

Effect of Leadership Styles Training Program on Autonomous Decision Making among Critical Care Nurses at King Faisal Medical Complex, Taif in Saudi Arabia

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Abstract:

Background: The style of nurse manager leadership may be adversely affected by their heavy workloads, which can provide obstacles and difficulties in achieving optimal nursing performance and, eventually, delivering high-quality care. Therefore, managing the workload of nurse leaders is essential to improving overall nursing performance and the capability to influence and motivate nurses to make decisions. **Aim:** To determine effect of leadership styles training program on autonomous decision making among critical care nurses at king Faisal Medical Complex, Taif, in Saudi Arabia. **Methods:** A quasi-experimental design with pretest-posttest was used in critical care units at King Faisal Medical Complex- Taif on 35 head nurses and 200 staff nurses using three tools for data collection in the present study namely; Leadership styles Knowledge Questionnaire, Leadership styles questionnaire and Autonomous decision making scale questionnaire. **Results:** As for total leadership knowledge level, (100%) had a high level of total knowledge immediately after the program, representing the highest percentage recorded across the study, and this remained the predominant level (80.0%) at the three-month follow-up. Regarding the total level it was found that (0%) had high level and raised immediately after program to (69.5%), while markedly decline after 3 months follow up to (15.0%), regarding the total scores, the mean was 105.20 ± 19.74 before the program, reached 176.31 ± 27.21 immediately after while 107.20 ± 18.28 , at the three-month follow-up ($\chi^2=394.074$, $p=0.0001$). **Conclusion** It was concluded that there was a highly significant improvement in head nurses' knowledge level regarding leadership styles throughout the program phases. Also, there was a highly significant improvement in head nurses' level regarding leadership styles throughout the program phases. Additionally, there was a highly significant improvement in nurses' level of autonomous decision making immediately post-program, where nearly two-thirds of the studied staff nurses reached a high level of autonomous decision making (69.5%), followed by a marked decline to 15.0% at the three-month follow-up. **Recommendations:** Create supportive and empowering work environment for enhancing staff nurses' participation in decision making and independent professional judgment. Encourage open communication and shared decision making to promote trust and active participation in patient care decisions.

Keyword: Autonomous Decision Making, Critical Care Nurses, Leadership Styles.

Introduction

Healthcare system is an essential work environment that impacts the patients' and society's healthcare. One of the main principles of a sustainable Vision 2030 that Prince Mohammed bin Salman announced in 2016 was to support and improve the healthcare sectors (Badreldin, et al., 2025). Nurses constitute approximately half of the global healthcare workforce who are mainly providing direct patient care. One of the most important factors affecting patient care outcomes positively and providing quality care service is having the ability to make correct and timely decisions (Ayed, 2025). However, Leadership plays a vital role in nursing, shaping nurses' work performance, autonomy, and decision-making abilities (Lu, et al., 2025)..

Leadership occurs at all levels within an organization. It is the process of supporting others to improve client care and services by promoting professional practice. Effective leadership is demonstrated by staff participation in decision making, the philosophy of the organization, and by the style of leaders within the organization (Junttila, et al., 2023). Leadership competencies influencing staff and stimulating their development are the most important factors that increase staff participation in decision making. However, inadequate leadership can impede nurses' autonomy in decision-making, limit their job satisfaction, and ultimately hinder the quality of patient care (Omidvar, et al., 2025).

A crucial determinant of the sustainability of nursing leadership is the standard of nursing work performance. As a result, nurse leaders must implement various leadership styles that enhance nursing performance, particularly those that promote nurses' willingness to perform better (Cosentino, et al., 2023). Leadership style can be defined as the ability to persuade others to help them accomplish a goal. Leadership and its styles have significant impacts on healthcare organizations and patient safety. These styles affect everyone, from seniors to the newest manager. Furthermore, leadership style may affect the decision-making style and skills of the nurse manager, which is a crucial feature of the nurse role in healthcare organizations. (Abeje, et al., 2025).

Leadership style is viewed as a combination of different characteristics, traits and behaviors that are used by leaders for interacting with their subordinates. Leadership is also considered as the pattern associated with managerial behavior, which is designed to integrate the organizational or personal interest and effects for

achieving objectives (Lu, et al., 2025). According to modern leadership, leadership styles can be categorized as follows: transformational leadership style, transactional leadership style, culture-based leadership, charismatic leadership, and visionary leadership (Alluhaybi, et al., 2026).

The style of nurse manager leadership may be adversely affected by their heavy workloads, which can provide obstacles and difficulties in achieving optimal nursing performance and, eventually, delivering high-quality care. Therefore, managing the workload of nurse leaders is essential to improving overall nursing performance and the capability to influence and motivate nurses to make decisions (Kamaryati, et al., 2024).

Nurse decision-making is the most important feature that affects the quality of care needed for everyday tasks. Therefore, autonomy in nurses' decision-making is vital to professional nursing care. Decision-making is described in the literature interchangeably and uses several terms, such as clinical reasoning, clinical judgment, and decision-making. Autonomy in clinical decision-making is a process that requires nurses to be more knowledgeable, work within a supportive environment, and access appropriate information sources (Alharbi, et al., 2025).

Although nurses are straining to provide high-quality health care to patients, the nurses' limitation of participation in clinical decision-making is ineffective and harmful to the safety of patients. Limited participation in autonomy in decision-making has been shown to have negative impact on staff job satisfaction and work performance in terms of mistrust and resentment in hospital management. As a result, the tension among nurses increased, morale among the staff declined, and job satisfaction and organizational commitment decreased (Sosan, et al., 2025).

Nurses make two types of decisions related to practice: patient care decision that affect direct patient care and condition-of work decisions that affect the work environment or groups of patients. As a result, nurses require greater autonomy and participation in decision making. Greater participation in decision making by nurses results in better outcomes. However, nurse participation in decision making in an organization varies depending on many factors. Factors that influence nurses' decision-making were categorized into four domains; nurses' personal characteristics, organizational factors, patient characteristics and environmental factors (Arends, et al., 2022).

Decision-making is a central aspect of nursing autonomy. Nurses place a high value on their autonomy in clinical practices. Most definitions of autonomy focus on self-direction and control over one's own work. Autonomy is being the master within the prescribed task domain. Nursing autonomy does not only refer to decisions at the bedside about the care of an individual patient, but also decisions about what care the nursing staff delivers and what that care looks like (Lavoie, 2026).

Autonomy in general and autonomous decision-making in particular can be influenced by managerial interventions. Nurse managers have a direct contact with staff nurses; therefore, they can influence nurses' autonomy. Nurses' practice needs autonomy to become powerful because it is noticed that nurses need to take more accurate and urgent decisions in their work. One of the major responsibilities of nurse managers is to support staff nurses to promote their autonomy by improving their skills, abilities, and practices that preserve their autonomy (Altaş, et al., 2024).

Different leadership styles can affect the nurse's autonomy and their ability to make decisions such as improve communication, resolve conflict, and improve relationships, enhance nurses' self-schedule of work, motivating staff nurses, establishing the standard of care, provide a sense of direction, establish trust and cooperation, ensure respect for individuals, and develop staff strengths (Hsiu-Ying, et al., 2022). Nurse managers can initiate interventions at the unit level to promote nurses' autonomy, which will influence job satisfaction and retention as well as patient satisfaction and the quality of nursing care (Ayed, 2025).

Significance of study

Nursing autonomy does not only refer to decisions at the bedside about the care of the patient, but also on ward or unit level to decisions about what care the nursing staff delivers and what that care looks like. Intensive care units focus on treatment for those who are critically ill and interventions to prolong life. Ethical issues arise when decisions have to be made regarding the withdrawal of life-sustaining treatment and the shift to comfort and palliative care. These issues are particularly challenging for nurses when there are varying degrees of uncertainty regarding prognosis.

Therefore, nursing practice needs autonomy to become powerful and sound. If nurses do not recognize that they work in an autonomous

and independent work climate, they will not have the capability to practice in a professional manner. Autonomy is considered as a very critical part of nurses' professional identity and an origin of power during nurses' clinical practice. One of the major responsibilities of nurse managers is to promote staff nurses' autonomy. Thus, they should possess the skills, abilities, and practices that preserve autonomy of staff nurses. So, the current study aims to determine the effect of leadership styles training program on autonomous decision making among critical care nurses at King Faisal Medical Complex, Taif in Saudi Arabia.

Aim of the Study

This study aimed to determine effect of leadership styles training program on autonomous decision making among critical care nurses at king Faisal Medical Complex, Taif, in Saudi Arabia., through the following objectives:

1. Assessing head nurses' knowledge level regarding leadership styles at king Faisal Medical Complex, Taif, in Saudi Arabia.
2. Assessing autonomous decision-making among critical care nurses at king Faisal Medical Complex, Taif, in Saudi Arabia.
3. Implementing leadership styles training program at king Faisal Medical Complex, Taif, in Saudi Arabia.
4. Evaluating the effect of leadership styles training program on autonomous decision making among critical care nurses at king Faisal Medical Complex, Taif, in Saudi Arabia.

Research hypotheses:

The specific research hypotheses were:

- H1.** The head nurses' level of leadership styles improves after implementing the training program at king Faisal Medical Complex, Taif, in Saudi Arabia.
- H2.** The autonomous decision making among critical care nurses improves after implementing the training program at king Faisal Medical Complex, Taif, in Saudi Arabia.

Methods

Design:

A quasi-experimental design with pretest-posttest was used to achieve the aim of this study.

Setting:

This study conducted in critical care units at King Faisal

Medical Complex- Taif which affiliated to a Ministry of Health (MOH), Saudi Arabia. Critical care units involved Intensive Care Units (ICUs), Critical Care Unit (CCU) involved the following units; {burn, delivery room, and emergency}, Pediatric Intensive Care Units (PICU), High Dependency Unit (HDU), and Neonatal Intensive Care Unit (NICU). Which serve the residents of Taif in kingdom Saudi Arabia through 500 beds for the main hospital, and 300 beds for the women's and maternity tower.

Participants:

A Convenient sample was utilized to include all available head nurses (n=35) and staff nurses (n=200) who are responsible to providing patients care in all above-mentioned settings and who fulfilled the criteria of having at least one-year of experience of work and available at time of data collection.

Tools of data collection

Three tools were used for data collection in the present study namely; Leadership styles Knowledge Questionnaire, Leadership styles questionnaire and Autonomous decision making scale questionnaire.

Tools I: Leadership styles knowledge questionnaire: It consisted of two parts

Part 1: Personal data of nurses such as age, gender, marital status, educational qualifications, and years of experience previous training in leadership

Part II: It was developed by the researcher based on reviewing related literature (Asiri et al., 2016) & (Blake & Bacon, 2020). It was used to assess head nurses' knowledge about leadership styles. It consists of 25 questions in the form of true and false and multiple choices that related to leadership styles.

Scoring system: The questions were score as "1" for correct answer, and "zero" for incorrect answer. The total scores of knowledge were summed up (ranges from 0-25) where the higher score indicating better level of knowledge. The total scores categorized based on cut of point as following:-

- ◆ Poor level of knowledge if total score <60 % (0-14).
- ◆ Moderate level of knowledge if total scores 60-75% (15-18).
- ◆ High level of knowledge if total scores >75% (19-25).

Tools II: Leadership styles questionnaire:

This questionnaire was developed by Dorgham & Al-Mahmoud, (2013), to measure three common styles of leadership: authoritarian, democratic, and laissez –faire. It composed of 18 statements. The respondents were presented with a five-point Likert scale, the number indicates the degree to which the respondents agree or disagree, the sum of the responses on items 1,2, 6, 10, 15 and 16 will indicate authoritarian leadership style. Sum of the responses on item 4,5,8,11,14 and 18 will indicate democratic leadership style, while sum of responses on item 3,7,9,12,13 and 17 will indicate laissez-faire leadership style.

Scoring system: Respondents head nurses are asked to rate leadership styles using a 5-point Likert scale ranging from (1-5) as follows; strongly disagree= 1, disagree=2, neutral= 3, agree=4 and strongly agree =5. The total scores of each Leadership style were summed up (ranges from 6-30) where higher score indicate high level of leadership style. The total scores categorized based on cut of point as following:-

- Very low level (6-10 scores)
- Low level (11-15 scores)
- Moderate level (16-20 score)
- high level (21-25 scores)
- Very high level (26-30 scores).

Tools III: Autonomous decision making scale questionnaire

The autonomy decision making scale was developed by Blegen,et al., (1993) and used to assess nurse's autonomy level. The questionnaire consisting of 42 items divided into (21) items related to decisions about patient care and (21) items related to decisions about unit operations.

Scoring system: Staff nurses are asked to rate their autonomous decision making using a 5-point Likert scale ranging from (1-5) as follows; completely disagree= 1, disagree=2, neutral= 3, agree=4 and completely agree =5. The total scores of nurses' autonomous decision making were summed up (ranges from 42-210) and categorized cut of point as following:-

- ♦ Low level if total score <50% (42-125).
- ♦ Moderate level if total scores 50%-70% (126-159)
- ♦ High level if total scores >70% (160-210).

Validity and reliability

Study tools were tested for its face and content validity by five experts (three professors and two assistant professor) in the field of Nursing Administration. Based on the opinion of panel of expertise minor modifications were done (paraphrasing for some items and arranging it into domains) and then the final form was developed and used for data collection. Reliability was tested statistically to assure that the tools were reliable before data collection. The internal consistency, as indicated by Cronbach's alpha, was 0.817 for Leadership styles knowledge questionnaire, 0.777 for Leadership styles questionnaire, and 0.781 for Autonomous decision making scale questionnaire.

Pilot study:

Pilot study was conducted on (4) head nurses and (20) staff nurses who representing 10% of study nurses to test the clarity and applicability of the study tool and time needed for filling it out. Nurses involved in the pilot study were excluded from the study as they were from the resting staff. This pilot study was done in two weeks before starting the study.

Ethical consideration:

Prior study conduction, approval was obtained from scientific research and ethics committee of the Faculty of Nursing at Mansoura University and another approval was obtained from the director of King Faisal Medical Complex, Saudi Arabia, after explanation of the purpose of the study and the schedule of data collection. The researcher met with the study participants and explained the aim of the study to gain their approval. The researcher clarified the aim of the study to the study participants to be included in the study. They assured that anonymity and confidentiality would be guaranteed and informed about their right to refuse or withdraw from the study at any time. The study procedures do not entail any harmful effects on participants.

Data Collection:

The collection of data and implementation of the training program was carried out from beginning of December 2024 to end of August 2025. The process of data collection was achieved three phases:

First phase:

This pre intervention (preprogram) phase lasted about two

months from December 2024 until the end of January 2025. The researcher met the participants individually to explain the aim of the study and get the approval to participate in the study. The researcher presented all the time of data collection three days a week (Saturday, Monday and Tuesday) during the morning and afternoon shift (from 9.00 AM to 3.00 PM) for clarification, as well as distribution of data collection questionnaire (leadership styles knowledge questionnaire, leadership styles questionnaire and autonomous decision making scale questionnaire) at the end of shifts. Each participant nurse took about 20–30 minute to complete the questionnaires.

The data collected during this phase constituted the pretest for the study. The purpose of this pre-study assessment was to provide a baseline of nurses' knowledge toward competence, their level of competencies and quality patient care.

Second phase:

Based on the findings of the pre-program assessment, the researcher created and implemented the Leadership Styles Training Program for all participant head nurses. The program timetable was carried out from the start of February 2025 until the end of May 2025. Total number of participant nurses was 35 nurses. Thus, they were divided into 7 groups. Five nurses were included in each of the seven groups. The ten hours required for conducting program were divided into five sessions, lasting two hours for each through three days of the week.

➤ **First session:** the researcher introduced him-self, gave introduction to the program and its importance and explained its objectives. Also, the researcher identified the methods of education and training and the participant filled out the interview and assessment questionnaire.

➤ **Second session:** participant head nurses received information about definition of leadership, qualities of a good leader in nursing, role of head nurses in shaping nursing culture, factor affecting leadership in nursing and definition of leadership styles in addition to importance of leadership styles in nursing.

➤ **Third session:** participant head nurses received information about transformational leadership, transactional leadership, democratic leadership, autocratic leadership and laissez-faire leadership as well as situational leadership.

➤ **Fourth session:** in addition to introduction to the practical part of the program, participant head nurses received

information and training about empower through delegation, encourage reflective practice and foster open communication in addition to provide supportive supervision.

➤ **Fifth session:** participant nurses received information and training about Mentor and role-model as well create a non-punitive culture. Also, participant nurses received information and training about Recognize autonomous actions.

The program was carried out by the researcher using easily accessible resources suitable content, and instructional strategies for every session. Power point presentations, brainstorming sessions, group discussions, and lectures were all employed as teaching strategies. On the first day, a handout developed by the researcher was given to each participant as educational booklet. Immediately after completion of the training program the three tools of data collection were distributed to the participants.

Third phase:

During this follow up phase, the researcher started to follow up the proposed progress after program through comparison of post test results with the baseline finding obtained in the pretest assessment by using the same three tools of data collection. It was conducted after three months of implementing the training program for each participant nurses. The data collecting of follow up lasted about three months from the beginning of June 2025 until the end of August 2025.

Data Analysis:

The collected data were coded, entered, tabulated and analyzed using SPSS (Statistical Package for Social Science) version 27 (IBM Corporation, Armonk, NY, USA). For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, which describe a categorical set of data by frequency, percentage or proportion of each category, comparison between two groups and more was done using Chi-square test (χ^2). For comparison between more than two means of non-parametric data of related samples (Before, immediate after and three months after follow up of the training program), Friedman test (χ^2 value) was calculated. For comparison between means of two groups of non-parametric data of independent samples, Z value of Mann-whitney test was used. For comparison between more than two means of non-parametric data, Kruskal-Wallis test was used and (χ^2) value was calculated. Correlation between variables was evaluated using Pearson's correlation coefficient (r). A p-value below 0.05 was deemed statistically

significant, and a p-value below 0.01 was considered highly significant.

Results:

Table (1): Personal characteristics of the studied head nurses at King Faisal Medical Complex, Taif in Saudi Arabia.

Personal characteristics	The studied head nurses (n=35)	
	No.	%
▪ Age years		
20-30	5	14.3
>30-<40	24	68.6
40-48	6	17.1
Range	27-48	
Mean±SD	36.00±5.41	
▪ Sex		
Male	4	11.4
Female	31	88.6
▪ Marital Status		
Single	9	25.7
Married	26	74.3
▪ Educational level		
Secondary nursing school	5	14.3
Diploma of Technical Institute of nursing	25	71.4
Bachelor of nursing	5	14.3
▪ Experience years		
1- 5	8	22.9
>5-10	11	31.4
>10	16	45.7
Mean±SD	14.55±3.17	
▪ Previous training courses		
Yes	12	34.3
No	23	65.7

Table (1) illustrates the personal characteristics of the studied head nurses. This table reveals that more than two-thirds of the studied head nurses (68.6%) were aged from more than 30 to less than 40 years old, compared to only (14.3%) who were aged from 20 to 30 years, with a mean age of 36.00±5.41 years. The majority of them (88.6%) were female. As regards marital status, (74.3%) were married. Concerning educational level, more than two-thirds (71.4%) had a diploma from a

technical institute of nursing. Regarding years of experience, less than half (45.7%) had more than 10 years of experience, representing the highest percentage with a mean of 14.55 ± 3.17 years. Finally, the majority (65.7%) had no previous training courses, while only (34.3%) had attended such courses.

Table (2): Leadership styles knowledge scores among the studied head nurses at King Faisal Medical Complex, Taif in Saudi Arabia before and after implementing the educational program.

Leadership styles knowledge scores (Each item was scored 0-1)	No. of questions Score	Leadership styles knowledge scores among the studied head nurses before and after program (n=35)			χ^2 value p value
		Before	Immediate after	After 3 months follow up	
		Range Mean $\pm$ SD	Range Mean $\pm$ SD	Range Mean $\pm$ SD	
A-Multiple choice questions (MCQs)	17 (0-17)	0-16	10-17	1-17	37.938
		8.89 $\pm$ 5.14	15.80 $\pm$ 1.69	13.57 $\pm$ 4.89	0.0001*
B-True/False questions	8 (0-8)	0-8	6-8	2-8	38.969
		4.11 $\pm$ 3.01	7.54 $\pm$ 0.65	6.77 $\pm$ 1.11	0.0001*
Total knowledge scores	25 (0-25)	0-24	16-25	3-25	49.813
		13.00$\pm$6.88	23.34$\pm$1.94	20.34$\pm$5.33	0.0001*

***Statistically significant (P<0.05)**

Table (2) demonstrates the leadership styles knowledge scores before and after the educational program. Regarding multiple choice questions (MCQs), the mean score improved from its lowest value of 8.89 ± 5.14 before the program to its highest value of 15.80 ± 1.69 immediately after the program, then slightly declined to 13.57 ± 4.89 at the three-month follow-up, with a highly statistically significant difference ($\chi^2=37.938$, $p=0.0001$). Similarly, for true/false questions, the mean score rose from its lowest value of 4.11 ± 3.01 before the program to its highest value of 7.54 ± 0.65 immediately after the program, then decreased slightly to

6.77±1.11 at follow-up ($\chi^2=38.969$, $p=0.0001$). As for total knowledge scores, the mean increased from its lowest value of 13.00±6.88 before the program to its highest value of 23.34±1.94 immediately after the program, then declined to 20.34±5.33 at follow-up, and this improvement was highly statistically significant ($\chi^2=49.813$, $p=0.0001$).

Table (3): Level of leadership styles knowledge among the studied head nurses at King Faisal Medical Complex, Taif in Saudi Arabia before and after implementing the educational program.

leadership styles knowledge level (Each item was scored 0-1)	leadership styles knowledge level among the studied head nurses before and after implementing the educational program (n=35)						x ² test p value
	Before		Immediate after		After 3 months follow up		
	n	%	n	%	n	%	
A-Multiple choice questions knowledge level							
Low level (0-9)	18	52.9	0	0	6	17.1	39.058
Moderate level (10-13)	8	23.5	3	8.6	3	8.6	0.0001*
High level (14-17)	8	23.5	32	91.4	26	74.3	
B-True/False questions knowledge level							
Low level (0-4)	15	42.9	0	0	1	2.9	45.687
Moderate level (5-6)	12	34.3	3	8.6	9	25.7	0.005*
High level (7-8)	8	22.9	32	91.4	25	71.4	
Total leadership styles knowledge level							
Low level (0-14)	21	61.8	0	0	4	11.4	49.024
Moderate level (15-18)	4	11.8	0	0	3	8.6	0.0001*
High level (19-25)	9	26.5	35	100	28	80.0	

N.B. Knowledge level was classified into; Low level (<60% of total scores), Moderate level (60-75% of total scores) and high level (>75% of total scores).

*Statistically significant ($P<0.05$)

Table (3) clarifies the level of leadership styles knowledge before and after the program. Regarding the MCQ knowledge level, more than half (52.9%) had a low level before the program, representing the highest

percentage at that phase, while none (0.0%) had a low level immediately after the program; conversely, a high level was reported by only (23.5%) before the program compared to the vast majority (91.4%) immediately after, decreasing slightly to (74.3%) at follow-up ($\chi^2=39.058$, $p=0.0001$). Regarding true/false knowledge level, (42.9%) had a low level before the program versus none (0.0%) immediately after, while a high level increased from (22.9%) before to (91.4%) immediately after and (71.4%) at follow-up ($\chi^2=45.687$, $p=0.005$). As for total leadership knowledge level, the majority (61.8%) had a low level before the program, representing the highest pre-program percentage, whereas none (0.0%) had a low level immediately after; a high level was reported by only (26.5%) before the program compared to all (100%) immediately after and (80.0%) at follow-up ($\chi^2=49.024$, $p=0.0001$).

Table (4): Leadership styles level among the studied head nurses at King Faisal Medical Complex, Taif in Saudi Arabia before and after implementing the educational program.

Level of leadership styles (Each item was scored 1-5)	Leadership styles level among the studied head nurses before and after implementing the educational program (n=35)						χ^2 test p value
	Before		Immediate after		After 3 months follow up		
	n	%	n	%	n	%	
<u>A-Authoritarian leadership style</u>							
Very low level (6-10)	0	0	0	0	2	5.7	19.539 0.003*
Low level (11-15)	4	11.4	1	2.9	6	17.1	
Moderate level (16-20)	9	25.7	21	60.0	19	54.3	
High level (21-25)	22	62.9	13	37.1	8	22.9	
<u>B-Democratic leadership style</u>							
Low level (11-15)	6	17.1	2	5.7	8	22.9	14.062 0.007*
Moderate level (16-20)	17	48.6	19	54.3	25	71.4	
High level (21-25)	12	34.3	14	40.0	2	5.7	
<u>C-Laissez –faire leadership style</u>							
Very low level (6-10)	0	0	0	0	2	5.7	15.292 0.018*
Low level (11-15)	3	8.6	7	20.0	8	22.9	
Moderate level (16-20)	14	40.0	21	60.0	18	51.4	
High level (21-25)	18	51.4	7	20.0	7	20.0	

N.B. leadership style level was classified into; Very low level (6-10

scores), Low level (11-15 scores), Moderate level (16-20 scores), high level (21-25 scores) and Very high level (26-30 scores).

***Statistically significant ($P < 0.05$)**

Table (4) presents the level of leadership styles before and after the program. Regarding the authoritarian style, nearly two-thirds (62.9%) had a high level before the program, representing the highest pre-program percentage, compared to none (0.0%) with a very low level; this high level decreased to (37.1%) immediately after and further to (22.9%) at follow-up ($\chi^2=19.539$, $p=0.003$). As for the democratic style, the moderate level represented the highest percentage across all phases, increasing from (48.6%) before the program to (54.3%) immediately after and (71.4%) at follow-up, while the low level recorded the lowest percentage before (17.1%) and immediately after (5.7%) the program ($\chi^2=14.062$, $p=0.007$). Concerning the laissez-faire style, more than half (51.4%) had a high level before the program, representing the highest pre-program percentage, compared to none (0.0%) with a very low level; this high level decreased to (20.0%) both immediately after and at follow-up ($\chi^2=15.292$, $p=0.018$).

Table (5): Personal characteristics of the studied Critical care nurses at King Faisal Medical Complex, Taif in Saudi Arabia.
Critical care nurses

Personal characteristics	The studied critical care nurses (n=200)	
	n	%
▪ Age years		
24-30	60	30.0
>30-40	112	56.0
>40-48	28	14.0
Range	24-48	
Mean±SD	35.70±5.25	
▪ Sex		
Male	16	8.0
Female	184	92.0
▪ Marital Status		
Single	64	32.0
Married	132	66.0
Divorced	4	2.0
▪ Educational level		
Secondary nursing school	14	7.0

Diploma of Technical institute of nursing	168	84.0
Bachelor of nursing	14	7.0
Other	4	2.0
• Experience years		
1-5	63	31.5
>5-10	56	28.0
>10	81	40.5
Mean±SD	9.64±2.29	
• Presence of previous training		
Yes	62	31.0
No	138	69.0

Table (5) illustrates the personal characteristics of the studied critical care nurses. This table shows that more than half (56.0%) were aged from more than 30 to 40 years, representing the highest percentage, with a mean age of 35.70±5.25 years. The vast majority (92.0%) were female. Regarding marital status, two-thirds (66.0%) were married. Concerning educational level, the majority (84.0%) held a diploma from a technical institute of nursing. As for years of experience, (40.5%) had more than 10 years, representing the highest percentage, with a mean of 9.64±2.29 years. Finally, more than two-thirds (69.0%) had no previous training courses, representing the highest percentage, while only (31.0%) had attended such courses.

Table (6): Total autonomous decision making scores among the studied critical care nurses at King Faisal Medical Complex, Taif in Saudi Arabia before and after implementing the educational program.

Total autonomous decision making (Each item was scored 1-5)	Total autonomous decision making among the studied critical care nurses before and after implementing the educational program (n=200)						x ² test p value
	Before		Immediate after		After 3 months follow up		
	n	%	n	%	n	%	
• Total autonomous decision-making level Low level (42-125)	186	93.0	1	0.5	170	85.0	486.050

Moderate level (126-159)	14	7.0	60	30.0	0	0	0.000 1*
High level (160-210)	0	0	139	69.5	30	15.0	
•Total autonomous decision-making scores (42-210)	42-126		122-210		44-126		
Range	105.20±19.74		176.31±27.21		107.20±18.28		
Mean± SD	74		21		28		
x 2 value	394.074						
P value	0.0001*						

N.B. Autonomous decision making level was classified into; Low level (<50% of total scores), Moderate level (50-70% of total scores) and high level (>70% of total scores).

*Statistically significant (P<0.05)

Table (6) demonstrates the total autonomous decision making scores before and after the program. Regarding the total level it was found that (0%) had high level and raised immediately after program to (69.5%), while markedly decline after 3 months follow up to (15.0%), regarding the total scores, the mean was 105.20±19.74 before the program, reached 176.31±27.21 immediately after while 107.20±18.28, at the three-month follow-up ($\chi^2=394.074$, $p=0.0001$).

Discussion

Nurses place a high value on their autonomy in clinical settings. Autonomy in general and autonomous decision-making in particular influenced by managerial interventions. Nurses' perceptions of leaders' leadership styles has a significant impact on their well-being (Gashaye, et al., 2023). Effective leadership in health care is crucial for improving and enhancing the effectiveness of health care systems. Nurse managers can initiate interventions at the unit level to promote nurses' autonomy, which influence job satisfaction and retention as well as patients' satisfaction and the quality of nursing care. Effective and balanced use of various leadership styles requires knowledge (training), organizational commitment, and innovative work behavior from both leaders and staff nurses (Omidvar, et al., 2025).

The development of head nurses' leadership style can increase hospital productivity by potentiating, coordinating, and articulating nursing tasks for delivery of high-quality patient care, keeping staff informed about evidence-based practices, advocating for health-care reform, and promoting social relationships and encouraging participation in decision-making. In addition, staff nurses can achieve

organizational goals if their work environments are arranged in a way that they have access to information and allow them to be more innovative in their discovery and growth (Aboelenein, et al., 2023).

The result of the present study revealed that more than three fifths of studied head nurses had poor level of knowledge regarding leadership styles before implementation training program. This outcome is matched with study done by **Ahmed, et al., (2023)**. entitled "Effect of Leadership Styles Educational Program on Nurses' Autonomous Decision Making" and showed that the highest percentage of the studied nurses had unsatisfactory level of knowledge regarding leadership styles before implementation training program.

Also, this outcome is agreed with study done by **Soliman, et al., (2023)**. entitled " Effect of Authentic Leadership Training Program for Head Nurses on Nurses Innovative Work Behaviors at Minia University Hospitals" and showed that the more than two thirds of the studied head nurses had low level of knowledge regarding leadership before implementation training program. Additionally, this outcome is supported with study done by **Aboelenein, et al., (2023)**. entitled "Effect of educational program about authentic leadership for head nurses on staff nurses' resilience and innovation behavior" and showed that preprogram more than two thirds of head nurses had poor level of knowledge about leadership.

This outcome is in accordance with study done by **Rehman, et al., (2024)**. entitled "Effects of transformational leadership style based on educational intervention regarding knowledge of head nurses for improvement of job performance" and concluded that head nurses had inadequate knowledge regarding leadership pre intervention. This outcome is in the same direction with study done by **Abdou, et al., (2025)**. entitled "Effect of head nurses' self-sacrificial leadership educational program on staff nurses' affective commitment and knowledge sharing behavior" and showed that majority of the studied head nurses have unsatisfactory level of leadership knowledge before program implementation.

Whereas post-intervention program revealed a highly significant improvement in level of knowledge regarding leadership styles. From the researcher's point of view, this improvement in the knowledge of head nurses could have resulted from utilizing creative teaching approaches that can facilitate the interactions and collaboration in the learning process, however, increasing knowledge acquired by head nurses could be explained by the fact that learning was not a passive experience and courses created an interactive environment. Also head nurses put their

concentration on learning more about leadership styles and the first priority was to adapt in any new situation and improve their staff nurses outcomes at work.

This outcome is matched with study done by **Younes, et al., (2019)**. entitled " The Effect of Leadership Program on Leadership Practice among Nurse Managers" and showed that there was a highly statistically significant difference between nurse managers total leadership knowledge before, and immediately after implementing the program. This outcome is matched with study done by **Ahmed, et al., (2023)**. entitled "Effect of Leadership Styles Educational Program on Nurses' Autonomous Decision Making" and showed that there is a significant improvement in the nurses' knowledge score at pretest compared to pretest.

Also, this outcome is agreed with study done by **Soliman, et al., (2023)**. Entitled "Effect of Authentic Leadership Training Program for Head Nurses on Nurses Innovative Work Behaviors at Minia University Hospitals" and showed that there was a highly statistically significance differences between three times of evaluation regarding levels of knowledge about leadership. In the same context, this outcome is congruent with study done by **Aboelenein, et al., (2023)**. entitled "Effect of educational program about authentic leadership for head nurses on staff nurses' resilience and innovation behavior" and showed that there was a statistically significant improvement of head nurses' knowledge of leadership.

This outcome is in accordance with study done by **Rehman, et al., (2024)**. entitled "Effects of transformational leadership style based on educational intervention regarding knowledge of head nurses for improvement of job performance" and concluded that head nurses had inadequate knowledge regarding leadership pre intervention. Additionally, this outcome is in the same direction with study done by **Abdou, et al., (2025)**. entitled "Effect of head nurses' self-sacrificial leadership educational program on staff nurses' affective commitment and knowledge sharing behavior" and found that there was a highly statistical significant improvement in the knowledge of head nurses regarding leadership post-intervention program as compared to pre-intervention program.

This findings agreed with study done by **Mahran, et al., (2025)** entitled "Effect of Ethical Leadership Training Program on Levels of Workaholism among Nursing Managers at Suez Canal University Hospitals" and showed that there were a highly statistical significant

difference between pre, post and follow up phases regarding nursing managers' knowledge about leadership

Leadership is a multidimensional process of recognizing goals, influencing people to act, and providing support and motivation to achieve mutually negotiated goals. Leadership has a strong relationship with employees, leaders, and accomplishments of organizational goals. Leadership style is the way a leader provides direction, motivates people, and implements plans. There are different types of leadership style that nurse leaders use when leading staff nurses at health facilities. However, most studies group leadership style as a full range leadership model which is categorized into three types of leadership style. Among which the most preferred and effective is the transformational leadership styles (Gashaye, et al., 2023). Regarding authoritarian leadership style, the result of the present study revealed that more than three fifths of studied head nurses had high level of authoritarian leadership style before implementation training program.

This findings in the same line with study done by **Abduljaber, et al., (2025)** entitled "Effect of leadership style on job related tension and organizational commitment among nurses" and found that the authoritarian style was highly demonstrated by three quarters of head nurses. This findings in the same line with study done by **Asfa & Ali, (2023)** entitled "The effect of leadership styles on achieving organizational effectiveness, field study: on the nursing staff at Al-Shifa Medical Complex in Gaza" and found that the authoritarian style was high among two thirds of head nurses.

This findings disagreed with study done by Al-Thawabiya, et al., (2023) entitled "Leadership styles and transformational leadership skills among nurse leaders in Qatar" and showed that the autocratic style remains the least used leadership style by head nurses. Whereas post-intervention program revealed a highly significant improvement in level of authoritarian leadership style. This findings agreed with study done by **Elsayed, et al., (2023)** entitled "Effect of training program about lean strategies for head nurses on their leadership effectiveness" and showed that there were a highly statistical significant improvement in head nurses' leadership effectiveness after implementation of the program. This finding agreed with study done by **Fragkaki, et al., (2024)** entitled "Educational Intervention Impact on Nurses' Emotional Intelligence and Leadership Models: A Longitudinal Randomized Trial" and concluded that educational interventions significantly enhance head nurses' leadership styles, emphasizing the need for tailored professional development programs in nursing education

Regarding democratic leadership style, the result of the present study revealed that near to half of studied head nurses had moderate level of democratic leadership style before implementation training program. The findings indicate the need for targeted leadership development programs to strengthen head nurses' democratic leadership competencies. By fostering a democratic leadership environment, professional nursing autonomy can be enhanced, contributing to improved patient care quality and overall organizational performance.

This findings disagreed with study done by Abudeeab & Sultan (2024) entitled "The Effect of Leadership Styles on Nursing Performance in the Northern West Bank Public Hospitals" and found that half of studied head nurses demonstrated moderate level of democratic leadership style. . This findings in the same line with study done by Abduljaber, et al., (2025) entitled "Effect of leadership style on job related tension and organizational commitment among nurses" and found that the democratic style was moderately demonstrated by less than half of head nurses.

This findings disagreed with study done by Asfa & Ali, (2023) entitled "The effect of leadership styles on achieving organizational effectiveness, field study: on the nursing staff at Al-Shifa Medical Complex in Gaza" and found that the democratic style was high among three quarters of head nurses. Whereas post-intervention program revealed a highly significant improvement in level of democratic leadership style. This finding agreed with study done by Fragkaki, et al., (2024) entitled "Educational Intervention Impact on Nurses' Emotional Intelligence and Leadership Models: A Longitudinal Randomized Trial" and concluded that educational interventions significantly enhance head nurses' democratic leadership styles.

This findings agreed with study done by Mahran, et al., (2025) entitled "Effect of Ethical Leadership Training Program on Levels of Workaholism among Nursing Managers at Suez Canal University Hospitals" and showed that there were a highly statistical significant difference between pre, post and follow up phases regarding nursing managers' practice of democratic leadership style. These findings agreed with study done by Elsayed, et al., (2026) entitled "Resonant leadership training program and its effect on organizational citizenship behavior among first-line nurse managers" and concluded that significant improvements were observed in democratic leadership style post-training program.

The laissez-faire leadership style follows the principle of minimal supervision. It may be defined as a leader who has little self-reliance in his leadership ability, sets no goals for the group, and minimizes group interactions. This approach is useful when group members are able to be “self-independent” and the leader requires very little to look good because most decisions are under the control of their followers. The result of the present study revealed that more than half of studied head nurses had high level of Laissez –faire leadership style before implementation training program.

This findings in the same line with study done by Hundie & Habtewold (2024) entitled "The effect of transformational, transactional, and laissez-faire leadership styles on employees' level of performance: The case of hospital in Oromia Region, Ethiopia" and found that more than half of head nurses exhibited high level of laissez faire leadership style. This findings in the same line with study done by Abduljaber, et al., (2025) entitled "Effect of leadership style on job related tension and organizational commitment among nurses" and found that more than half of head nurses demonstrate high level of Laissez –faire leadership style.

These findings disagreed with study done by Abudeeab & Sultan (2024) entitled "The Effect of Leadership Styles on Nursing Performance in the Northern West Bank Public Hospitals" and found that more than half of studied head nurses had medium level of Laissez –faire leadership style. Whereas post-intervention program revealed a highly significant improvement in level of Laissez –faire leadership style. These findings agreed with study done by Alreshidi (2023) entitled " The Impact of a Training Intervention on Emotional Intelligence Leadership Styles Self-Efficacy and Perception of Sense of Power in a University Nursing Faculty in Saudi Arabia" and found indicated that there was a statistically significant difference in laissez-faire scores across the four time points among study group compared to control group.

These findings agreed with study done by Al-Nasri (2024) entitled "The development and effectiveness of leadership and management program for enhancing the nursing managers competency: a quasi-experimental pre-posttest study " and demonstrated that the implementation of a leadership program for head nurse significantly impacted the level of leadership style after the program's implementation. The study highlighted a significant difference in the mean scores of pre-and post-intervention evaluations, particularly in Laissez –faire style.

Autonomous decision making refers to nurses' application of

independent and interdependent clinical judgment to make patient care decisions. Operational autonomy is decisions nurses make in collaboration with managers employing participatory approaches. Professional autonomy has been treated as participation in decision making regarding care of individual patients and, more broadly, development of care processes to improve nursing quality and patient safety. Other elements that have been recognized include the ability to influence working practices and conditions (Mohamed et al., 2023).

Regarding decisions about patient care, the result of the present study revealed that all the entire of studied staff nurses had low level of autonomous decision making about patient care before implementation training program. The researcher believes that these findings could be attributed to the limited responsibilities of nurses in making patient care decisions, the power of other professions, and lack of confidence in knowledge. Therefore, organizational support is needed to encourage nurses to exercise a high level of autonomy through step-by-step autonomy-improvement training and to analyze the characteristics of nurses with a high level of autonomy.

These findings agreed with study done by Mohamed, et al., (2023) entitled "Effect of Autonomy Educational Program on Staff Nurses' Organizational Commitment " and found that majority of nurses had low level of autonomy preprogram implementation regarding patient care dimension. These findings supported with study done by Yuk & Yu (2023) entitled "The effect of professional autonomy and nursing work environment on nurses' patient safety activities" and concluded that nurses' professional autonomy score was relatively low regarding patient care decisions.

Also, these findings supported with study done by Abd El-Aziz, et al., (2024) entitled "Relationship between Professional Image and Autonomy among Staff Nurses" and found that the higher percentage of nurses had low level of autonomy.

These findings disagreed with study done by Hassan (2022) entitled "Relationship between Professional Image and Autonomy among Staff Nurses" and found that more than three fifths of nurses had moderate level of autonomy. These findings disagreed with study done by Alruwaili& Abuadas, (2023) entitled "Professional autonomy among nurses in Saudi Arabian critical care units" and concluded that staff nurses in acute care settings have higher professional autonomy in making patient care decisions Whereas post-intervention program revealed a highly significant improvement in level of autonomous

decision making about patient care. This findings indicate that leadership training program are instrumental in empowering head nurse to effectively oversee their staff, consequently enhancing the quality of nursing care and contributing to the future prosperity of the nursing profession.

The result of this study consistent with study done by Junttila, et al., (2023) entitled "The impact of leadership in the autonomy and engagement of nurses: a cross-sectional multicenter study among nurses outside the United States" who reported that enhancing leadership styles has a positive impact on nurses' autonomy. The result of this study agreed with study done by Omidvar, et al., (2025) entitled "Head nurses' leadership styles and emergency department nurses' clinical professional autonomy in Iranian University Hospitals" who highlighted that head nurses' transformational leadership style significantly enhances nurses' clinical professional autonomy.

Regarding decisions about unit operations, the result of the present study revealed that all the entire of studied staff nurses had low level of autonomous decision making about unit operations before implementation training program. The researcher believes that this result might be due to the culture of the supervisors who were only responsible for decision making and nurses as followers who should obey the orders of their supervisors.

These findings agreed with study done by Mohamed, et al., (2023) entitled "Effect of Autonomy Educational Program on Staff Nurses' Organizational Commitment " and found that majority of nurses had low level of autonomy preprogram implementation in relation to unite operation. These findings agreed with study done by Alruwaili& Abuadas, (2023) entitled "Professional autonomy among nurses in Saudi Arabian critical care units" and concluded that staff nurses in acute care settings have low professional autonomy in making unit operations decisions

The result of this study contraindicated with study done by Azizi et al., (2020) entitled "Investigating the correlation between psychological empowerment and assertiveness in nursing and midwifery students in Iran" where clarified that more than half of the nurses perceived a high-autonomy level. Whereas post-intervention program revealed a highly significant improvement in level of autonomous decision making about unit operations. This findings indicate that managers have an important role in enhancing nurses' professional autonomy, empowering and supporting them in their expertise through enabling necessary advanced training, and maintaining an appreciative work community where all have equal participation opportunities. Thus, nurse managers

have the chance to strengthen high-quality multi-professional teams' ability to make unit operations decisions for better outcomes through their leadership.

The result of this study consistent with study done by **Pursio, et al., (2023)** entitled "Nurse managers' perceptions of nurses' professional autonomy" who concluded that nurse managers can enhance nurses' professional autonomy through enhancing leadership styles. The result of this study consistent with study done by **Junttila, et al., (2023)** entitled "The impact of leadership in the autonomy and engagement of nurses: a cross-sectional multicenter study among nurses outside the United States" who reported that nurses' autonomy in decision-making is enhanced by nurse managers and leaders who are visible and effective advocates for nurses.

Identifying nurses' educational needs on the main domains of competence and its influential factors may assist in both planning and organizing tailored training strategies and in promoting appropriate environments to support a high-quality health education practice (Pueyo-Garrigues, et al., 2022).

Concerning the relationship between personal characteristics of head nurses and their knowledge about leadership styles, the result of the present study revealed that there was a significant statistical relation between studied head nurses' age and their leadership styles knowledge scores during 3 months posttest at p-value 0.006 respectively. Also, there was a significant statistical relation between studied head nurses' previous training courses and their leadership styles knowledge scores during immediate posttest.

This findings agreed with study done by Gashaye, et al., (2023) entitled " Perceived utilization of leadership styles among nurses. Risk management and healthcare policy" and showed that there was a relationship between perceived leadership style and nurses who had not received previous training on leadership. Additionally, this outcome is supported with study done by Aboelenein, et al., (2023). entitled "Effect of educational program about authentic leadership for head nurses on staff nurses' resilience and innovation behavior" and showed that there was statistically significant relation between head nurses age and total leadership knowledge.

These findings agreed with study done by Abudeeab & Sultan (2024) entitled "The Effect of Leadership Styles on Nursing Performance in the Northern West Bank Public Hospitals" and showed that there was no significant relation between educational level of the studied nurses and

their leadership style.

These findings disagreed with study done by Asfa & Ali, (2023) entitled "The effect of leadership styles on achieving organizational effectiveness, field study: on the nursing staff at Al-Shifa Medical Complex in Gaza" and found that there was no significant relation between gender of the studied nurses and their leadership style. This findings disagreed with study done by Al-Thawabiya, et al., (2023) entitled "Leadership styles and transformational leadership skills among nurse leaders in Qatar" and showed that there was no statistically significant difference between gender and years of experience in any of the leadership styles.

Concerning the relationship between personal characteristics of staff nurses and their autonomous decision making scores throughout the program phases, there was no significant statistical relation between studied nurses' personal characteristics and their total autonomous decision making scores through training program phases at $p\text{-value} \geq 0.05$

These findings agreed with study done by Alruwaili & Abuadas, (2023) entitled "Professional autonomy among nurses in Saudi Arabian critical care units" and concluded that there was no statistically significant relation between studied nurses' total autonomy and their age. These findings supported with study done by Yuk & Yu (2023) entitled "The effect of professional autonomy and nursing work environment on nurses' patient safety activities" and found no statistically significant relation between studied nurses' total autonomy and their years of experience. The result of this study agreed with study done by Omidvar, et al., (2025) entitled "Head nurses' leadership styles and emergency department nurses' clinical professional autonomy in Iranian University Hospitals" who showed that clinical professional autonomy was not significantly associated with nurses' gender

These findings disagree with study done by Hassan (2022) entitled "Relationship between Professional Image and Autonomy among Staff Nurses" and found that there was a highly statistically significant relation between studied nurses' total autonomy and their educational level and years of experience. These findings disagreed with study done by Abd El-Aziz, et al., (2024) entitled "Relationship between Professional Image and Autonomy among Staff Nurses" and found that there was a highly statistically significant relation between studied nurses' total autonomy and their age and gender.

Concerning the correlation between total leadership styles

knowledge scores and leadership styles scores among the studied head nurses, the result of current study illustrated that, authoritarian leadership style showed a statistically significant positive correlation with total scores of Leadership styles knowledge. Total scores of democratic leadership style showed a statistically significant positive correlation with total scores of Leadership styles knowledge immediately posttest and after 3 months follow up test phase. Total scores of Laissez-fair leadership style showed a statistically significant negative correlation with total scores of leadership styles knowledge immediately posttest and after 3 months follow up test phase.

This outcome is matched with study done by Younes, et al., (2019). entitled " The Effect of Leadership Program on Leadership Practice among Nurse Managers" and concluded that there were statistically significance correlations between total leadership knowledge and of total leadership practice among nurse managers. Additionally, this outcome is in the same direction with study done by Abdou, et al., (2025). entitled "Effect of head nurses' self-sacrificial leadership educational program on staff nurses' affective commitment and knowledge sharing behavior" and found that there was highly statistically significant positive correlation between head nurses' leadership knowledge and leadership behavior in all program phases. This findings agreed with study done by Mahran, et al., (2025) entitled "Effect of Ethical Leadership Training Program on Levels of Workaholism among Nursing Managers at Suez Canal University Hospitals" and showed that was a statistically highly statistically significant positive correlation between head nurses' leadership knowledge and leadership practice through all program phases.

This findings agreed with study done by Elsayed, et al., (2023) entitled "Effect of training program about lean strategies for head nurses on their leadership effectiveness" and showed that there were a highly statistical significant positive correlations between head nurses' knowledge and leadership effectiveness.

This findings agreed with study done by **El-Dash, et al., (2024)** entitled "Effect of Educational Program about Adaptive Leadership for Nurse Managers on Staff Nurses' outcomes" and showed that there were a highly statistical significant positive correlations between nurse mangers' knowledge, and performance of democratic leadership. The result of this study agreed with study done by **Omidvar, et al., (2025)** entitled "Head nurses' leadership styles and emergency department nurses' clinical professional autonomy in Iranian University Hospitals"

who revealed that all three leadership styles had a significant correlation with nurses' professional autonomy.

Conclusion

This study concluded that there was a highly significant improvement in head nurses' knowledge level regarding leadership styles throughout the program phases. Also, there was a highly significant improvement in head nurses' level regarding leadership styles throughout the program phases. Additionally, there was a highly significant improvement in nurses' level of autonomous decision-making immediately after the program implementation, where nearly two-thirds of the studied staff nurses achieved a high level of autonomous decision making, which then experienced a significant decline at the three-month follow-up phase.

Recommendation

Based on the study results the following recommendations were suggested:

For nursing directors

- Create supportive and empowering work environment for enhancing staff nurses' participation in decision making and independent professional judgment.
- Encourage participative leadership approach among nurses' managers and supervisors to enhance nurses' confidence, accountability and autonomy.
- Establish clear organizational policies and evaluation system that reinforce autonomous nursing practices, leadership performance and shared decision making.
- Implement regular refresher/booster training sessions (every 3 months) to reinforce and sustain critical care nurses' autonomous decision-making skills and overcome knowledge decay over time

For head nurses

- Promoting supportive environment that enhances open communication and emotional support for nursing staff.
- Adopt suitable leadership style that consistent with staff nurses needs and situation to enhance confidence and autonomy in decision making among nursing staff.
- Encourage open communication and shared decision making to promote trust and active participation in patient care decisions.

For staff nurses

- Actively participate in development training programs to enhance communication skills and autonomous decision-making abilities.
- Enhance evidence based practices and critical thinking skills through continuous learning and self-development.
- Engage positively in shared decision making and interdisciplinary collaboration to improve patients' outcomes and strengthen professional autonomy.

For Further Research

- Replicating the current study in another setting with larger sample to ensure generalization of results.
- Evaluating the long-term impact of leadership styles training program on nurses' autonomy, job performance and patients care outcomes

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