Effect of Transitional Training Program on Knowledge and Experience of Novice Nurses' Role Transition

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Abstract

Background: The transition period is a time for learning, adjusting, and socializing, in which the novice nurses apply, consolidate, and expand upon the knowledge already acquired. **This study aimed** to determine the effect of transitional training program on knowledge and experience of novice nurses' role transition in critical care units at Alexandria Main University Hospital. **Research design**: A quasi-experimental, interventional research design was utilized. **Setting:** The study was conducted in critical care units, at Alexandria Main University Hospital. **Subjects:** All nurses with less than one year of working experience were included. (N = 72). **Tools**: The study's tools involved role transition knowledge questionnaire which composed of 50 questions and the Casey-Fink Graduate Nurse Experience Survey, which contained 37 questions, which were used pre, immediately after, and following three months of transition experience. **Results:** The transition training program had a significant positive impact on novice nurses' knowledge and experience. **Conclusion**: The current study revealed a significant positive correlation between novice nurses' overall role transition knowledge and experience at various stages of the transition training program. **Recommendations:** Hospital administrators should conduct a continuous role transition training programs for all novice nurses.

Key words: Knowledge, Novice Nurses, Role Transition Experience, Transition Training Program.

Introduction

In an evolving health care system, provider well-being is at the center of workforce, educational, and organizational conversations. Understanding how to optimize the workforce and prepare novice nurses for health care delivery is increasingly important.[1] Novice nurses face a critical role transition process through their first months on the job.[2] Role transition is defined as the process of moving from one state to another, which is usually associated with significant changes in goals, roles, and responsibilities.[3]

Novice nurses' role transition can be described as stressful and turbulent, leading to decreased job satisfaction and increased intent to leave. The role transition process is difficult and full of stress and challenges for novice nurses where their knowledge and skills are insufficient to handle routine work, feelings of anxiety related to fears of incompetence, and communication difficulties are also faced.[1] These problems increase nurses' turnover rate due to lack of necessary knowledge, experience, and confidence to work in clinical settings and the end result of ineffective transition management is inferior nursing care and negative patient outcomes.[4]

The novice nurse leaves the comfort zone as a new graduate to enter an advanced practice role which is accompanied by associated stress, anxiety, isolation, inadequacy and role ambiguity, commonly leading to feelings of incompetence. The main personal barriers to a successful transition from graduate nurses to novice role are loss of confidence, shift of status, identity confusion and poor job satisfaction.[5] Moreover, there are issues of mis-matched expectations, workload, and unstable relationships with colleagues, as well as concerns of new nurses' lack of confidence. Examples of lack of confidence include communicating with physicians and patients, delegating, setting priorities, organizing care needs, and making suggestions to the plan of care.[6]

Furthermore, the sense of confidence is an indicator of successful transition that is associated with lower burnout among new nurses and increases with experience.[7] This offers a unique perspective on how new nurses may increase confidence, separate from time in the role and gaining experience in practice.[8]

A holistic transition program is vital for new nurses during the role transition journey. Role transition into practice programs that are offered for novice nurses help them to adopt appropriate attitudes and approaches to practice, care for patients independently, seek role models, and adapt to workload.[1] Moreover, it develops their confidence, knowledge, skills regarding good communication, proper documentation and clinical competencies, possessing critical and analytical thinking skills to independently ensure appropriate decision-making with advanced problem solving.[9] Transition program focused mainly on six dimensions namely: communication skills, documentation practices, clinical reasoning skills, evidence-based practice, legal issues in nursing practices and ethical nursing practices.[10-15]

Role transition allows nurses to move beyond their present bachelor's degree level and to cope with the demands of complex patient care; thus, role transition programs provide the tools to deepen novice nurses` understanding of the roles and responsibilities related to clinical, professional, legal and ethical nursing practice issues. Moreover, role transition programs

promote nurses' clinical reasoning skills and participation in evidence-based practice to enhance quality of care, patient satisfaction, and reduced hospital readmissions and mortality.[16,17] There is a need for additional support during this time. Multiple sources of supports are essential from colleagues; educators, and administrators associated with guidance from head nurses and superiors.[2] Many areas emerged as opportunities to support novice nurse transition such as: awareness of role transition, preceptorship, social support, and orientation.[18]

Novice nurses struggle with the challenge of providing safe and competent care to their customers while continuing to fill the gaps in developing their knowledge base. They are expected to have advanced clinical skills and be able to think critically, there is significant uncertainty regarding their role in an increasingly demanding profession.[19] Consequently, this impaired role development can affect employment continuity and the decision to leave the profession within the first year of practice. A better awareness of the transitional process will lead to greater understanding and a shorter adjustment period.[20]

The nurse leader is responsible for guiding the new nurse and providing opportunities for learning to close the gap between education and practice. It has been used to support novice clinical learning, both before and after graduation. Preparedness for practice is a critical issue for a productive learning experience for many who report feeling overwhelmed, frustrated, and inadequate. It enables frequent contact, evaluations and positive reinforcement that protects against feelings of isolation, enhances professional advancement,

builds confidence, develops a sense of unity, promotes collegial support, allows effective communication channels and increases autonomy in clinical decision-making skills.[21] Social support including support from peers, physicians, family, and patients, is especially vital to novice nurses during the transitional period. Involvement in professional groups and organizations can prevent feelings of isolation.[22]

Orientation program is designed to orient new nurses to the facility while developing clinical and social skills. Time frames for orientation vary depending on the specialty.[23] The importance of a thorough orientation period and the support of other professionals, particularly staff nurses and coworkers, is especially influential in the transition process. Formal orientation programs provide the foundation for successful practice and are augmented by additional opportunities for professional growth.[24] New nurses are a special group that requires extra care to ensure that they receive a purposeful orientation. The future of nursing requires that hospital orientation and training programs change to meet the needs of new nurses in an ever-changing health care environment. There are some important aspects in the transition from student to clinical nurse which gives them a sense of confidence and comfort, job satisfaction, commitment and competence with the improvement of role transition experience.[25, 26]

Significance of the study:

Health care organizations are short-staffed at all times, so novice graduate nurses must be able to act as nurses and provide patient care in a short

period of time. These nurses are arriving in the healthcare field, receiving an abbreviated orientation, and then being expected to take on full patient responsibility. This experience is setting them up for failure. These unprepared novice nurses become upset and ultimately leave the hospital. The transition training program for new nurses addresses a vital need for them to become competent, confident, accountable and professionals. Also, they can cope with reality shock, improve retention and enhance the nurses' role transition experience. Nurse managers and leaders can create a work atmosphere that encourages and promotes open communication among nurses and other health care team members. Likewise, creating an environment conducive to translating experiences into organizational learning and promoting competent role transition.[27]

Aim of the study

The aim of this study was to determine the effect of transitional training program on knowledge and experience of novice nurses' role transition experience in critical care units at Alexandria Main University Hospital.

Research hypotheses

H1: Nurses' knowledge is significantly and positively improved after attending a role transition training program in critical care units at Alexandria Main University Hospital.

H2: Nurses' role transition experience issignificantly and positively improved after attending a role transition training program in critical care units at Alexandria Main University Hospital.

Material and methods

Research design

Aquasi-experimental,interventional

research design was utilized.

1.1. Setting

The study was conducted in all critical care units at Alexandria Main University Hospital, namely: First, Second, Third and Fourth Units. It is the main university hospital, which is affiliated to Ministry of Higher Education & Scientific Research and is equipped with 1,825 beds. The capacity of critical care units includes 100 beds in the previously mentioned four units. Alexandria Main University Hospital is the largest teaching hospital at Alexandria city. It provides a wide range of services to all populations from Alexandria and the nearest governorates, such as: emergency services, medical, surgical and critical care services; radiology; pharmacy; laboratory; physiotherapy; outpatients and para-medical services, such as: dietary, maintenance, storage, blood bank, and laundry. Moreover, it provides teaching and clinical training services for medical and nursing students and setting for a wide range of scientific researches.

1.2. Subjects

All novice nurses, who were working in the previously mentioned settings with less than one year of experience and graduated from the Faculty of Nursing (N = 72)

Exclusion criteria:

- Nurses who were graduated from technical institute of nursing and secondary school of nursing.

-Nurses who had more than one year of experience

1.3. Study Instrument and Scoring System

The data was collected through self-administered questionnaire encompassing two

tools:

Tool (I): Role Transition Knowledge Questionnaire:

It was developed by researchers after thorough review of related literature.[15, 28-32] It was used to measure the studied nurses' level of knowledge regarding six dimensions of role transition namely: communication skills, documentation practices, clinical reasoning skills, evidence based practice, legal issues in nursing practices and ethical nursing practices during different periods of measurement, (before program, immediately after program, and after three months of program implementation). This questionnaire composed of 50 questions (30 multiple choice questions and 20 questions true and false). All questions were organized in accordance with training program content with total score 50 marks. **Scoring System:** The questions were scored as (one) for the correct answer and (zero) for the incorrect answer. The total score was summed and classified according to cutoff points as follows: The total nurses' knowledge was considered good if knowledge ≥ 75%, fair 50-<75%, and poor knowledge < 50%.

Tool II: The Casey-Fink Graduate Nurse Experience Survey:

This tool was developed by Casey et al., (1999) [33] and revised by Altier, (2002) [34] and Keller, (2006).[35] The tool encompasses three aspects: comfort/confidence (24 items); job satisfaction (9 items); and role transition (4 items) to measure role transition experience during different periods of measurement, (before the program, immediately after the program, three months after the program implementation). Twenty-four of the tool questions utilized a 5-point Likert scale ranging from (Strongly agree=5, Agree=4, Not sure=3, Disagree=2, Strongly disagree=1) and the score was reversed for negative items to measure nurses' confidence level. While the nine items of job satisfaction utilized a 5-point Likert scale ranging from (Very satisfied =5, Moderately satisfied =4, Neither Satisfied nor Dissatisfied =3, Dissatisfied =2, Very dissatisfied =1). The remaining items consisted of four multiple-choice questions for role transition, the study subjects (nurses) can choose more than one answer. These four multiple answer questions were scored by giving one point for each selected option and how many nurses' answers were selected for each answer option.

Scoring system:

The scoring system for the part of confidence was classified into: low confidence level (24-56), moderate confidence level (57-88) and high confidence level (89-120). The scoring system for the part of job satisfaction was classified into: low level of job satisfaction (9-21), moderate level of job satisfaction (22-33) and high level of job satisfaction (34-45). Total score for the three section of tool II were summed-up and the total was divided by the number of the items, giving a percent score. Nurses' role transition experience was considered at a high level if the percent score was ≥75%, moderate level if the present score 50-<75% and a low level if the percent score < 50%.

Furthermore, nurses' satisfaction regarding the transition training program was assessed immediately after the program implementation by distribution of questionnaire for all novice nurses who

attended the program and included questions to assess nurses' satisfaction regarding program content, teaching methods, teaching staff, and teaching materials.

In addition, demographic characteristics questionnaire was developed and included: age, educational qualification, current working unit, years of nursing and unit experiences.

1.4. Data collection

The study was conducted as follows:

- An authorized approval was obtained from the Director of Alexandria Main University Hospital and the head of departments in which the study was conducted. Researchers introduced the research purposes to nursing administrators for better cooperation, and to motivate nurses to actively participate in the study.

- Tools (I and II) were translated into Arabic and revised by a panel of seven experts: four bilingual academic professors and three assistant professors from nursing administration, to test their content and face validity, to give their recommendations regarding the tools' contents and the clarity of items. Their comments were taken into consideration to ensure accuracy and minimize potential threats to the validity of the study.

- **Pilot study:** it was carried out to test the clarity, feasibility and applicability of the study tools, on (10%) of the study subjects (N= 8), who were excluded from the study subjects. Accordingly, some modifications were made.

- The study tools were examined for reliability by measuring the internal consistency of items

using Cronbach's Alpha Coefficient test. The two tools proved to be reliable ($\alpha = 0.91$) for tool one and ($\alpha = 0.89$) for tool two, at a statistical significance level where $p \leq 0.05$.

- Subsequently, the study was conducted through three consecutive stages: planning, implementation and evaluation.

▪ **Planning and preliminary stage:**

- The researchers explained the aim of the study to nurses. The initial assessment was planned to assess nurses' needs regarding role transition, by filling out the questionnaire sheets at their working units and returning them back to the researchers, who were present to answer any questions and prevent knowledge contamination (tool I and II).

- Afterwards, the transition training program was organized, as follow: the objectives and content were established; designing handout was based on the analysis of data obtained from nurses at the initial assessment and based on the review of related literature; theoretical and practical contents were developed; instructional media was used, such as: role play, brainstorming group work, case study and video. The handout was reviewed by the previously mentioned panel experts. Accordingly, some changes were done; then, the last handout form was established. Head nurses and nurses approved the location and time of the sessions based on their work schedules and off days to avoid disrupting their work and patient care.

• **Implementation stage:**

- Nurses were divided into 7 groups, each group involved 10-11 nurses. Each session took

approximately two hours (total 18 sessions). Each group was given three consecutive sessions (total time 6 hours/group) to cover the content.

- First session, it was aimed to establish relationships with nurses, then introduce general and specific objectives of role transition management, core concepts of role transition experience. The second session focused mainly on dimensions of role transition namely: communication skills, documentation practices, clinical reasoning skills, evidence-based practice, legal issues in nursing practices and ethical nursing practices. The third session was mainly centered on the practical part through case studies of role transition. Content of the training program was delivered using relevant and interactive teaching strategies according to the information presented including (interactive lecture, brainstorming, small group discussion, role play, group work and case studies). Instructional media, such as video presentation was used; handouts and visual materials through a laptop. The handout was circulated to nurses prior to the sessions to enhance their awareness. Sessions were provided to nurses in the lecture hall at their working unit, during morning shift and sometimes during evening shift. Following every session, structured feedback was given by nurses and the researchers on how to increase their understandings.

• **Evaluation stage:**

Data was collected, using study tools (I and II) to determine the effect of transition training on nurses' knowledge and role transition experience immediately after and after three months of the training program implementation;

compared to pre-implementation. These were delivered among nurses at their working units. Evaluating of the immediate effect of training program on studied nurses to assess knowledge about the topics of the program was done using the two tools. It was filled at the end of January 2022. The follow up was conducted after three months of the program implementation to assess knowledge about the topics of the program using the two tools. It was filled in June 2022.

1.5. Ethical considerations

Official permission was granted with approval by the Ethical Committee of the Faculty of Nursing, Damanhur University. The aim of the study was explained to subjects and oral informed consent was obtained from them for their participation in the study. Confidentiality, privacy and anonymity of subjects were protected; as well as their rights to withdraw at any time, from the research, were assured without penalty.

1.6. Data Statistical Analysis

Data were collected, tabulated, and analyzed statistically using an IBM personal computer with Statistical Package of Social Science (SPSS) version 22. The following statistics were applied.

▪ **Descriptive statistics:** in the form of frequencies, percentages, mean and standard deviation.

▪ **Analytical statistics:**
   The McNemar test is used on paired nominal data to analyze the significance between the three stages; and correlation coefficients are used to measure the strength of the relationship between two variables. All

statistical analysis was done using two tailed tests with an alpha error of 0.05. Regarding P value, it was considered that: non-significant (NS) if P> 0.05, significant (S) if P< 0.05 and highly significant (HS) if P<0.01.

Results

According to **table 1,** the majority of the novice nurses (40.3%) were between the ages of 30 with age mean score (37.08±8.51). Around one third of them (37.5%) hold Bachelor of Science in Nursing, (30.6%) of them were working in the First Unit. More than one half of studied nurses (55.6%) had from 5-<10 years of experience in nursing and one third of them (34.7%) had 1-<5 years of unit. Nearly three quarters of nurses (73.6%) reported that they had not attend transition training program previously.

Table 2 revealed that there were highly statistically significant differences between pre, immediately after and after three months from attendance of the role transition training program concerning nurses' transition knowledge (P<0.001). Concerning dimensions of role transition knowledge table 2 and fig 1 revealed that more than half of nurses (61.1%) reported poor knowledge level prior to implementation of the transition training program, compared to 75.0% and 65.3% who reported good knowledge level immediately after and after three months of attendance, respectively.

Moreover, there were highly statistically significant differences found between pre, immediately after and after three months of the role transition training program implementation concerning role transition

experience (at P<0.001), table 2 and fig. 2 showed that nearly half of nurses (48.6%) had a low level of role transition experience pre program, while (81.9%) and (73.6%) of nurses had a high level immediately after and after three months of the transition training program implementation, consecutively.

Table 3 showed that the majority of nurses were satisfied (82.50±10.05) regarding effectiveness of the transition training program implementation.

Table 4 reported that there were statistically significant differences between studied nurses' role transition knowledge mean scores and all demographic characteristics (at P<0.05) except the working unit. Furthermore, there were statistically significant differences between the studied nurses' transition experience mean scores and all demographic characteristics (at P<0.05) except age, and working unit.

Table (5) illustrated that there were highly statistically significant positive correlations between total scores of nurses' transition knowledge, domains and total score of role transition experience pre, immediately after, and after three months from the role transition training program implementation where (p <0.001).

Table (1): Frequency and distribution of the studied nurses according to their demographic characteristics

Nurses' demographic characteristics	Nurses (n = 72)	
	No.	**%**
Age:		
▪ < 30	10	13.9
▪ 30-<40	29	40.3
▪ 40-<50	21	29.2
▪ 50-60	12	16.7
Mean ± SD	37.08±8.51	
Educational qualification:		
▪ Diploma of Secondary Nursing School	25	34.7
▪ Diploma of Technical Institute of Nursing	20	27.8
▪ Bachelor of Nursing Sciences	27	37.5
Working Unit:		
▪ First Unit	22	30.6
▪ Second Unit	21	29.2
▪ Third Unit	19	26.4
▪ Fourth Unit	10	13.9
Years of experience in nursing:		
▪ 1-<5 years	17	23.6
▪ 5-<10	40	55.6
▪ ≥10 years	15	20.8
Years of experience in working unit:		
▪ 1-<5 years	25	34.7
▪ 5-<10	29	40.3
▪ ≥10 years	18	25.0
Attendance of role transition training program:		
▪ Yes	19	26.4
▪ No	53	73.6

Table (2): Percent scores distribution of the studied nurses regarding knowledge and experience of role transition, at pre, immediately after and after three months of transition training program implementation (n=72)

	Pre program implementation		Immediately after program implementation		After 3 months of program implementation		Fr	p
	No.	%	No.	%	No.	%		
Role transition knowledge:								
▪ Poor	44	61.1	5	6.9	7	9.7		
▪ Fair	16	22.2	13	18.1	18	25.0	102.884*	<0.001**
▪ Good	12	16.7	54	75.0	47	65.3		
Role transition experience:								
▪ Low	35	48.6	4	5.6	6	8.3		
▪ Moderate	25	34.7	9	12.5	13	18.1	105.241*	<0.001**
▪ High	12	16.7	59	81.9	53	73.6		

Fr: **Friedman test**

p: p value for comparing between the studied periods *: Statistically significant at $p \leq 0.05$ **: Highly statistically significant at $p < 0.001$
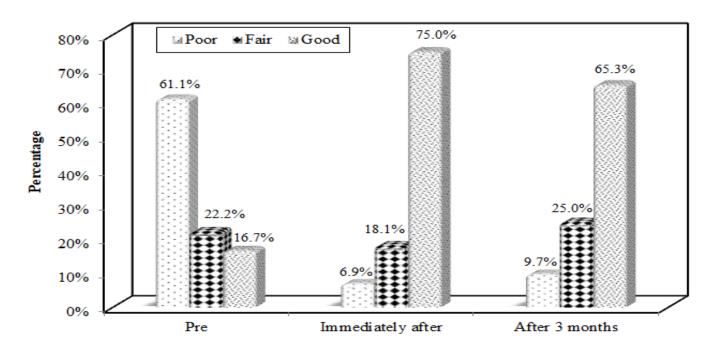Not statistically significant at $p > 0.05$

Figure (1): Percent scores distribution of the studied nurses regarding role transition knowledge at pre, immediately after and after three months of transition training program implementation (n=72)
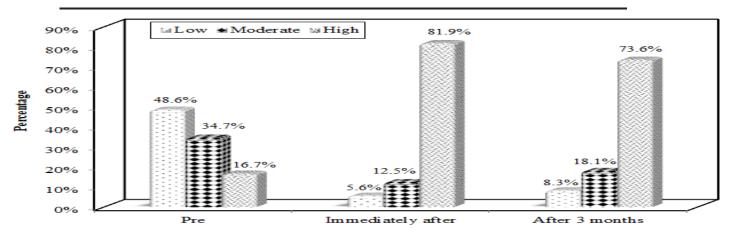
Figure (2): Percent scores distribution of the studied nurses regarding role transition experience at pre, immediately after and after three months of transition training program implementation (n=72)

Table (3): Nurses' overall mean percent score of satisfaction regarding role transition training program

Nurses' satisfaction mean scores regarding role transition training program:	Nurses (n = 72) Mean ± SD
1. The session clarified my potential career pathway and future role	4.14±1.01
2. The session has increased my strengths and self-awareness.	4.24±0.85
3. I am confident that I am obtaining the required knowledge from this session to improve my career	3.90±0.87
4. The session increased my feeling of my leadership role toward my staff	4.29±0.76
5. The teaching methods used in this session were helpful and effective	3.93±0.95
6. The teaching materials and resources used in this session were motivating and helped me to learn.	3.91±0.96
7. I enjoyed how my instructor taught the session.	4.38±0.88
8. The way my instructor taught the session was suitable to the way I learn.	4.13±1.05
9. I hope to repeat this session to all nurses to prepare them for professional nursing shared governance practices as the concept can be applied in practice.	4.31±0.91
10. Generally, I am satisfied with module teaching and I hope its recurrence	4.13±0.50
Overall nurses' satisfaction percent score (%) regarding role transition training program	**82.50±10.05**

Table (4): Relationship between the studied nurses' demographic characteristics, their transition knowledge, and experience mean scores immediately after transition training program implementation (n=72)

	Role transition knowledge		Role transition experience	
	Mean	**SD**	**Mean**	**SD**
Age:				
▪ < 30	36.40	5.56	148.00	18.09
▪ 30-<40	32.34	9.36	145.86	19.08
▪ 40-<50	34.90	7.69	144.86	21.19
▪ 50-60	39.67	0.78	154.67	19.25
F (p)	2.800^* (0.046^*)		0.728 (0.539)	
Educational qualification:				
▪ Diploma of Secondary Nursing School	32.40	9.81	143.80	20.67
▪ Diploma of Technical Institute of Nursing	31.75	7.80	140.85	16.94
▪ Bachelor of Nursing Sciences	39.48	0.89	155.41	17.98
F (p)	9.123^* $(<0.001^{**})$		4.167^* (0.020^*)	
Working Unit:				
▪ First Unit	36.73	5.26	150.00	17.53
▪ Second Unit	34.05	7.71	144.10	21.51
▪ Third Unit	33.42	9.97	146.63	21.54
▪ Fourth Unit	35.30	8.92	149.60	16.78
F (p)	0.699 (0.556)		0.373 (0.773)	
Years of experience in nursing:				
▪ 1-<5 years	35.00	7.60	149.24	20.15
▪ 5-<10	32.95	8.71	141.88	17.07
▪ ≥10 years	39.87	0.52	159.73	20.03
F (p)	4.639^* (0.013^*)		5.233^* (0.008^*)	
Years of experience in unit:				
▪ 1-<5 years	34.20	9.08	147.44	19.88
▪ 5-<10	32.62	8.19	139.93	15.75
▪ ≥10 years	39.44	0.92	159.11	19.57
F (p)	4.764^* (0.012^*)		6.145^* (0.004^*)	
Attendance of role transition training program:				
▪ Yes	39.26	0.99	160.21	19.62
▪ No	33.30	8.65	142.72	17.44
t (p)	4.928^* $(<0.001^{**})$		3.431^* (0.002^*)	

t: Student t-test   **F: F for One way ANOVA test**

*: Statistically significant at $p \le 0.05$ **: Highly statistically significant at $p < 0.001$

  Not statistically significant at $p > 0.05$

Table (5): Correlation matrix between the studied nurses' total role transition knowledge, its domains and experience at pre, immediately after and after three months of transition training program implementation (n=72)

Domains of role transition knowledge		Role transition experience		
		Preprogram implementation	Immediately after program implementation	After 3 months of program implementation
▪ **Communication skills**	**r**	0.883*	0.468*	0.631*
	p	<0.001**	<0.001**	<0.001**
▪ **Documentation practices**	**r**	0.830*	0.274*	0.457*
	p	<0.001**	0.020*	<0.001**
▪ **Evidenced Based-Practice**	**r**	0.816*	0.481*	0.652*
	p	<0.001**	<0.001**	<0.001**
▪ **Clinical reasoning skills**	**r**	0.779*	0.542*	0.683*
	p	<0.001**	<0.001**	<0.001**
▪ **Ethical principles in nursing practice**	**r**	0.595*	0.418*	0.542*
	p	<0.001**	<0.001**	<0.001**
▪ **Legal issues of nursing practice**	**r**	0.597*	0.570*	0.666*
	p	<0.001**	<0.001**	<0.001**
Overall role transition knowledge	**r**	0.826*	0.514*	0.669*
	p	<0.001**	<0.001**	<0.001**

r: Pearson coefficient

*: Statistically significant at $p \leq 0.05$

**: Highly statistically significant at $p < 0.001$

Not statistically significant at $p > 0.05$

Discussion

Being a student and then transitioning to a new job as a novice nurse is not simply a phenomenon.[1] Role transition starts with getting used to a new workplace; it is also an experience that has an impact on the professional lives of novice nurses.[36]

According to the findings of the current study, there has been an increase in the percent scores of the novice nurses' role transition knowledge who attended the transition training program to the time immediately following the program, as well as after three months of transition training program implementation.

This study's finding may be explained by the fact that, prior to transition training program implementation, novice nurses did not have knowledge regarding their roles, did not understand the value of communication skills, documentation practices, clinical reasoning skills, and evidence-based practice. Additionally, this result may be attributed to that lack of opportunities for novice nurses for attending in-service role transition training program.

The current findings are in line with those of Abdallah, et al. (2020) [11], who noted that nurses had limited knowledge of role transition regarding documentation practices and its principles. As a result, nurses should enroll in training programs. Additionally, Lehane, et al. (2019) [13], revealed that nurses had lack of knowledge of role transition related to evidence based practice.

Also, this finding is consistent with Chu et al. (2018) [37], who stated that nurses' role transition knowledge regarding communication skills considerably increased after the educational program implementation. Moreover, this finding

corroborated by Munoz, et al., (2020) [10], who indicated that, as newly novice nurses move to the workforce, a communication program should be conducted for them.

The present study's findings also agree with those of Moustafa and Abd-Elmeged (2020) [28], who noted that the improvement in overall level of novice nurses' knowledge immediately after the educational program implementation.

Furthermore, Mahmoud and Mohamed (2017) [38] revealed that more than three-quarters of the nurses had an ambivalent inclination toward clinical reasoning skills. Moreover, Romero, et al. (2018) [14] revealed that role transition knowledge regarding ethical principles enable novice nurses to provide high quality of patients' care. Furthermore, Safa and Hajbagheri (2019) [15] stated that enhancing novice nurses' knowledge regarding legal issues in nursing practice provide them legal protection against legal liabilities.

Moreover, the current study findings revealed that the majority of studied nurses had a low level of role transition experience prior to transition training program implementation but that they had high levels of role transition experience both immediately after the program's implementation and three months later.

The finding of the current study may be attributed to that immediately following transition training program implementation, as well as after three months of transition training program implementation novice nurses had a high level of role transition knowledge which resulted in more nurses' job satisfaction, and self-confidence.

According to Fawaz, et al. (2021) [16], nurses' trust and confidence levels will steadily rise as new information is considered and addressed. DeCleene et al.

(2015) [39] also highlighted that nursing students' knowledge and confidence gained from their educational background and clinical experience have an impact evidence-based practice.

Moreover, the current study revealed that there were statistically significant differences between studied nurses' role transition knowledge and experience mean scores and all demographic characteristics except working unit.

The result of the current study is congruent with Fawaz, et al., (2021) [16], Moustafa and Abd-Elmeged (2020) [28], Safa and Hajbagheri (2019) [15], and Chu et al. (2018) [37], Mahmoud and Mohamed (2017) [38], who revealed that more nurses' age, educational qualification, years of experience in nursing, years of experience in the unit, and those who attended the transition training program had more role transition knowledge and experience which resulted in more nurses' job satisfaction, self-confidence, and positive role transition. Furthermore, the current study revealed a highly statistically significant positive correlations between novice nurses' overall score of role transition knowledge, domains and their overall score of role transition experience pre, immediately after, and three months after role transition training program implementation. These findings may be attributed to the provision of a comprehensive knowledge course of transition knowledge dimensions for novice nurses in a limited time frame, which motivated them to be more focused and attentive and ultimately promoted novice nurses' self-efficacy and confidence level which lead to more nurses' job satisfaction and a positive role transition experience.

The current findings are consistent with those of Chu et al. (2018) [37], and Fawaz, et al., (2021) [16] who revealed that novice nurses possess self-confidence, job satisfaction, positive role transition experience as a result of role transition training programs implementation.

Conclusion

There were highly statistically significant variations in both the mean scores of the studied nurses' role transition knowledge and experience during different stages of transition training program. Moreover, the role transition training program had a highly significant positive impact on novice nurses' role transition experience and knowledge.

Recommendations

1. Hospital administrators should conduct a continuous transition training program for all novice nurses.

2. Hospital administrators should design job description for novice nurses.

3. Faculty administrators should orient nursing students about role transition experience in nursing curricula.

There is a critical need for research on:

- Replicate study in other settings for comparative design and promote generalization of the research results.

- Identify the effective strategies for teaching nursing students and novice nurses in order to manage role transition experience effectively

Conflicts of Interest Disclosure

The authors declare that there is no conflict of interest.

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