Enhancing Role Transition for New Graduated Nurses and its Effect on their Work Engagement

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Abstract

Background: Health care organizations need to understand how changes in the health care landscape impact new graduate nurses. **Aimof study:** Was to enhance role transition for new graduated nurses and its effect on their work engagement. **Research design:** A Quasi experimental design was utilized to meet the aim of this study. **Setting:** The study was conducted at Benha University Hospital. **Sample:** The study sample was composed of 60 of new graduated nurses with one year experience or less. **Tools of data collection:** Three different tools were used in the present study of data collection. These were namely: (1) Role Transition Knowledge Questionnaire, (2) Self-Administered Questionnaire, (3) Utrecht Work Engagement Scale (UWES). **Results:** There was a highly statistically significant difference among pre, immediate post program, and follow-up of the knowledge test and skills of new graduated nurses and level of their work engagement. There was positive statistical significant correlation between knowledge and skills score for new graduated nurses and their work engagement during immediately post and follow up (after three months) of the program phases. **Conclusion :** There was general improvement in new graduated nurses' knowledge and skills about role transition and also their level of work engagement as compared to pre course knowledge and skills. **Recommendation:** In-service training and education programs must be continuous process for refreshing increasing nurses' knowledge and skills about role transition. Effort made by hospital administration to promote awareness of being a nurse in the clinical unit, this would aid their engagement into their work

Keywords: New graduated nurses, Role Transition, Work engagement.

Introduction

The profession of nursing has been no exception in feeling the need to response to this scientific revolution. However, often the full impact of science and technology is oblivious to students as they prepare for practice and mastery of the basics of care. Preparation of transition fundamentally deals with acquiring the basic knowledge of transition- related incidents and effective strategies for managing those. Poor training, lack of support and stress related to intense working situation and high patient acuity are the main reasons why nurses are leaving during their first year after graduation. **(Wiltse et al., 2020).**

Role transition begins during the graduate educational program when students are socialized into the role and the transition does not complete until later in the first year of practice when full adaptation and adjustment to the provider role is realized. To facilitate/support their transition, students expected to be orientated to their new role and to receive regular feedback from colleagues and line managers **(Deasy et al., 2018).**

Enhancing Role Transition for New Graduated Nurses and its Effect on their Work Engagement

Work engagement has three dimensions: vigor, absorption and dedication. Vigor (physical dimension) is defined as the willingness to put efforts in one's work: it is high level of mental resilience while working and capable to preserve when deal with challenging task **(Garcia - Sierra, et. al. 2016)** dedication (emotional dimension) refers to a sense of pride, significance, challenge, enthusiasm and inspiration. Individuals who feel dedication also perceive the work to be critical and they express problems as challenges rather than strains.

Significance of the study

Transition period is characterized by anxiety, stress and manifestation of separation. The core of the problem of transition is the shock of the nurse students when encountered with the real situation and they discover that their perception about actual working area differed from academic education. Graduate nurses' negative perceptions of their new role and environment in the first 60 to 90 days of employment often lead to turnover within the first year **(Jessica and Crossman, 2017)**. So, it is important to enhance role transition for new graduated nurses and its effect on their work engagement.

Aim of the study

This study aimed to enhance role transition for new graduated nurses and its effect on their work engagement.

Research hypothesis

There would an improvement for new graduated nurses' knowledge and skills after implementing role transition educational program and there will have a positive effect on their work engagement.

Subjects and methods
Research design

A quasi-experimental research design with pretest, posttest and follow up assessments was carried out in this study.

Setting:

The study was conducted at Critical care units at Benha University Hospital: at which included 11 units.

Subjects:

The subjects include all available new graduated nurses who are working in the above mentioned study setting. The total numbers of nurses were 60 new graduated nurses

Tools of data collection:

Three different tools will be used to collect data for this study.

I- Role Transition Knowledge Questionnaire.

It was developed by the investigator based on review of related literature as **(Aldeeb et al., 2016)** to assess new graduated nurses' knowledge about transition role. It consisted of two parts:

Part (1): Personal data such as (age, marital status, gender, department, scheduled work pattern, unit orientation, preceptors during your orientation).

Part (2): It included different questions as (Multiple choice-MCQ and matching) aim to assess new graduated nurses' knowledge about transition role,

Scoring system:

For answer in each question, scores were allocated as follow: (1) for correct, and (zero) for incorrect so the total scores (39). The participant who had a percent more than 60% this indicated an adequate knowledge and if less than 60% this indicated an inadequate knowledge **(Jessica and Crossman, 2017).**

II-Self-administered Questionnaire.

It was adapted from **(Ivey and Jessica, 2018)** to assess new graduated nurses' skills toward role transition at work.

Scoring system:

For answers in each question, scores were allocated as follows: (2) always, (1) sometimes, (0) rarely, and. The participant who had a percent more than 60% this indicated satisfactory skills and if less than 60% this indicated unsatisfactory skills **(Jessica and Crossman, 2017)**.

III: Utrecht Work Engagement Scale (UWES).

This scale developed by **(Schaufeli et al. 2017)** .It aimed to assess work engagement levels among new graduated nurses.

Scoring system:

For answers in each question, scores were allocated as follows: (2) always, (1) sometimes, (0) rarely. The participant who had a percent more than 75% this indicate high work engagement level, if the score was from 60-75 % this indicate moderate work engagement level, if the score less than 60% this indicate low work engagement level **(Amer, 2017).**

Tool validity and reliability:

The tools of data collection were tested by jury group consisted of five experts in Nursing Administration; two Assistant Professors from Faculty of Nursing, Benha University , three Professors from Faculty of Nursing, Monfayia University.

The reliability was done by Cronbach's Alpha Coefficient test for role transition knowledge questionnaire was α = 0.874, for role transition skills was α= 0.846 and for work engagement scale was α = 0.793.

Ethical Considerations:

The study was conducted with careful attention to ethical standards of research and rights of the participants:

Informed consent

The respondent rights was protected by ensuring voluntary participation, so the informed consent will be obtained by explaining purpose, nature time of conducting the study, potential benefits of the study.

- **Scientific honesty**

To ensure scientific honesty, the researcher uses bucketing and intuiting to avoid bias.

Pilot Study

Pilot study was carried out from the beginning of January, 2020 to the end of January, 2020 to assess tools clarity and applicability. It was done on 10% form the subject: 6 new graduated nurses were included in the main study subject because there no modifications are required.

Field Work

The following phases were adopted to achieve the aim of the current study: assessment, planning, implementation and evaluation phases. These phases were carried out from the beginning of February, 2020 to the end of July, 2020.

Assessment phase:

- The process of data collection was carried out in February, 2020 to assess new graduated nurses' knowledge and skills regarding role transition and assess new graduated nurses' work engagement before implementation of the educational program.

- The time required for finishing each questionnaire was around; 20-40 minutes.

Planning phase:

Based on baseline data obtained from pre-test assessment and relevant review of

literature, the program was developed by the researcher. This was taken one month March, 2020. This phase was initiated in April, 2020.

Evaluation Phase:

During this phase, the impact of the education program was evaluated. Immediate evaluation included, immediate post program implemented for all subjects using the same tools which were used before the program. Follow up after three months of program implementation. The time of the data collection lasted for three months from the beginning of May, 2020 to end of July, 2020.

Statistical analysis:

Data were verified prior to entry into the computer. The Statistical Package for Social Sciences (SPSS version 22.0) was used for that purpose, followed by data analysis and tabulation. Descriptive statistics were applied quantitative data (frequency and percentages). (χ2) test was utilized to compare percentage between studied variable. Paired -t test was used to compare mean scores between pre and post program. Non-significant level value was considered when $p > 0.05$. A significant level value was considered when $p \leq 0.05$ and a highly significant level value was considered when $p \leq 0.001$. Arithmetic mean: as average describing the central tendency of observation.

Limitations of the study

1. The time for giving the session to newly graduated nurses was difficult to be organized due to corona virus.
2. As related to the research title or problem there was one research only conducted to study the effect of role transition for new graduated nurse on their work engagement.

Results

Table (1): Shows that, personal characteristic of new graduated nurses; where (16.7%) of them working in Hepatic care unit, regarding to age, about half (50.0%) of new graduated nurses were had less than or equal 23 years with Mean ± SD

(23.60±0.668), more than half (58.3%) of them were female. As regards to their Scheduled work pattern , majority (91.7%) of them were had rotating days/nights, more than three quarters (80.0%) of them were had unit orientation more than two weeks .

Figure (1): Clarifies that, the minority of new nurses(23.3%) had inadequate knowledge regarding role transition through preprogram phase, but the majority of them (95.0%) had highly adequate knowledge regarding role transition during immediately post program phase while it decrease (88.3%) through follow up phase (after three months) but they had adequate knowledge regarding role transition compared with the preprogram phase.

Figure (2): Indicates that, the minority of new nurses (41.7%) had unsatisfactory skills regarding role transition through preprogram phase, but the majority of them (90.0%) had highly satisfactory skills regarding role transition during immediately post program phase while it decrease (76.7%) through follow up phase (after three months) but they had satisfactory skills regarding role transition but still more than preprogram phase.

Figure (3): Clarifies that, , about fourth (25.0%) of new nurses had moderate engagement regarding role transition through preprogram phase, but more than half of new graduated nurses (51.7%) had moderate engagement regarding role transition during immediately post program phase. While about (60.0%) of them had high engagement through follow up phase.

Table (2): Reveals that, there was a highly statistical significant correlation between total knowledge level and total skills during immediate post program phase and there was a highly statistical significant correlation between total knowledge and work engagement toward role transition of them through follow-up phase (after three month) of program.

Table (1): Distribution of newly graduated nurses according to personal characteristics of (n=60)

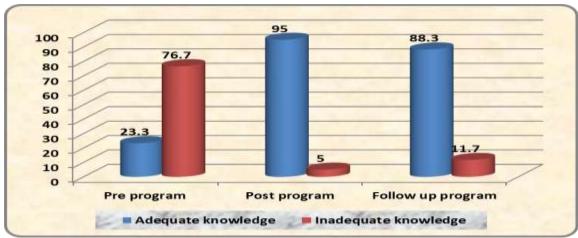| Personal characteristics		No	%
Department	Emergency care unit	7	11.7
	Intensive care unit.	9	15
	Coronary care unit	8	13.2
	Chest care unit	6	10
	Pediatric care unit	7	11.7
	Premature unit	9	15
	Hepatic care unit	10	16.7
	Neurological and psychiatric care unit	4	6.7
Age	≤ 23 years	30	50.0
	24 years	24	40.0
	25 years	6	10.0
	Mean ± SD	**23.60±0.668**	
Gender	Female	35	58.3
	Male	25	41.7
Scheduled work pattern	Straight days	5	8.3
	Rotating days/nights	55	91.7
Unit orientation	≤week	5	8.3
	>2 weeks	48	80.0
	>8 weeks	7	11.7

Figure (1): Total knowledge levels of new graduated nurses regarding role transition through the program phases. (n=60).
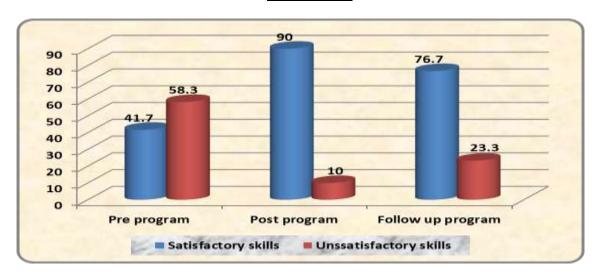
Figure (2): Skills level of new graduated nurses regarding role transition through the program phases. (n=60).
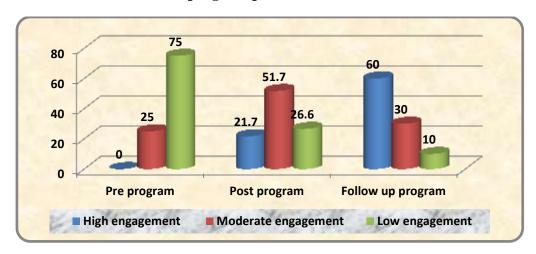

Figure (3): Percentage distribution of new graduated nurses according to total work engagement dimensions through the program phases. (n=60).

Table (2): Correlation matrix between study variables of new graduated nurses, total knowledge level, total skills level and total work engagement dimension toward role transition through the program phases (n=60).

Variables	Total Knowledge		Total skills		Total work engagement	
	Pre-program		Immediate post program		Follow-up program	
	R	P	R	P	r	P
Total Knowledge	-	-	0.251	0.000**	0.525	0.000**
Total skills	0.251	0.000**	-	-	0.320	0.000**
Total work engagement	0.525	0.000**	0.320	0.000**	-	-

Discussion

Role transition begins during the graduate educational program complete until later in the first year of practice when full adaptation and adjustment to the provider role is realized. The transition in role from a registered nurse to a nurse practicers has been described as difficult, involving a struggle, stressful, hard work, complex and demanding and one characterized by turbulence. In summary, the transition may not be smooth or easy **Price and Reichert, (2018).**

The current study aimed to enhance role transition for new graduated nurses and its effect on their work engagement. This achieved through assessing new graduated nurses' knowledge regarding role transition thorough program, assessing new graduated nurses' skills regarding role transition thorough program, assessing work engagement for new graduated nurse thorough program, designing and implementing educational program for new graduated nurses about role transition and evaluate effect of role transition educational program for new graduated nurses on their work engagement.

Discussion of the study was presented in a fifth sequences. **Firstly**; concerned with personal characteristics of new graduated nurses through program phases. **Secondly;** elaborated new graduated nurses' knowledge levels regarding role transition through program phases. **Thirdly;** focused on skills level of new graduated nurses' regarding role transition through program phases. **Fourthly**; focused on effects of role transition program on work engagement through program phases. **Fifthly** focused on correlations and relation among studied

variables of role transition program through program phases.

The present study illustrated that the distribution of personnel characteristics of the new graduated nurses, where minority of them working in Hepatic care unit, regarding to age, about half of new graduated nurses were had less than or equal 23 years, more than half of them were female. As regards to their scheduled work pattern , majority of them were had rotating days/nights, more than three quarters of them were had unit orientation more than two weeks, less than one third of new graduated nurses, concerning their Preceptors during your orientation with mean SD (4.28±1.923).

The present study illustrated that, the majority of them had highly adequate knowledge regarding role transition during immediately post program phase while it decrease through follow up phase (after three months) but they had adequate knowledge regarding role transition compared with the preprogram phase.

From researcher point of view inadequacy new graduated nurses' knowledge related to role transition was new object and they didn't have adequate training for it than before or lack of interest from nurse managers to acquire new knowledge. However, increasing knowledge acquired by new nurses could be explained by the fact that learning was not a passive experience and courses created an interactive environment.

The foregoing findings of the present study were consistent with **Azimian et al. (2018)** who conducted study about "The importance of nurse residency programs on new graduate nurses' knowledge, satisfaction and retention (Doctoral dissertation)". Reported that, a comprehensive

understanding of difficulties new nurses faced during the transitions period.

This result disagreed with **Jordan et al., (2019)** who conducted study about" Best practice principles for the transition from student to registered nurse" Reported that; there is only low- level evidence that program achieve their desired out comes regarding graduate nurses perception and knowledge of transition and as yet no reliable cost- benefit evidence.

The present study indicated that, less than half of new graduated nurses had unsatisfactory skills regarding role transition through preprogram phase, but the majority of them had highly satisfactory skills regarding role transition during immediately post program phase while it decrease through follow up phase (after three months) but they had satisfactory skills regarding role transition compared with preprogram phase**.**

From researcher point of view**,** this improvement in the skills of the newly graduate nurses could have resulted from utilizing creative teaching approaches that can facilitate the interactions and collaboration in the learning process, and this might have finally increased the effective learning performance for the newly graduate nurses and their readiness to learning new skills to facilitate their work and increases the quality of nursing care provided to the patient.

In the same respect **Jordan et al., (2019)** stated that the nurses enter professional nursing with a desire to acquire knowledge, develop skills, provide nurturing support during life changing experiences, and they have high expectations for gaining skills and knowledge to prepare them to enter professional practice, also, having an open mind and a strong desire to learn new

things which are important items of quality for all nurses.

The present study revealed that, the highest mean and standard deviation was vigor dimension throughout immediate post and follow-up phases (after three months) of the program was Mean $\pm$ SD (9.06$\pm$1.30 & 8.15$\pm$0.73) compared with the preprogram phase.

From researcher point of view, a difficult transition from nursing student to practicing professional may lead the new graduated nurses toward thoughts of leaving the profession. Graduate nurses' negative perceptions of their new role and environment in the first days of employment often lead to turnover within the first year. The highest first-year new graduated nurses retention rates are associated with strategies that incorporate a preceptor-type model for orientation and ongoing support for several months and lead to improvement of work engagement.

The present study was consistent with **Salt et al. (2018)** who conducted study about increasing retention of new graduate nurses: a systematic review of interventions by health care organizations. Reported that, to facilitate new graduated nurses' engagement into the clinical unit, the nurse managers used a total of 6 strategies. The three strategies that were standard practice if new graduated nurses were working in clinical units comprise understanding the circumstances of new graduated nurses (NGNs), providing opportunities for experience and learning, and providing support to nurses who teach NGNs.

The present study revealed that, about fourth of new nurses had moderate engagement regarding role transition through preprogram phase, but more than half of new

graduated nurses had moderate engagement regarding role transition during immediately post program phase. While less than two third of them had high engagement through follow up phase (after three months) regarding role transition due to corona virus compared with the preprogram phase.

Furthermore**, Brewington (2018)** identified that orientation programs play a critical role in job satisfaction and retention of NGNs. Creating a specially designed orientation program that takes into account the expectations of both the hospital and NGNs situation to focus on the problem, not just its symptoms. **Also, (Weigl et al., 2018)**

Moreover, **(Brewington, 2018)** who conducted study about "New nurse transitions: a qualitative study of perceived difficulties". Stated that, the mentoring program in an operating room reduced the turnover rate of newly hired nurses by helping their integration into the practice environment.

The present study indicated that, the minority of new graduated nurses reported always related to item can continue working for very long periods at a time that present in pre- program, while it was increased to more than two third after intervention through immediate post program and it was decreased in the follow up phase but still more than preprogram phase.

For researcher point of view, these might be due to their appreciation for their work which makes them able to overcome problems of work and their inside positive convenience and self- esteem which give them positive energy for doing their job. New nurses were never feeling engaged to their work as they weren't feeling preserve at their work even when things don't go well.

These findings were on the same line with **Sanneh and Taj (2015)** who conducted a study about " Employee engagement in the public sectors" indicated that Vigor is characterized by high levels of energy and mental resilience while working, by the willingness to invest effort in one's work, and by persistence in facing difficulties for new nurses.

The present study indicated that, the minority of new graduated nurses reported always related to item forget everything around me, when working that present in pre-program, while it was increased to more than two third after intervention through immediate post program and it was decreased in the follow up phase but still more than preprogram phase.

From researcher point of view, these may be related to they feel enjoying nursing profession that giving them sense of value and autonomy. As regard that they were never feeling engaged as they not feeling immersed in their work and can't got carried away when they were working. This might be due to lack of supplies and equipment that makes them work hard and provide effective patient care.

These findings were supported by **Wang et al. (2017),** who conducted a study about" Associations of occupational stressors, perceived organizational support and psychological capital with work engagement among new graduated nurses" reported that new graduated nurses at their study were have low absorption and dedication levels that lead to feeling not engaged to their work.

The present study indicated that, less than two third of new graduated nurses reported always related to item job is challenging that present in pre- program, while it was increased to after intervention through immediate post program and it was

decreased to in the follow up phase but still more than preprogram phase.

From researcher point of view, these might be due to their challenge to prove that nursing profession is an important and effective job. On the other hand, the highest percent of new graduated nurses were never feeling engaged as they don't feeling the work that they do full of meaning and purpose, proud on the work that they do, and their job is challenging.

The result of present study revealed that there was highly statistical significant positive correlation between total knowledge and total skills and total work engagement dimension. This means that when knowledge increase, skills' will increase also.

This result was supported with **Janelle et al. (2016)** who found positive correlation between acquisition of knowledge and generic skills, there was a significant positive correlation between the scores of the three domains for all batches of new graduated nurses.

Conclusion

The educational program was effective for enhancing role transition for new graduated nurses throughout the program phases: majority of them have adequate knowledge, and most of them have satisfactory skills level toward role transition in immediately post program phase. In addition there was a statistical significant improvement regarding all dimension of work engagement for new graduated nurses through immediately post program phase. And finally there was a positive correlation between total knowledge and skills score for new graduated nurses and their work engagement during immediately post and follow up (after three months) of the program phases compared with preprogram phase.

Recommendations

Recommendation for Hospital administration level:

- Hospital managers initiate an orientation program based on job description for new graduated nurse to meet their need in nursing field.

- Head nurses motivate new graduated nurses to attend of certified training courses in time management should be considered a requirement for promotion of nurse.

Recommendation for educational level:

In-service training and education programs must be continuous process for refreshing increasing nurses' knowledge and skills about the concept of role transition.

Opportunities for further research:

Further research is needed to draw more direct correlations between using a structured preceptor- training program and the necessary resources required to support such a program to improve NGNs transition to practice.

References

Aldeeb, G., Basal, A., Ebrahem, R. and Elnagar, S. (2016). Perceptions of role transition among nursing interns at Tanta University. Journal of Nursing and Health Science, 5 (5): 16-22**.**

Amer, S. M. (2017). Relationship between staff nurses job satisfaction and organizational commitment at new Kaser Elaini teaching hospital**.**

Brewington, D. M. (2018). New nurse transitions: a qualitative study of perceived difficulties. East Carolina University**.**

Deasy, C., Doody, O. and Tuohy, D. (2018). An exploratory study of role transition from student to registered nurse (general, mental health and intellectual disability) in Ireland. Journal for Nurses in Staff Development, 32(4): 15-19.

García-Sierra, R., Fernández-Castro, J., & Martínez-Zaragoza, F. (2016). Work engagement in nursing: an integrative review of the literature. Journal of nursing management, 24(2), E101-E111 .

Azimian J, Negarandeh R and Movahedi A F. (2018). Factors Affecting Nurses' Coping With Transition: An Exploratory Qualitative Study www.ccsenet.org/gjhs Global Journal of Health Science, 6, (6). P: 88-95

Ivey B. and Jessica J. (2018). Transition from student to nurse: The orientation process. Gardner-Webb University.

Janelle, C., O'Connor, K., & Dupuis, G. (2016). Evaluating illness representations in heart transplant patients. Journal of health psychology, 21(9), 1850-1859.

Jessica, Y. & Crossman, L. (2017). New nurse transition success through aligning multiple identities. Journal of Health Organization and Management, 29 (7): 1098-1114

Jordan, S., Banner, T., Gabe-Walters, M., Mikhail, J. M., Panes, G., Round, J. (2019). Medicines' Management Group, Swansea University. (2019). Nurse-led medicines' monitoring in care homes, implementing the Adverse Drug Reaction (ADRe) Profile improvement initiative for mental health medicines: An observational and interview study. PLoS One, 14(9), e0220885.

Price S. and Carol R. (2017). The Importance of Continuing Professional Development to Career Satisfaction and Patient Care: Meeting the Needs of Novice to Mid- to Late-Career. Nurses throughout Their Career Span 2,*. Adm. Sci. 2017, 7, 17.

Ratta CD. (2016). Challenging graduate nurses' transition: care of the deteriorating patient. J Clin Nurs 2016; 25: 3036–3048.

Salt, J., Cummings, G. G., & Profetto-McGrath, J. (2018). Increasing retention of new graduate nurses: A systematic review of interventions by healthcare organizations. JONA: The Journal of Nursing Administration, 38(6), 287-296.

Sanneh, L., & A.Taj, S. (2015). Employee Engagement in the Public Sector: A Case Study of Western Africa. International Journal of Human Resource Studies. https://doi.org/ 10.5296/ijhrs.v5i3.8088

Schaufeli, W. B., Shimazu, A., Hakanen, J., Salanova, M., & De Witte, H. (2017). An ultra-short measure for work engagement. European Journal of Psychological Assessment.

Wang, S., & Liu, Y. (2015). Impact of professional nursing practice environment and psychological empowerment on nurses' work engagement: test of structural equation modelling. Journal of Nursing Management, 23(3), 287-296.

Weigl, M., Muller, A., Hornung, S., Leidenberger, M., & Heiden, B. (2018). Job resources and work engagement: The contributing role of selection, optimization, and compensation strategies at work. Journal of Labour Market Research, 47(4), 299– 312. doi:10.1007/s12651-014-0163-4

Wiltse N, Kelly L, Fairman J. 2020 Postgraduate nurse practitioner residency program supporting transition into practice. Acad Med. 2020; 90(6): 707-709.

تعزيز الدور الانتقالى للممرضين حديثى التخرج وتاثيره على اندماجهم فى العمل

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تحتاج مؤسسات الرعاية الصحية الي فهم كيفية حدوث التغييرات للمرضين حديثي التخرج اثناء فترة انتقالهم الى بيئة العمل . يناقش هذا التعليق التحديات والحلول الممكنة للانتقال الناجح وزيادة مشاركتهم في بيئة العمل . لذا هذه الدراسة تهدف إلى تعزيز انتقال الدور لدى الممرضيين الجدد وتأثيره على ارتباطهم بالعمل. تم استخدام تصميم شبه تجريبي لتحقيق الهدف من هذه الدراسة. وقد أجريت الدراسة بمستشفى جامعة بنها على عينة الدراسة تتألف من ٦٠ ممرض حديثى التخرج بخبرة سنة واحدة أو أقل . وأظهرت النتائج كانت هناك فروق ذات دلالة إحصائية عالية بين ما قبل البرنامج ، وبعده مباشرة . ومتابعة اختبار المعرفة ومهارات الممرضين حديثي التخرج ومستوى ارتباطهم بالعمل . كانت هناك علاقة ذات دلالة إحصائية موجبة بين درجة المعرفة والمهارات للممرضين الجدد حديثي ومشاركتهم في العمل خلال المتابعة بعد ثلاثة أشهر) لمراحل البرنامج . وخلصت الدراسة إلى أن هناك تحسن عام في الخريجين الجدد من الممرضين . المعرفة والمهارات حول الدور الانتقالى و أيضا مستوى مشاركتهم في العمل مقارنة بالمعرفة والمهارات السابقة للبرنامج . أوصت الدراسة بما يلي : ـ أثناء الخدمة يجب أن تكون برامج التدريب والتعليم عملية مستمرة لزيادة معرفة ومهارات الممرضين حول الدور الانتقالى . توجيه جهود من قبل المستشفى لتعزيز الوعي بكونك ممرض في الوحدة السريرية ، فهذا من شأنه تساعد على اندماجهم في عملهم .