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Impact of empowerment program on the professional knowledge of newly employed nurses at Imam Khomeini Hospital in Khash, South East Iran

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ABSTRACT

One of the missions of nursing education is to prepare professionally qualified nurses. However, nursing students have inadequate knowledge when starting as a career after graduation. This research aimed at exploring the effect of in-service empowerment training on the professional knowledge of newly employed nurses. This quasi-experimental study was conducted on 60 nurses with 1-6 month experience working at Imam Khomeini Hospital in Khash, Iran. The subjects were divided into the intervention (n=30) and control (n=30) groups. Data collection tool included a researcher-made questionnaire designed in six domains including patient safety, basic cardiopulmonary resuscitation, infection control, communication skills, reporting, and firefighting. Data were analyzed in SPSS 22 using independent t-test and Mann-Whitney U test. Independent t-test revealed no significant difference between the mean scores of knowledge in the control (41.22± 6.52) and intervention (40.88±6.66) groups (P = 0.845). However, after the empowerment program, the knowledge score increased significantly in the intervention group (89.88±7.08) compared with the control group (46.55±8.34) (P <0.001). Empowerment program enhanced nurses' professional knowledge. Therefore, empowerment programs should be a vital part of professional development at hospitals.

Keywords: Professional knowledge, empowerment, novice nurses

1. INTRODUCTION

Educating professionally competent nurses is one of the major objectives of nursing (Yazdi and Jafari, 2010). Qualified nurses are more effective in providing care services (El-hadad et al., 2013). Meanwhile, newly graduated nurses do not possess the necessary skills and are not sufficiently prepared to begin their clinical work (Wilkinson, 2013). In addition to lacking professional competence and failing to provide effective care, they are not good at teamwork and are confused about organizational expectations (Axley, 2008). Competence in the field of medical science refers to correct judgment and deploying knowledge, technical skills, clinical reasoning, communication, feelings, values, and reflection on daily activities with the aim of serving the community and individuals. Nurses' clinical competence is defined as a combination of skills, knowledge, attitudes, values, and abilities that lead to effective performance in occupational or professional positions (Negarandeh et al., 2013). Solutions such as empowerment programs are needed to raise the competence of novice nurses. Empowerment is an abstract concept as well as a dynamic process for development, long-term learning, knowledge dissemination, personal growth, and self-esteem in the organization (Williams and Day, 2009). Without staff empowerment, any quality management strategy is doomed to failure (Kuokkanen et al., 2016). Empowering employees without improving their knowledge is a waste of time and other resources (Gorbani et al., 2015). Considering the importance of empowerment in providing nursing services, this study attempts to determine the impact of empowerment training on the professional knowledge of newly employed nurses.

2. MATERIAL AND METHODS

This quasi-experimental study was performed on novice nurses working at Imam Khomeini Hospital in Khash, Iran, in 2018. The eligibility criteria included expressing willingness and giving informed consent to participate in the study, clinical experience of less than six months, and no history of training at the start of the nursing career. On the other hand, the exclusion criteria were the likelihood of moving to another city and the death of the individual. A total sample size of 60 was estimated based on a previous study (Babaeipour-Divshali et al., 2016) and the formula of mean difference (Abdollahimohammad and Firouzkouhi, 2019). Qualified samples were randomly divided into the control and intervention groups.

Data collection consisted of two parts. The first part included demographic characteristics such as age, gender, marital status, work experience, and place of work. The second part assessed the nurses' professional competence in terms of patient safety, cardiopulmonary resuscitation (CPR), infection control, communication skills, reporting, and firefighting. The professional knowledge was assessed using Nurses' Knowledge Assessment Questionnaire (NKAQ), which comprised 30 multiple option questions ('True', 'False', and 'I do not know'); each domain included 5 questions. A panel of experts confirmed face and content validity of the instrument. Additionally, the reliability of this questionnaire was explored by test-retest method. Correlation coefficient of test-retest was .48 for patient safety, .86 for advanced cardiopulmonary resuscitation, .75 for infection control, .70 for communication skills, .76 for reporting, and .78 for fire fighting.

Before distributing the questionnaire, the aims of the study were explained to the participants and their informed consent was obtained. Nurses were also ensured about confidentiality of their information. Moreover, they were allowed to leave the study at any stage, even during or after completing the pretest. Both the intervention and control groups filled out NKAQ within 20-25 minutes. Then, the control group was tested two weeks later and just before the start of the educational program. Afterwards, the intervention and control groups attended six three-hour sessions on patient safety, advanced cardiopulmonary resuscitation, infection control, communication skills, reporting, and firefighting. The contents were extracted from the relevant nursing and medical sources. The content was provided via PowerPoint presentations, educational videos, and practical work. Two weeks after completion of the educational sessions, the post-test was conducted for the intervention group. The collected data were analyzed using SPSS 22. This study was approved (IR.ZBMU.REC.1397.167) by Ethical Committee of Zabol University of Medical Sciences, Iran.

3. RESULTS

Majority of participants were female (66.7%). In terms of marital status, 70% of nurses in the intervention group and 53.3% in the control group were single. The mean age was 23 years in both groups. No significant difference was found between the two groups with respect to gender, marital status, and age (P> 0.05). There was a statistically significant difference in terms of work experience between the intervention group (3 months and lower) and the control group (5 months) (P>0.05).

Table 1 Demographic profile of the study samples

Variable		no (%) or Median (IQR)		Z score	P value
		Intervention Group	Control Group		
Gender	Female	20 (66.7%)	20 (66.7%)	0	1
	Male	10 (33.3%)	10 (33.3%)		
Marital status	Single	21 (70%)	16 (53.3%)	1.76	0.184
	Married	9 (30%)	14 (46.7%)		
Job experience (Month)		2 (2.2)	5 (2.25)	5.26	<0.100
Age (Month)		23 (2)	23 (1)	1.28	0.199

Table 2 shows that the mean score of knowledge in the control (6.52±41.22) and intervention (6.66±40.88) groups did not differ significantly (P = 0.845). Nevertheless, after the educational program, the knowledge score rose significantly in the intervention group (89.88±7.08) compared with the control group (46.55±8.34) (P <0.001). Table 2 also shows Mann-Whitney U test depicted no significant difference between the two groups with respect to the mean variables of CPR, infection control, patient safety, firefighting, communication skills, and reporting (P>0.05). However, after the training program, the two groups showed a significant difference in terms of these variables (P>0.001).

Table 2 Mean and standard deviation or median and inter quartle range of knowledge scores between control and intervention group in pre- and post-test

variables	Pre-test		p-value	Post-test		p-value
	Mean (SD) or Median (IQR)			Mean (SD) or Median (IQR)		
	Control	Intervention		Control	Intervention	
Knowledge total	41.82 (6.52)	40.88 (6.66)	0.845 [a]	36.66 (7.68)	89.88 (7.08%)	<0.001[a]
CPR	40 (20)	40 (20)	0.800 [b]	40 (20)	100 (20)	<0.001[b]
Security	30(20)	20 (20)	0.841 [b]	40 (20)	100 (20)	<0.001[b]
Infectious control	40 (20)	40 (20)	1 [b]	40 (20)	100 (20)	<0.001[b]
Fire control	40 (10)	40 (10)	1 [b]	40 (20)	100 (20)	<0.001[b]
Communication	40 (20)	40 (20)	1 [b]	40 (25)	100 (20)	<0.001[b]
Nursing reports	40 (20)	40 (20)	1 [b]	40 (20)	100 (20)	<0.001[b]

[a] Independent t-test; [b] Man-Whitney test

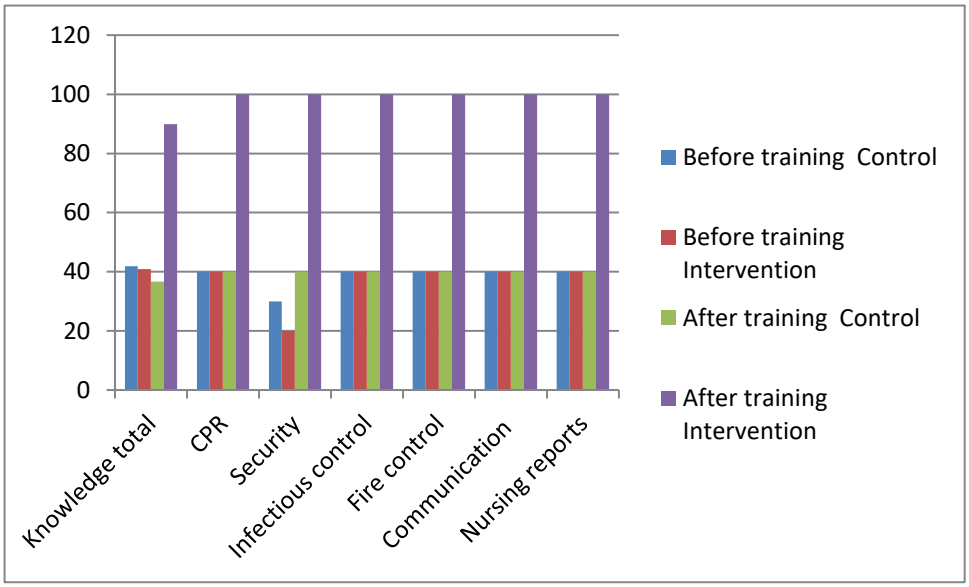

Figure 1 The impact of professional knowledge and its sub-scales before and after Empowerment program in control and intervention groups

4. DISCUSSION

The purpose of this study was to determine the effect of empowerment training on the professional knowledge of newly employed nurses of Imam Khomeini Hospital in Khash. In this study nurses knowledge were evaluated in six areas including cardiopulmonary resuscitation, patient safety, infection control, firefighting, effective communication, and reporting. The pre-test results showed that the new nurses did not have sufficient knowledge and skills in these areas, and there was no significant difference between the control and intervention groups in terms of these six categories. However, after the empowerment program, the knowledge of nurses in the intervention group improved significantly compared with the control group.

The scores of knowledge about CPR were low in both groups before the educational program but significantly increased in the intervention group after the program. Nursing students learn the theoretical and practical aspects of CPR at the beginning of their studies and face it in emergency departments. However, there is little opportunity for nursing students to participate in resuscitation, which may be one of the causes for the weakness of new nurses in CPR. Retraining courses ought to be developed and implemented for novice nurse every six months in accordance with up-to-date guidelines (Munezero et al.,2018).

In the present study, the knowledge of novice nurses in the area of patient safety were not initially satisfactory; however, they improved considerably after the empowerment program in the intervention group compared with the control group. Empowering programs can help nurses reduce or prevent possible risks and complications as patient's falling from the bed and various medical errors (Amiri et al., 2018; Pakzad et al., 2016). The results of the present study showed that knowledge of newly employed nurses in controlling infections were generally low prior to the intervention. Despite the fact that infection control is taught for about 16 hours to nurses in Iran, lack of rehearsal and practice has weakened the knowledge of them. Sarani et al., (2014) reported that Iranian nurses do not often possess adequate knowledge about nosocomial infections, which is in line with the results of the current research. On the other hand, in one study on Irish nurses it was observed that most nurses were aware of their hospital infection control guidelines, which could be attributed to the way hospitals are planned and monitored (Kingston et al., 2017). In the present study, after the experiment, the knowledge and skills of newly employed nurses increased significantly in the intervention group, indicating the effectiveness of the empowerment program.

In this research, the knowledge scores of both groups in the area of firefighting were from low before the experiment but rose significantly in the intervention group after conducting the empowerment program. Bhogal et al., (2015) and Davoudiantalab et al., (2016) also reported low levels of knowledge and practice among novice nurses, which increased after presenting the training program. One of the main reasons for nurses' insufficient knowledge is lack of training during formal university education. Therefore, firefighting training should be provided to nurses in educational institutions. Hospitals are also recommended to organize emergency training and firefighting awareness programs as part of retraining and continuing education for hospital staff, especially newly employed nurses.

In the present study, while knowledge scores of newly nurses in the pre-test stage were not favorable with respect to nurse-patient communication, they grew much better after the empowerment program. Novice nurses with less than one-year experience are not as successful in communicating with the patient as those with more than one-year of work experience (Mani and Abutaleb, 2017). Establishing favorable nurse-patient communication is a necessity for providing effective and high-quality nursing care (Nikmanesh et al., 2018). In the nursing curriculum in Iran, nurse-patient communication starts from the second year when clinical internship programs begin and it is carried out through case reports based on the nursing process. The inability of novice nurses to communicate effectively with patients probably due to lack of adjustment to new working conditions, compared to the time when they were student.

At the beginning of this research, the subjects were inefficient in reporting as well. However, after the empowerment program, the intervention group prepared significantly better reports compared to the control group. Reporting and recording activities is one of the most essential tasks of the nurse. In their final academic year, nursing students in Iran directly experience internship at various wards so that they can fulfill their future roles. According to the findings of this research and similar studies by Nakate et al., (2015), and Qasabi and Alavi (2012), novice nurses have poor knowledge in the reporting process.

5. CONCLUSION

The results of this study demonstrated that the knowledge newly graduated nurses were significantly increased in terms of patient CPR, infection control, safety, nurse-patient communication, firefighting, and reporting. It could be deduced that novice nurses need to be trained about skills that enhance their knowledge and culminate in amplifying their professional competence.

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Competing interest

No any conflict interest among authors.

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