004$; change management skills $t(104) = −3.457$, $p = .001$; time management skills $t(104) = −3.641$, $p < .001$; problem-solving skills $t(104) = −5.517$, $p < .001$; delegation skills $t(104) = −4.353$, $p < .001$, motivation skills $t(104) = −4.653$, $p < .001$; communication skills $t(104) = −1.841$, $p = .03$, people skills $t(104) = −4.030$, $p < .001$; anger management skills $t(104) = −4.119$, $p < .001$, and creativity skills $t(104) = −3.269$, $p = .001$.

Results of the Pearson correlation coefficient in Table 3 indicated that there is a significant positive and moderate association between attending the workshop and the domains of people skills ($r = .529$, $p < .001$), management skills ($r = .519$, $p < .001$), and communication skills ($r = .443$, $p < .001$). The coefficient also showed a significant positive but weak correlation with the domains problem-solving skills ($r = .383$, $p < .001$), motivation skills ($r = .371$, $p < .001$), decision-making skills ($r = .366$, $p < .001$), creativity skills ($r = .363$, $p < .001$), change management skills ($r = .351$, $p < .001$), management skills ($r = .332$, $p = .001$), and delegation skills ($r = .305$, $p = .002$). Leadership skills ($r = .163$, $p = .112$) and time management skills ($r = .225$, $p = .021$) had a very low correlation. The previous results indicate that attending the workshop was associated with higher scores in the post-workshop assessment. Cronbach's alpha coefficient for the entire assessment tool was .93, indicating good internal consistency.

Discussion

This paper explored the impact of implementing a comprehensive three-day quality improvement nursing leadership development program in a network of public hospitals in the UAE on enhancing nursing middle managers' perception of their leadership abilities. The intended outcome of this transformational program was to build the nurse managers' leadership capacity and advance them into expert leaders. The previous analysis illustrated that the leadership and management development programs positively improved participants' perceptions of their leadership and managerial competencies. The program pre- and post-assessments total mean scores for all domains and the individual domains have increased and were statistically significant, suggesting that attending this quality improvement program enhanced participants' perception of their skills in the selected domains. Likewise, the results suggest that the process utilized in developing the program syllabus and content

effectively contributed to achieving the intended outcomes. These findings are consistent with several studies focused on developing nurse managers' leadership competencies (Cohrs et al., 2019; Göktepe et al., 2018; Paterson et al., 2015; Titzer et al., 2014).

Graph 1 shows that the difference between the managers' pre- and post-workshop assessments scores is small for the total and individual leadership domains. While the difference is statistically significant, indicating that there was an effect for the program and that the program enhanced participants' perception of their skills, one might want to consider whether the effect was real and large enough to make a difference. For this reason, we reviewed the practical significance to assess the strength of the relationship between the two scores. We also considered the remarks of the subject matter experts to determine whether the effect is meaningful in the real world (Kalinowski & Fidler, 2010; Schober et al., 2018; Schuele & Justice, 2006).

Practical significance is typically evaluated by testing the effect size, and in this study, we reported a medium effect size (.51). As for subject matter experts, our nursing executives reported that they have witnessed positive change in the managers' human, organizational, and structural capacities. In terms of human capacity, they have demonstrated a better ability to articulate workforce management and staffing strategies in their units and relate their new knowledge to budgeting processes and the financial planning model adopted by the system's nursing leadership. As for organizational capacity, the managers demonstrated their new understanding of the operational planning process by developing operational plans for their units and aligning unit activities with the hospital's strategic goals. In addition, they have demonstrated the ability to inspire nurses through communication and team-building skills as well as engage them in the unit's evidence-based initiatives. Lastly, the managers showed their structural capacity by focusing on outcomes management and improving the delivery of nursing services. This was reflected in the improved knowledge of patient outcomes Key Performance Indicators (KPIs) adopted in our system and the manager's ability to empower nurses to improve the results of several KPIs. These reported outcomes are consistent with those of similar leadership and management development programs (Göktepe et al., 2018; Vatan & Temel, 2016).

In this project, participants' post-assessment scores in management, decision-making, and motivation domains were higher than the others. These high scores suggest that the nurse managers have a stronger perception of their ability in these areas, which may be influenced by how they work on the ground and the need to use these skills in their daily work. According to Chuang (2013), leadership is people-oriented, while management is task-oriented and requires directing and controlling. For years, both concepts have drawn researchers' attention since they are necessary competencies for delivering high-quality nursing services.

However, it seems that management appears to attract more nurses' minds, which may explain the high score in this domain (Chuang, 2013). The high scores in decision-making and motivation skills, on the other hand, may indicate that the managers became confident and experienced over time in these two competencies since they have frequently used them in their role as caregivers. Their experience and how they function may have also contributed to developing their decision-making skills. Nurse Managers often meet regularly, and West et al. (2015) suggested that these meetings and working in groups increase motivation and establish strong mutual support among the team members. Likewise, the organizational culture could have been another contributing factor for increasing staff motivation (Sowmya et al., 2018). According to Sowmya et al. (2018), public sector leaders in UAE continuously demonstrate participatory and situational leadership approaches, making team members feel valued and supported.

One interesting finding is the low scores in delegation skills, considering that delegation is a critical component of empowerment and one of the required skills in managing the delivery of high-quality care. In a study conducted by Yoon et al. (2016) in a long-term care hospital in Korea, the authors examined the association between confidence in delegation and the leadership of registered nurses. The results revealed that nurses' confidence in delegation is closely related to the clinical experience in the concerned staff's unit, length of the nursing staff experience, delegation training, and leadership style (Yoon et al., 2016). Thus, the authors suggested improving nurses' confidence in delegating tasks through ongoing in-service training and educational programs to help them learn practical delegation skills and enhance their leadership capacity (Yoon et al., 2016). Although our leadership quality improvement programs are a step toward improving nurses' delegation skills, the post-assessment low scores in this evaluation indicate a need for additional training to enhance managers' competence in this area.

People skills are essential competencies for nurses and nurse managers, and our evaluation revealed that it is correlated with the offered program. Hoffman and Tadelis (2021) studied the importance of a manager's interpersonal skills in handling subordinates and influencing employee outcomes. Also, they explored how the impact of people management skills varied across hierarchy levels, nationality, and occupation. The result demonstrated a positive relationship between people management skills and employee retention, which they considered critical in highly skilled companies. Moreover, the results showed that replacing a manager in the 10th percentile of people management skills with one in the 90th percentile reduces total subordinate labor costs by 5% of lower staffing costs due to less attrition. Likewise, managers with better people management skills have higher self-performance scores and are more likely to be promoted and receive larger salary increases, considering that they are placing significant value on these skills. It is
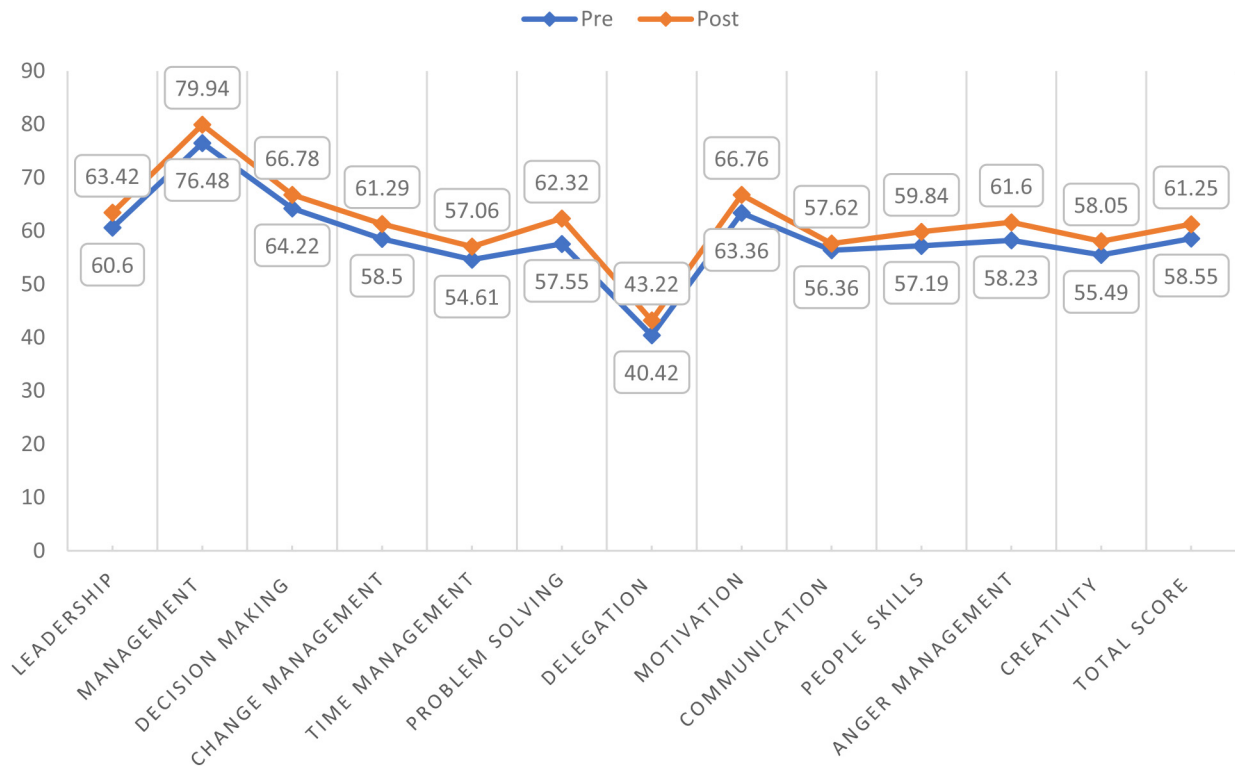
Graph 1. Comparison of Nurse Manager's pre- and post-assessment mean scores for the individual leadership domains and the total score (*n*-105).

noteworthy to mention that even though participants in our leadership development programs appeared to be task-oriented since they scored higher in management skills, they also scored high in people skills. This observation can be attributed to the fact that the managers may have mixed people skills as caregivers with people skills as managers.

Conducting several leadership quality improvement programs from December 2017 to April 2019 suggest that the hospitals' network has established a positive culture for developing nursing leaders' managerial abilities and competence. Adopting such a culture empowers the nurse managers and positively impacts their performance. Andriotis (2018) stated that positive culture is the mysterious force that drives a workforce to perform better and must not be neglected. It also has the most prominent attributes for employee satisfaction and talent retention, which organizations should invest time and effort in improving. McGarity et al. (2020) also established the importance of adopting leadership development and training programs for frontline nurse leaders to augment knowledge, skills, and abilities in care coordination and building and sustaining healthy work environments. The authors suggested that attending nurse leader training programs cause the leaders to feel more confident and support their transition to expert leaders, which in turn would improve patient and staff satisfaction (McGarity et al., 2020).

Learning Needs Assessments can be viewed as supporting factors for the success of our programs. Various studies

support this assumption (Kojuri et al., 2015; Leskiw & Singh, 2007). These studies suggested that substantial improvements in leadership skills could be made from the interventional strategies that evolved from the needs assessment. Likewise, findings of Lacerenza et al. (2017) and Richter et al. (2016) indicate that leadership training programs would be most effective when the program is based on needs analysis, includes observations, uses multiple delivery methods, and involve the target group in shaping interventions tailored to their needs. Customizing the program based on the groups' learning needs may also improve participants' management skills and learning experience. Although the workshops' procedure and implementation process was standardized, we customized the program content to match the groups' learning requirements. Göktepe et al. (2018) studied managerial competencies among nurse managers in Turkey, and their findings supported this assumption. Ayeleke et al. (2019) concluded that interventions that are flexible, use a variety of training techniques, and are designed with the organizational contexts in mind can improve staff competence and performance in the training and professional development.

Participating actively in the learning process and practicing new skills or testing new knowledge was identified as the best learning style in these programs since learning activities incorporating interactive methods such as group discussions, case studies, and practical exercises improve the

learning experience and enhance leadership skills (Leskiw & Singh, 2007). Leskiw and Singh (2007) studied best practices in the leadership development process and identified those essential practices required for successfully developing organizational leaders. They put together six steps for developing leaders in an organization, including needs assessment, audience selection, supporting infrastructure, established learning system, effective evaluation mechanism, and rewarding success and improving deficiencies. The involvement of the nurse executives in the planning and execution of the programs also contributed significantly to its success (Swearingen, 2009; Wright, 2019). Swearingen (2009) indicated that leadership development is not an event or quick process but rather a journey that requires the support of the nursing leadership. Wright (2019) suggested that it is essential to seek the support of and input from the current leaders about the organization-specific challenges and needs to create a successful leadership development program. Figueroa et al. (2019) also affirmed that it is essential to consider the current and emerging challenges for healthcare leaders posed by the complex healthcare environment since these challenges must be recognized to enhance the leadership capacity. In conclusion, the education team's plans and the support of the nursing leadership led to the development of such an effective quality improvement program.

Limitations

This study provided insight and benchmarking material for the network senior nursing management regarding the leadership quality improvement program's impact on developing nursing middle managers' competence. Findings should be interpreted with caution due to the potential for response bias. Participants in the program relied on Self-Assessment to report their leadership skills and competence, and consequently, they may have overestimated their leadership capabilities. Further analysis and follow-up are needed to identify the managers' actual skills. Moreover, the project team used face validity to ensure that the assessment questions were relevant and acceptable. Although some researchers emphasized the importance of assessing face validity since the acceptability of a scale is critical to its utility (Bannigan & Watson, 2009), and this form of validity influences how well the idea of a theoretical construct is described in operational dimensions (Bolarinwa, 2015). Others believed that face validity is a subjective judgment and is often considered the weakest form of validity (Taherdoost, 2016).

Implications for Nursing Practice

This evaluation's findings can help plan and develop leadership quality improvement initiatives for any healthcare organization in the future. It also contributes to the growing literature on leadership training and development in nursing. Such programs may benefit the nursing middle

management and the nursing leadership succession planning strategies because they influence the practice environment (Phillips et al., 2018). Therefore, nursing leadership quality improvement programs can be considered one of the mandatory requirements for nurses regardless of their level. Furthermore, as we are inclined to prepare nurse leaders for the 21st century, nurturing nursing staff continuously is essential for their career development. Nursing senior leadership must be proactive and open-minded about developing influential future leaders. Hence, regular assessments and provision of opportunities are necessary for their subordinates' career progression. By maintaining future nurse leaders' competence in leadership, nurses can create a core set of inner values or principles that guide them during their leadership journey (Pidgeon, 2017). It is noteworthy to mention the importance of reviewing participants' feedback since their evaluation provides valuable input about revising and improving the program content. Finally, we recommend that future studies assess such programs' effect on staff satisfaction, patient outcomes, and nursing care quality.

Conclusions

Leadership and management are essential components of any healthcare organization's clinical care delivery system. Findings from this evaluation indicate that leadership quality improvement initiatives positively influence and improve nursing middle managers' leadership and management competencies. Our hospital network nurse executives have noticed a positive impact on the participating managers' leadership skills. The managers on the other hand did show more active engagement and innovation in matters related to patient safety initiatives. They were also able to function based on their new understanding of the utilized nursing practice model structure and processes, which they learned during their participation in the program. This finding supports the delivery of similarly structured leadership programs to strengthen critical leadership skills.

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