



Research Article

External Effectiveness of Nursing Undergraduate Curriculum from the Viewpoint of Nursing Graduated Students and Nursing Managers: A Cross-sectional Study

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Rec Date: March 23, 2018 Acc Date: April 19, 2018 Pub Date: April 29, 2018

Abstract

Background and aim: Educational programs are considered as one of the main concerns of planners in each organization to find their impact on learners and making behavioral and functional changes in them. Given the professional status of nurses in community health, the current research was conducted to evaluate the external effectiveness of nursing undergraduate curriculum from the viewpoint of nursing graduated students and nursing managers based on the Kirkpatrick model.

Methods and materials: This cross-sectional research was carried out on 208 graduated nursing and nursing managers working in hospitals affiliated to Iranshahr University of Medical Sciences, who were randomly selected. The tool used in this research was a researcher-developed questionnaire based on educational goals. Data were analyzed by SPSS v22 with independent t-test.

Result: Findings revealed that the knowledge created from the viewpoint of the graduated students is less than the desirable level, but it is at acceptable level. The skill acquired from the viewpoint of graduated students was at the desirable level and the attitude created by the graduated students was at acceptable level. Moreover, findings reflecting the managers' viewpoint showed the results similar to graduated students' viewpoint. From the nursing viewpoint, the acquired skill was at desirable level and the knowledge and attitude of graduated students were at acceptable level.

Conclusion: Nursing undergraduate curriculum external effectiveness has acceptable level.

Keywords: Effectiveness; Nursing; Education; Healthcare professional

Introduction

Nursing is a knowledge-based profession, using science and art to meet the health needs of the people in community [1], and major part of human resources is allocated to health systems throughout the world [2], so that four and a half million people of nursing community provide care for elderly people in European countries [3]. The important function of this group of treatment teams in maintaining and enhancing the health of people along with increasing multicultural challenges, rapid changes in medical technology, and rapid social changes have made nurses face with great number of legal and ethical challenges. Thus, nursing education focuses on educating the independent, responsible and patient-oriented nurses, who can have practical skills appropriate to the existing needs of the community and equipped with critical thinking [3-5]. Nursing education is being developed rapidly in recent decades, and this has caused concerns on the education quality [6,7]. Moreover, its education in the world faces with great challenges such as the competence of graduated students, the quality of education provided, and curricula of this field of study in accordance with the needs of society [7,8]. While this healthcare field of study has been developed positively in Iran, it has faced serious challenges as with many other countries [9]. While nursing education program has started several decades ago and modern methods of education have been provided for the students, many problems have been reported by students, educators, and managers in this profession [3,10]. Given the special importance of nursing due to its close relationship with the health of people, it needs to move towards quality evaluation [7,11].

Evaluation is one of the main methods used to improve the quality of education in universities, performed mainly in the form of internal evaluation, external evaluation, and accreditation process in most of countries in the world [12]. Research conducted on evaluation in Iran suggests that internal evaluations have been used in Iran, while it is not adequate to achieve desirable level of quality [13]. In addition, these studies suggest that evaluations in the educational system have not been based on specified and coherent framework and this has caused problems in improving the education quality of universities [14]. One result of the evaluation of the educational courses is determining the impact of directions, modification, reforming, or completion of them [15,16]. One important indicators of external evaluation is determining the extent to which learners achieve to organizational goals. The answer to the question that to which extent learners have achieved to the educational courses is one of the main questions of healthcare professional professors, which several models have been proposed for it [16]. The external effectiveness of the curriculum can be evaluated by measuring the level of change in learners' behavior. As the size of changes occurred in the behavior of learners at the end of educational activities is more consistent with pre-specified goals, it could be stated that the curriculum has higher effectiveness [17]. In other words, the actual effectiveness of a curriculum needs to be considered from the functional dimension, called as external effectiveness [18]. One of the simple and practical models in evaluating the educational programs is the Donald Kirkpatrick four-level model [19]. This model is widely used in evaluating in-service educational programs in organizations [17]. In this simple and practical model, the effectiveness of educational programs can be evaluated using four important steps, including reaction levels, learning, behavior, and outcomes. The reaction means the rate of response, which learners are showing to all the factors affecting the implementation of an

educational course. In the response step of this evaluation model, the feeling of the participants on education program (satisfaction) is measured. The learning step involves determining the level of learning the skills, techniques, and facts trained for participants during the educational course and we can find its level through priori educations, in-service educations, and educations provided after participating in the educational course. Behavior means the rate of changes created in the behavior of participants due to participation in the educational course. Finally, outcome means the level of achieving to the goals, which are directly associated with organization [20,21]. Evaluations in the educational course in Iran have been performed often simple and at the first level or at the second level at most, while other levels reflecting the level of skill and efficiency of people in the workplace have not been evaluated [22]. Undoubtedly, educational programs are very different in terms of quality. Unfortunately, a few numbers of these programs are comprehensively evaluated. Thus, the current research was conducted to determine the external effectiveness of the nursing undergraduate educational program from the viewpoint of graduated students and nursing managers in Iranshahr Medical Sciences School.

Methods

This cross-sectional research was carried out on graduated nursing and nursing managers (metron, educational supervisor, clinical supervisor, infection control expert, one who is responsible quality improvement, one who is responsible for accreditation, and one who is responsible for the wards) in three hospitals affiliated with Iranshahr University of Medical Sciences. Out of 281 nursing staff, 165 samples were selected and participated in the research. A total of 58 nursing managers participated in the research.

Collecting data

Data were collected using two researcher-developed questionnaires, which it was developed for both groups of participants, (graduated nurses and nursing managers). It included 21 items in the three dimensions of knowledge, skills and attitude (7 items for each dimension) based on the educational goals approved for nursing undergraduate course. Subjects provided their views in a 5-point Likert scale ranging from completely agree (score 5) to completely disagree (score 1) (minimum score was 21 and maximum score was 105). Validity of the questionnaires was determined using the views of 13 faculty members and professors in this field of study (in examining the CVR, the minimum score of each item was determined 0.99 and the maximum was determined 1. In the CVI examining, the minimum score was determined 0.84 and the maximum score was determined 1 for different items in the criteria of simplicity, clarity, and relevance). The reliability of the questionnaires was also measured and confirmed by the test-retest method ($r=84\%$). The questionnaires were provided for participants by referring to the workplace of the samples selected for the research. The questionnaires were delivered 60 minutes after their distributing.

Data analysis

Data were analyzed by SPSSv22 with inferential statistics (one sample t-test and independent t-test).

Results:

A total of 223 questionnaires (165 nursing staffs, 58 nursing managers) were distributed, which 208 of them were completed and

returned (responding rate was 93%). According to the obtained findings, 68.7% of the samples were female and 31.3% of them were male, 76% were graduated students and 24% were nursing managers. The findings obtained from view of graduated students showed that the mean score of knowledge was 3.37 ± 0.61 , the mean score of acquired skill was 3.74 ± 0.64 , and the mean score of attitude was 3.44 ± 0.66 , which were at the acceptable, desirable, and acceptable levels, respectively. The mean scores of the viewpoint of the nursing managers in three areas of knowledge, skill and attitude were 3.21 ± 0.82 , 3.86 ± 0.65 , and 3.4 ± 0.78 , respectively (Table 1).

Effectiveness dimensions	Groups	N	mean	SD	T	Df	P value
Knowledge	Graduated students	158	3.37	0.61	1.55	206	0.12
	Managers	50	3.21	0.82			
Attitude	Graduated students	158	3.44	0.60	0.36	206	0.71
	Managers	50	3.40	0.78			
Skill	Graduated students	158	3.74	0.64	1.16	206	0.24
	Managers	50	3.86	0.65			

Table 1: Comparing the views of nursing graduated students and nursing managers on the effectiveness of nursing undergraduate curriculum.

Comparing the views of the two groups of graduated students and nursing managers showed that the graduated students gave the highest score to two dimensions of knowledge and attitude, and the managers gave the highest score to acquired skill.

Discussion

The research findings suggest that the learners and managers participating in the current research evaluated the effectiveness of the external curriculum of nursing undergraduate course at the acceptable level, while this does not indicate 100% effectiveness. These scores represent the acceptable adequacy status at the first level (reaction) and the second level (learning). Various research has shown the highest level of educational effectiveness in the first and second levels of Patrick model, for example the research conducted by Fathi et al. [15] and Hojjati et al. [17].

Mohan et al. believe that learners of the educational courses reported high satisfaction at first level evaluation of the Kirkpatrick model, and based on Tavakolli, this stage is the most common type of intra-organization evaluation, evaluating the learners' reaction immediately after completing the educational courses and providing an immediate feedback to measure the educator performance and educational programs [23,24]. However, the finding of the research conducted by Mohammadi et al. was in contrast with findings of this research [18]. The attitude created from the viewpoint of graduated students is at the acceptable level, which it is less than the desirable level [25]. It is in line with findings of the research conducted by

Torkzadeh et al. [26] and contrast to findings of the research conducted by Fathi et al. [15] and Mohammadi et al. [18]. Change in the attitude caused by implementation of the educational program results in an individual adaptation to organizational principles of the workplace and providing the necessary flexibility for working efficiency and increasing the desired efficiency and, finally, service and professional satisfaction of the person.

In addition, given the status of the attitude caused by educational program based on the learner talents, the organization needs to develop the educational programs appropriately to create the necessary opportunities for obtaining experiences in order to maximize the change of learners' attitudes [12,18]. The acquired skills from the viewpoint of graduated students are at the desirable level, which is consistent with findings of the research conducted by Fathi and Vahjarga but it was inconsistent with findings of the research conducted by Mohammadi et al. [3,15,18]. This suggests that graduated students have the ability to provide their services with high quality and perform their duties and responsibilities. This would result in stability in the desirable performance level, client satisfaction, satisfaction of managers, and positive external view of the organization. However, managers should consider the required planning to improve the level of knowledge of their employees. The important point in achieving the desirable acquired skills is that despite the lower level of knowledge and attitude, is that employers expect that their students to have the required practical knowledge necessary to perform the specialized tasks in the organization [16]. The viewpoint of nursing managers shows the similar results with those of graduated students. According to the research findings, from the nursing managers' point of view, the knowledge and attitudes of graduated students was in the acceptable level and the acquired skill was at the desirable level. In the knowledge dimension, it is in line with finding of the research conducted by Fathi et al. [15] and Mohammadi et al. [18]. As the final stage of the educational program, evaluation provides information to justify or reject an educational program leading to continuity or non-continuity of the educational program by the managers [27]. Most of the evaluations performed in different areas have been related to the first and second levels of the Kirkpatrick model, which major issues of it are related to lack of seriousness by employees and managers in evaluating and not providing adequate feedback on its outcomes [28]. Given the complexity of evaluations at the third and fourth levels and lack of performing it in educational systems, researchers did not have adequate information in this regard. As education is not considered seriously in many cases without developed and proper validation, one limitation of this research might be lack of similar foreign and domestic studies in this regard. Thus, it is recommended that nursing researchers and nursing managers to evaluate different educational courses based on the Kirkpatrick model. As the current research is a case study, it is necessary to conduct this type of study in other academic centers to generalize the results and make the relevant decisions.

Conclusion

Based on the results obtained from acceptable quality of the external evaluation of the nursing undergraduate educational program, the mission of the health centers in supporting and providing appropriate healthcare services to its clients makes it requires that the nursing undergraduate program to have appropriate, qualitative, and desirable effectiveness.

Acknowledgments

We appreciate nursing personnel and managers of hospitals affiliated to Iranshahr Medical Sciences School for their cooperation in performing this research. This research is the result of a project approved by research committee of Iranshahr university of Medical Sciences with number of IR.IRSHUMS.REC.1395.10

Conflict of interest: None

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