

Original Article

## Development of Managerial Competencies for First-level Nurse Managers in Turkey

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### Abstract

**Background:** First-level nurse managers play a key role in providing high quality and safe healthcare services; however, they are challenged by rapidly changing conditions. The development of nurse manager skills and competency requires attention to determine their educational needs.

**Purpose:** This study evaluated the contribution of the specially developed “Nurse Manager Development Program” to the managerial and leadership competencies of first-level nurse managers.

**Methods:** This quasi-experimental research utilized a pre- and post-test design with 18 first-level nurse managers who attended the education program. Most of the participants were women and had a Bachelor’s degree. Data were collected using the Managerial Competency Self-Assessment Scale.

**Results:** Significant differences were discovered between nurses’ pre- and post-test scores and managerial competency levels.

**Conclusion:** The program made a key contribution towards enhancing nurses’ professional skills and their managerial competencies; however, how nurse managers will apply their acquired skills and competencies over the long term still needs to be evaluated.

**Keywords:** professional development, leadership, managerial competencies, nurse manager.

### Introduction

The healthcare environment and nursing services are undergoing a rapid change and nurse managers play a key role in providing high quality and safe services to patients in this continuously changing environment (American Organization of Nurse Executives (AONE) 2015; Huston, 2013). For nurse managers to successfully fulfill these vital roles, their management and leadership skills need to be

strengthened (AONE, 2015; The International Council of Nurses (ICN), 2015; Yoder-Wise, 2012).

Because they work in close contact with patients, patients’ families, other healthcare team members, and play a key role in the day-to-day functioning of the healthcare unit, first-level nursing managers notably influence the success of the organization. It has been emphasized that it is of immense importance for first-level nurse

managers, who are the frontline in healthcare services, to have management knowledge and skills and to demonstrate their leadership skills (CAN, 2015; Marquis & Huston, 2015).

It has been reported that nurse managers are selected based on their clinical skills and that their formal preparations for leadership are inadequate (Fennimore & Wolf, 2011; Homer & Ryan, 2013; Titzer et al., 2013). While in some institutions structured training and coaching or mentoring programs are used to train nurses to become nurse managers, in some institutions, nurses are expected to fulfill this role only with their personal characteristics, training, and experiences, and they are not provided with special training (Cadmus & Johansen, 2012; DeCampi, Kirby, & Baldwin, 2010; Titzer et al., 2013; Türkmen & Hisar, 2016; Watkins et al., 2014; Yoder-Wise, 2014). However, it has been reported that the transition from staff nurse to nurse manager is difficult, that their undergraduate education is inadequate, and that they should obtain formal training after graduation to develop their managerial skills and competencies to assist in their adaptation during this period (Cohen, 2013; Doria, 2015).

There have been some studies that have addressed nurse leadership/manager development programs (Mackoff, Glassman, & Budin, 2013; Patton et al. 2013; Spencer, Al-Sadoon, Hemmings, Jackson, & Mulligan, 2014; Titzer, Shirey, & Hauck, 2014). The ICN notes that educational programs are essential to improve the leadership and management skills of nurses in all countries at corporate, local, and national levels (ICN, 2015). It is vital to develop effective leadership by evaluating the objectives and content of specific development programs to promote the leadership capacity of nurses (Bleich, 2016).

In Turkey, duties, authorities, and responsibilities of nurse managers are defined within the framework of the updated Nursing Law of 2007 and the Nursing Regulation, enacted in 2010 (Nursing Law, 2007; Nursing Regulation, 2010). These arrangements give significant responsibilities to nurse managers. In Turkey, although there are graduate and doctoral programs for nursing services management that have existed for many years, post-graduate education programs for training nurse managers are limited (Tatar Baykal & Harmanci Seren, 2014).

## **Aim**

This study was conducted to evaluate-in a private hospital environment-the contribution of the “Nurse Manager Development Program” to the management leadership skills and competencies of first-level nurse managers. The results of this study are expected to contribute to the qualitative improvement of continuing education programs in nursing leadership and management.

## **Methods**

### **Design**

This was a quasi-experimental study that utilized a single group pre- and post-test design.

### **Sample and setting**

The study sample consisted of 20 volunteering first-level nurse managers working at a private hospital who attended the “Nurse Manager Development Program.” The research was completed with 18 nurses who successfully finished the educational program.

A questionnaire consisting of three parts was used as a data collection tool. The first part comprised 12 questions prepared by researchers to identify nurse managers’ socio-demographic characteristics and management experience. The second part was the “Management Competency Self-Assessment Scale,” which contained 23 questions to assess the nurses’ management skills and competencies. The scale was prepared by the researchers based on research study conducted by Kang et al. (2012) and the objectives of the education program. Three scholars who were experts in nursing management reviewed its content validity. Each management competency was assessed on a 10-point scale (1–10). Higher scores indicated higher levels of management competency. The third part was a pre- and post-test prepared in the context of the objectives and content of the education program to evaluate participants’ professional knowledge and competencies.

### **Intervention**

“The Nurse Manager Development Program” was used as an intervention in this study. This program was organized in cooperation with the Continuous Education Center in Nursing affiliated to a (non-profit private) foundation university and the Association of Nurse Managers.

Continuing education standards updated by the American Nurses Credentialing Center in 2013 were adopted as a benchmark when designing the education program. These standards include a gap analysis between current practices in nursing and the most recent scientific findings in the field and the planning, execution, and evaluation of the programs. Informed by these principles, the “Nurse Manager Development Program” was developed according to the following steps:

**Needs assessment:** To evaluate participants’ education needs related to management knowledge and skills and for the gap analysis, separate meetings were held with the nurse executives of the relevant hospital and nurse managers who were to participate in the program. In addition, relevant literature was reviewed for the gap analysis.

**Establishment of the educational planning committee:** For the planning of the training program, an educational planning committee consisting of four educators who were experts in nursing management and continuous education was established.

**Designing of the education program:** The members of the committee identified the objectives of the education program, content and duration of the course, and the name of the educators. The main purpose of the program was to improve the leadership and management skills and competencies of nurse managers, thus enabling them to provide high quality and safe healthcare services to patients hospitalized in the units.

The objectives of the program were as follows: to enable the participants to implement nursing management process effectively, to implement total quality management processes, to use leadership skills effectively, manage time effectively, to use effective problem-solving methods, to manage the budgeting process, determine the human resources requirements of the unit, to make performance appraisal effective, to determine their staff’s needs for education, to manage requests and complaints effectively, to establish manager-employee

relationships, and to provide effective teamwork in the unit.

The program duration was approximately 80 hours. The face-to-face training was conducted 8 hours a day, once a week, for 10 weeks. Interactive adult learning methods such as group work, team-based learning, case studies, and role playing were implemented, with participants encouraged to come to classes after reading recommended studies and publications. The course passing score was 75 out of 100 points.

### **Data collection**

At the beginning of the education program, the participants were requested to complete a questionnaire to identify their socio-demographic characteristics and management experiences, the “Managerial Competency Self-Assessment Scale” to evaluate their management skills and competencies, and a pre-test questionnaire to identify their level of knowledge in leadership and management. At the end of the course, the participants were administered the “Managerial Competency Self-Assessment Scale” to evaluate their management skills and competencies and the final test to identify their level of knowledge in management.

### **Data analysis**

Data were imported into Statistical Package of Social Science (SPSS) version 20.0 software package for analyses. The Wilcoxon test was used for the comparison of pre- and post-test scores and managerial competency self-assessment results. The Mann-Whitney U test was used for the comparison of nurses’ pre- and post-test scores depending on their professional experience and educational background and their managerial competency self-assessment scores.

### **Ethical considerations**

The study and its methods were approved by the Ethics Committee of Koc University. Participation in the study being voluntary, all the participants were duly briefed on the purpose of the research study before providing their written consent.

**Table 1. Comparison of nurse managers' pre- and post-test scores and pre- and post-course self-assessment managerial competency scores (n = 18)**

Nurse Manager Development Program	Test (exam) Score			
	Pre-test Mean (SD)	Post-test Mean (SD)	Z	p
	63.8 (4.9)	84.9 (4.8)	-3.680	<.001
Managerial competencies	Managerial competency score			
	Pre-course Mean (SD)	Post-course Mean (SD)	Z	p
Business management process	7.0 (1.6)	8.3 (0.9)	-2.653	<.01
Delegation of authority	7.0 (1.4)	8.1 (0.9)	-3.305	<.01
Knowledge of national health and nursing legislation	6.0 (1.6)	7.9 (1.0)	-3.436	<.01
Application of total quality management	7.2 (1.8)	8.7 (0.8)	-2.949	<.01
Application to risk management	7.2 (1.7)	8.6 (0.6)	-3.969	<.01
Outcome monitoring	8.2 (1.1)	9.1 (1.0)	-2.391	<.05
Leadership ability	6.8 (1.3)	8.9 (0.8)	-3.803	<.001
Time management	6.9 (1.3)	8.6 (1.1)	-3.446	<.01
Meeting management	7.0 (1.4)	8.7 (1.0)	-3.334	<.01
Problem-solving ability	7.2 (1.0)	8.4 (0.8)	-3.401	<.01
Effective decision-making	7.4 (1.0)	8.6 (0.8)	-3.496	<.001
Budgeting	6.7 (1.4)	7.7 (1.6)	-2.346	<.05
Monitoring for budget management	6.5 (1.6)	8.1 (1.2)	-3.267	<.01
Nurse labor planning	7.3 (2.2)	7.9 (1.4)	-1.297	>.05
Performance appraisal	7.2 (1.4)	8.3 (1.0)	-2.732	<.01
Employee empowerment and continual improvement	7.3 (1.5)	8.8 (0.8)	-3.114	<.01
Build teamwork in a work unit	7.6 (1.3)	8.8 (0.9)	-2.826	<.01
Empowerment communication between manager and employees	7.4 (1.3)	8.7 (0.6)	-2.954	<.01
Managing conflict	7.1 (1.3)	8.1 (1.2)	-2.252	<.05
Employees' motivation	7.4 (1.1)	8.7 (0.7)	-3.241	<.01
Managing complaints	7.3 (1.0)	8.6 (1.2)	-2.763	<.01
Efficient running of daily unit operations	8.9 (1.3)	8.5 (2.2)	-0.037	>.05
Creating a positive work environment	7.7 (1.3)	8.8 (0.9)	-2.847	<.01
<b>Mean</b>	7.2 (0.9)	9.2 (0.5)	-3.680	<.001

SD: standard deviation, EP: education program, Z: Wilcoxon signed-rank test.

**Table 2. Comparison of nurse managers' pre- and post-training test scores and managerial competency self-assessment scores by their educational background, age, and experience (n = 18)**

Educational background, age, and experience of nurses	Pre-training test score		Post-training test score		Pre-training managerial competency self-assessment score		Post-training managerial competency self-assessment score	
	Mean (SD)	Z/p	Mean (SD)	Z/p	Mean (SD)	Z/p	Mean (SD)	Z/p
<b>Educational background of nurses</b>								
Baccalaureate degree (n = 13)	64.2 (5.4)	0.000	83.7 (4.1)	-1.184	7.0 (0.9)	-1.627	8.4 (0.6)	-1.482
Master's degree (n = 5)	62.7 (4.1)	>.05	87.9 (5.5)	>.05	7.8 (0.6)	>.05	8.7 (0.3)	>.05
<b>Age of nurses</b>								
< 35 years (n = 6)	59.2 (2.4)	-3.425	85.1 (3.5)	-0.047	6.9 (0.9)	-0.984	8.1 (0.5)	-0.422
≥ 35 years (n = 12)	66.1 (4.3)	<.01	84.8 (5.5)	>.05	7.4 (0.9)	>.05	8.5 (0.5)	>.05
<b>Total nursing experience</b>								
10–15 years (n = 13)	61.8 (3.2)	-2.503	85.8 (4.3)	-0.888	7.2 (0.8)	-0.394	8.4 (0.5)	-0.099
More than 15 years (n = 5)	68.8 (5.6)	<.05	82.4 (5.7)	>.05	7.3 (1.1)	>.05	8.5 (0.5)	>.05
<b>Work experience in current hospital</b>								
1–9 years (n = 7)	61.0 (3.2)	-2.024	83.8 (4.3)	-1.088	7.4 (0.6)	-0.544	8.5 (0.5)	-0.318
More than 9 years (n = 11)	65.5 (5.2)	<.05	85.6 (5.2)	>.05	7.1 (1.1)	>.05	8.5 (0.6)	>.05
<b>Work experience as a manager</b>								
< 5 years (n = 5)	61.6 (2.7)	-1.302	84.0 (2.9)	-0.543	6.4 (0.5)	-2.712	8.1 (0.4)	-1.926
≥ 5 years (n = 13)	64.6 (5.5)	>.05	85.2 (5.4)	>.05	7.6 (0.8)	<.01	8.6 (0.5)	>.05

SD: standard deviation, Z: Mann-Whitney U test.

## Results

Of the participants, 94.4% (n = 17) were women, 66.6% (n = 12) were aged ≥ 35, 72.2% (n = 13) had a Bachelor's degree, and 27.8% (n = 5) had a Master's degree. Their mean lengths of service in the profession, in the establishment, and in their current position were  $14.4 \pm 3.5$ ,  $9.0 \pm 2.3$ , and  $7.0 \pm 4.3$  years, respectively. Of the participants, 88.9% (n = 16) previously received a 3-day in-service training on management and leadership skills, and 5.6% (n = 1) received an 8-day nurse manager development course.

According to their statements, 33.3% (n = 6) were very pleased with their jobs, 66.7% (n = 12) were pleased with their jobs, 61.1% (n = 11) experienced no difficulties in the efficient running of daily unit operations, and 38.9% (n = 7) had difficulties dealing with abrupt changes in human resources planning.

Remarkably significant differences were found between nurse managers' pre- and post-training test score averages as well as between their pre- and post-training managerial competency self-assessment score averages. Participants' post-training competency scores were found to be

significantly higher than their pre-training scores in all areas of competency except staffing and efficient running of the unit (Table 1).

Nurse managers aged  $\geq 35$  years, with  $\geq 15$  years of experience in the profession, and with  $\geq 10$  years of experience in the current hospital demonstrated significantly higher pre-training test scores in comparison to others. Moreover, nurse managers with  $\geq 5$  years of experience had higher pre-training managerial competency self-assessment scores in comparison to others. Finally, no significant differences were noted between nurses' post-training test scores and their managerial competency self-assessment scores when evaluated based on their age or experience (Table 2).

### Discussion

This study examined the impact of the "Nurse Manager Development Program" on the professional knowledge levels and managerial competence self-assessment scores of first-level nurse managers. In this study, it was revealed that the training led to a significant increase in nurse managers' managerial competency self-assessment scores. Furthermore, there was a considerable increase in nurse managers' scores in 21 of the 23 management competency areas, with the highest score increase seen in "effective decision-making" and "leadership ability." In several studies, it was reported that there was a significant increase in the leadership and management competencies of nurse managers after the training program (Titzer, Shirey, & Hauck, 2014), that there was a significant difference between their pre- and post-training scores (Mackoff, Glassman, & Budin, 2013), and that their clinical leadership skills improved (Patton et al. 2013). Consistent findings in this study indicate that training programs improve the management and leadership skills of nurse managers.

In the present study, no significant difference was observed between the pre- and post-training scores in the following two management competency self-assessment domains: (1) efficient running of daily unit operations and (2) nurse labor planning. In a pre-assessment conducted prior to the training, the participants gave high scores (8.5 out of 10) to their skills related to running daily unit operations, stating that they experienced no difficulties with planning their work flow. Lack of any difference between pre- and post-training test scores in this

competency area may indicate that nurse managers already felt confident with using their skills in this area before the education program commenced. No meaningful change in the post-training test scores for "nurse labor planning" may be attributed to the fact that human resource planning is usually performed at hospitals by senior level nurse managers and that the skill assessment test done immediately after the end of the education program may not have accurately gauged their acquired levels of competence in staff planning, which takes time and effort to fully master and implement staff planning.

One of the interesting findings of this study is the low scores nurse managers provided in response to pre-training managerial self-assessment questions about health and nursing regulations and budgeting processes. Some studies show that nurses are not acquainted enough with the health and nursing legislation. A study conducted on nurses' awareness of nursing legislations and legal responsibilities indicated that more than half of the nurses did not receive any training related to the legislation or legal responsibilities they were subject to and that a significant part of the nurses either did not know the relevant legislation or were misinformed about them (Karabakır & Cetin, 2016). The finding that the nurse managers had insufficient skills and knowledge about budgeting/finance issues was consistent with prior literature (Kang et al., 2012). In a study by Bai et al. (2017), nurse managers were determined to have insufficient training and education on economic management and nursing economics. Furthermore, in Turkey, given that first-level nurse managers are not given direct responsibility regarding budget management in the nursing/health legislation (Nursing Regulation, 2010), nurse managers' obtaining low managerial competency self-assessment scores in this study was somewhat expected.

However, financial knowledge and budget management have become key competency areas that are desirable in nurse managers with the arrival of the modern management culture (AONE 2015; Doria 2015; Fennimore & Wolf, 2011; Homer & Ryan, 2013; Li & Wivatvanit, 2016). Financial planning is a skill developed by learning and applying, and managers must be competent in budget management (Marquis & Huston, 2015). Higher post-training test scores in both competency areas achieved by the

participants in this study is a good indicator that the program's objectives were achieved. In Fennimore and Wolf's (2011) study, there was also an increase in the post-course scores on post-training finance management.

The current study also reveals that while the pre-training test score averages of nurse managers aged  $\geq 35$  years, with  $\geq 15$  years of experience in the profession, and  $\geq 10$  years of experience working at the same establishment were considerably high, with only those with  $\geq 5$  years of management experience achieving higher scores in management competency areas. Doria (2015) states that in transition from staff nurse to nurse manager, clinical skills and experience may be beneficial; however, they are not sufficient to make someone a successful nurse manager. In this study, nurse managers' clinical experience and training concerning management and leadership may have contributed to the increase in exam success and managerial skill scores.

Lack of any difference between the post-training exam scores and mean managerial competence self-assessment score of the participants, categorized according to their educational backgrounds and professional experience, indicates that the implemented education program had a beneficial effect across the whole group. It has been reported that manager development programs that considering participants' educational needs are beneficial (Blecih 2016; Homer & Ryan, 2013). The results show that the training program met the participants' expectations, helping to fill the gaps in their professional learning.

### Limitations

This study had some limitations. This study was conducted in a private hospital, and the results are only applicable to the first-level nurse managers who participated.

### Conclusion

The nurse manager development training program, based on scientific current data and continuous education principles, was determined to increase nurse managers' knowledge levels and improve their management competencies. Given that the nursing management environment is a highly complex and changing structure, such managerial development training programs provided to nurse managers can contribute to the improvement of nursing service management

processes and the achievement of organizational goals.

### Implications for nursing management

For nurse managers, who work in the complex healthcare environment that is consistently changing, to keep up with their professional development, it may be useful to plan and spread out continuing education programs at the institutional and healthcare system level. Increasing the knowledge, skills, and managerial competencies of first-level nurse managers can contribute to the improvement of both patient and nurses' outcomes. Top-level managers in an institution should provide flexible scheduling and financial support for first-level nurse managers to encourage their participation in continuing education programs.

In addition, given that nurses who take part in or will take part in managerial positions have limited opportunity to have orientation and developmental training, it is vital for nurse managers to demand that they are given opportunity to improve their management and leadership skills. By implementing qualitative and quantitative research methods, it will be useful to demonstrate how nurse managers put knowledge and skills they gain in manager development training programs into practice and to evaluate the effect of the program on patient, nurse, and healthcare organization outcomes in the unit.

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