Original Article

Studying Barriers to Work-Based Learning in Clinical Environments from the Perspective of Nursing Managers and Nurses

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Abstract

Work-based learning is one of the best learning methods to ensure professional competence during nurses' careers. In the strategic goals of healthcare organizations to achieve success, awareness of the importance and value of this learning method is essential. The purpose of this study was to investigate the operational barriers to work-based learning in clinical environments. In this descriptive-analytical research, 220 clinical nurses and nursing managers were included in the study using available sampling and Morgan's table. After the collection of data, data analysis was done by SPSS23 software. Data were analyzed by inferential tests and descriptive statistics. From the point of view of nurses and nursing managers, managerial, organizational, and individual factors were important obstacles to work-based learning in healthcare centers. The difference between the nurses' and nursing managers' opinions was statistically significant just in managerial obstacles (P < 0.01), and the difference between the nurses' and nursing managers' opinions in organizational and individual obstacles was not statistically significant (P < 0.05). Contrary to nursing managers, nurses considered managerial obstacles more involved in work-based learning. Whereas, based on the nursing managers, organizational barriers were the most limiting factors for a method of work-based learning in clinical environments. According to the obtained results, using the method of work-based learning is one of the interactive and active learning methods that causes professional development in some fields, including nursing. Thus, it is essential to specify the factors that affect the implementation or failure of this learning method.

Keywords: Nursing managers, Nurses, Work-based learning, Clinical environments

Introduction

Learning is a purposeful activity and the quality of the learning environment is important for effective learning. The concept of work-based learning is an approach that can be understood from different perspectives [1-4]. This concept is the informal learning of the employees of an organization that happens in interaction with each other while doing work, and its core is learning based on experiences [5, 6]. This type of learning is to transfer experience to others [7]. The focus of training programs in professions with clinical training is on action-based learning [8], hence, experiential learning has been one of the most important necessary components in health courses [9]. Nursing is also one of the professions where most of the education is done in clinical settings. Therefore, there is a learning process throughout the working life of nurses, and work-based learning is the best way to ensure professional competence during their working life. In the strategic goals of healthcare organizations to achieve success, awareness of the importance and value of this learning method is essential [10, 11]. Learning in the traditional sense means that knowledge is given to the employees without the need for them to do any activity or process themselves, but in the new meaning of learning, it requires individual processing [5]. In another

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perspective, work-based learning is a concept that describes learning-based programs in organizations that are used in a coordinated and integrated manner to create a new learning approach in the workplace [12].

Every educational phenomenon occurs in a specific context or context, and for its realization, the necessary background for its occurrence in real environments should be made possible. According to Fischer *et al.* [13] in socio-cultural theories, learning occurs within social groups and knowledge emerges through the argumentative transfer of meaning and social identity. In the clinical environment, the importance of providing training in personal and professional development as well as nursing clinical skills is undeniable [14, 15]. They define the clinical education environment as a reciprocal and complex network of forces that affect clinical learning outcomes [16, 17]. Despite paying a lot of attention to organizational training, studies have shown that much of this training does not have the necessary effectiveness in terms of transferring learning to people working in the organization, and the transfer of learned skills is done in a very small amount [18]. Therefore, employees are required to absorb new knowledge and skills in the work environment so that they can keep their professional knowledge up to date with organizational changes [19]. Transfer of learning is defined as the degree to which participants apply their acquired knowledge, skills, and attitudes in the workplace. In the past three decades, some researchers focused on the development of mechanisms and tools for measuring the transfer of education in the workplace [20, 21].

Chiaburu *et al.* [22] have pointed out that the transfer of training is critical to workplace effectiveness. The mastery of the receiver of training on learning increases goal orientation and will lead to an increase in motivation to transfer training. Knowledge is one of the important factors in knowledge-based organizations instead of production-oriented organizations, and having up-to-date knowledge and information is an undeniable phenomenon for the survival of organizations. Therefore, organizations should give importance to the acquisition of modern knowledge, find more wise solutions in important quests to improve knowledge-based functions, and have a high degree of learning in defined dimensions so that they can claim that they have a high learning ability. To achieve their goals, organizations need capable human resources with high-level skills and expertise. Meanwhile, it is assumed that human resources are a stable and developing vital element in the organization, and one of the most important reasons that organizations pay attention to the training and improvement of human resources is to improve organizational performance, but there are signs for relative certainty of Its success is not in hand [23].

With the improvement and upgrading of the nursing education process, progress in nursing care is expected, although it is suggested that students apply the learned standards related to their specialization in work environments, and this process can also be useful in improving the quality of patient care. Nevertheless, it seems that work-based learning in some places is still used less than other practical training methods to perform tasks [5]. To achieve this goal, the a need for sufficient time and space for interaction. There is reciprocity between employees and the transfer of experiences [24, 25]. Nursing managers can influence their learning in the work environment by familiarizing new employees with the examination environment and managing how employees perform tasks. To ensure work-based learning, nursing managers need to create a learning culture in their workplace [26]. In nursing and bedside areas, there is often less space and time required during procedures to transfer experience and informal learning between employees, and this issue is quite clear. Therefore, the researchers hope that by identifying the obstacles in the work-based learning process from the point of view of nursing managers and nurses working in clinical areas, steps will be taken to remove them and implement this learning technique as best as possible.

According to the conducted research and the variables of the current research, it is important to find the obstacles to the implementation of the work-based learning process in different fields with a focus on learning in clinical environments in health care services, so that planners and educational managers can evaluate the dimensions Related to these factors, healthcare organizations should pay special attention.

Materials and Methods

The current study is a descriptive-analytical research that examines the barriers to work-based learning in clinical learning environments from the perspective of two groups of hospital employees (clinical nurses and nursing managers). The reason for choosing these centers was the availability of samples and cooperation with the research group. The research community included all nurses and nursing managers, supervisors, and matrons. The entry criteria of all nurses and managers who were willing to participate in the study and the exit criteria of unwillingness to participate in the study and long-term leave of more than two weeks were considered. The sample size was estimated using Morgan's table and according to the size of the research population, 205 people, taking into account the attrition rate, 220 of the eligible samples completed the questionnaires. 16 administrators and 204 clinical nurses completed the questionnaires.

In the current research, to collect data, a researcher-made questionnaire of work-based learning barriers was used. The first part was demographic information and included: age, work experience related to nursing, experience in nursing management positions, marital status, latest degree in nursing, employment status, and type of

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employment. The second part was the sub-scales of managerial, organizational, and individual barriers to work-based learning and it consists of 23 items that are graded on a five-point Likert scale from strongly disagree (1) to strongly agree (5). To determine the factor structure of the work-based learning barriers questionnaire, the exploratory factor analysis method was used by the principal components method and varimax rotation to explain, categorize, and clarify the items. Factor loadings less than 0.30 were discarded. In other words, the exploratory factor analysis method was used to check the construct validity of the work-based learning barriers questionnaire and to determine the factors (barriers) that make it up.

The criterion for extracting the slope factors of the scree diagram was an eigenvalue higher than one. The value of the Keyser-Meyer-Olkin sampling adequacy test was equal to 0.85 and the coefficient of Bartlett's sphericity test was equal to 539.1573, which was significant at the 0.001 level and indicated the adequacy of sampling and the correlation matrix of the items for factor analysis. The validity of the dimensions of this scale has been obtained by the researcher using Cronbach's alpha method for individual barriers (0.73), managerial barriers (0.76), and organizational barriers (0.71) respectively, and the Cronbach's alpha coefficient for the entire questionnaire is 0.82. The demographic data were analyzed by descriptive statistics (percentage and frequency) and inferential tests (Keyser-Meier-Olin sampling adequacy test, exploratory factor analysis, Bartlett's test of sphericity, Cronbach's alpha coefficient, independent means test, one group comparison test, and Friedman's intra-case non-parametric statistical test). SPSS23 software was used for data analysis at a significance level of 5%.

Results and Discussion

In this study, 220 nurses and nursing managers (16 nursing managers and 204 clinical nurses) participated and completed the questionnaires, whose demographic information is given in **Table 1**. The results of the frequency distribution of the opinions of nursing managers and nurses regarding the practicality of work-based learning showed that 1.4% were not practical, 43.2% were somewhat practical, and 55.5% acknowledged that it was very practical. Also, the results of the exploratory factor analysis are given in **Table 2**.

Table 1. Demographic data in two groups of nursing managers and clinical nurses.

Nurses	Age (years)	Work experience (years)	Marital status (percentage)		Educational status		Employment status			
			Married	Single	BSc	MSc	Official	Trial	Draft	Contractual
Nursing managers	42.25 ± 6.75	19.19 ± 6.34	87.5%	12.5%	75%	25%	81.3%	0	0	18.8%
Nurses	31.37 ± 7.19	8.29 ± 6.64	59.3%	40.7%	91.7%	8.3%	3.35%	9.8%	17.2%	37.7%

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Table 2. The results of factor analysis of work-based learning barriers scale.

Questions	Individual factor
Fatigue caused by workload and many patients	0.66
Dissatisfaction with the work program of the department	0.40
Psychological stress caused by personal and family problems	0.45
Lack of belief in the usefulness of learning from colleagues' experiences while doing work	0.60
Lack of awareness about the necessity of learning while doing work	0.72
Lack of awareness about how to learn while doing	0.63
Being disinterested and not paying attention to the nursing profession	0.53
Worry about revealing your lack of professional knowledge and skills by asking to learn from a colleague	0.64
Lack of belief in the high level of knowledge and skill of the colleague compared to his level of knowledge and skill	0.59
Unwillingness and willingness of skilled people to teach others their knowledge and skills while doing work	0.42
Special Value	0.173
Variance explained	13.76%

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Questions	Managerial factor
Failure to choose the ward according to the nurse's interest and desire	0.31
Lack of direct supervision of the nursing manager on work-based learning	0.58
Failure to provide appropriate feedback from the nursing manager	0.73
Lack of direct supervisor supervision on work-based learning	0.81
Failure to provide appropriate feedback from the supervisor	0.76
Failure to employ skilled people in all departments in clinical environments	0.62
Lack of periodic monitoring of the implementation process of directives regarding new learning methods in clinical environments by the nursing office	0.31
Special Value	28.3
Variance explained	35.14%

Questions	Organizational factor
Not having the right opportunity and time to learn while doing work	0.62
An increase in the amount of written work followed by less interaction with colleagues	0.62
Not assigning points and rewards to nurses who seek to learn and acquire knowledge and skills from the experiences of other colleagues while doing their work	0.48
Lack of immediately available learning facilities for nurses (books, pamphlets, internet, etc.)	0.39
Existing stresses related to the hospital environment and patients	0.64
Lack of appropriate instructions and directives from the organization to implement informal learning while doing work	0.32
Special Value	2.76
Variance explained	11.99%

Table 3 compares the average opinions of two groups of nursing managers and bedside nurses. The average opinion of nursing managers and nurses was statistically significant at the $P < 0.01$ level with the expected average. From the point of view of nurses and nursing managers, managerial, organizational, and individual factors are serious obstacles to work-based learning in healthcare centers. The difference between the nurse's and nursing managers' opinions was statistically significant only in managerial barriers at the level of $P < 0.01$, and the difference between the nurse's and nursing managers' opinions in organizational and individual barriers was not statistically significant ($P > 0.05$). In other words, compared to nursing managers, nurses consider managerial obstacles more involved in work-based learning. Also, the opinions of nursing managers and nurses regarding individual and work-based learning organizational barriers were almost similar and close to each other. To investigate the difference in the average ratings from the point of view of both groups (managers and nurses), the Chi-square statistical test and Friedman's intra-case non-parametric statistical test were used. The results showed that the difference between the ranks is statistically significant ($P < 0.01$). Organizational barriers had the highest rank from the point of view of nursing managers and managerial barriers had the highest rank from the point of view of clinical nurses in work-based learning.

Table 3. Comparison of the average opinions of nurses and nursing managers regarding managerial, organizational, and individual barriers to work-based learning.

Barriers to work-based learning	Job position	Mean	t-value	Degree of freedom	P-value
Individual barriers	Nursing Managers	3.28 ± 0.698	9.920	218	0.428
	Nurses	3.40 ± 0.581			
Management barriers	Nursing Managers	2.93 ± 0.730	7.906	218	0.001
	Nurses	3.40 ± 0.671			

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Organizational barriers	Nursing Managers	3.88 ± 0.522	22.690	218	0.885
	Nurses	3.90 ± 0.591			
The total score of the questionnaire	Nursing Managers	33.3 ± 0.533	-1.628	218	0.105
	Nurses	3.53 ± 0.473			

Table 4 compares the ranks of the leveled averages of individual, organizational, and managerial barriers to work-based learning from the point of view of nursing managers and nurses. To check the difference between the mean ratings, the chi-square test and Friedman's intra-case non-parametric statistical test were used. The results showed that the difference between the ranks is statistically significant (P < 0.01). Also, the ranking of barriers to work-based learning, from the highest to the lowest, are organizational barriers, individual barriers, and managerial barriers. In other words, organizational barriers have the highest rank and managerial barriers have the lowest rank in work-based learning. In other words, from the point of view of nursing managers and nurses, organizational barriers are more important in the work-based learning of nurses and employees in healthcare centers compared to individual barriers and managerial barriers.

Table 4. Comparison of the ranks of the aligned averages of individual, organizational, and managerial barriers to work-based learning from the point of view of nursing managers and nurses.

Rank	Barriers to work-based learning	Average rank	Chi-square value	Degree of freedom	P-value
1	Organizational barriers	2.51			
2	Individual barriers	1.77	146.87	2	0.001
3	Management barriers	1.72			

The purpose of this study was to examine the barriers to work-based learning in healthcare organizations from the point of view of nurses and nursing managers. Increasing inclusive experiences in work environments, deepening inclusive applied learning, strengthening the skills of working professionally, increasing responsibility in the execution of work, reducing job stress, increasing awareness of the environment, and improving competence and competence in inclusiveness, are among the benefits of using the learning approach based on performance [27].

The results of this study showed that from the point of view of nursing managers and nurses, organizational barriers are more important in the work-based learning of nurses and staff in healthcare centers compared to individual barriers and managerial barriers. Among the studies carried out in this field, we can refer to the research of Syamhanim *et al.* [7] entitled Comparison of Work-based Educational Models and their implementation in educational institutions. In the research of Syamhanim *et al.* [7], five work-based learning models were discussed and it was found that all these models emphasize that this learning method requires the participation of students, educational institutions, and employers to achieve results. It has also been emphasized that the role of the learner, teacher, and educational environment is essential for success through this learning method. In this study, in line with the results of the current research, individual factors were one of the most effective factors in learning and are known as the most important factors in experiential learning. In this research, individual obstacles were among the weakest obstacles in the implementation of work-based learning from the point of view of nurses and nursing managers. The main obstacles, respectively, were organizational and managerial factors, which played a greater role in the lack of access to the implementation of this learning method in work environments [7].

Nevalainena *et al.* [10] conducted a systematic review of qualitative studies titled "Nursing Staff's Experience of Work-based Learning in Health Care Organizations". This study, which aimed to systematically review the summary of qualitative evidence about work-based learning and the experiences of nursing personnel in this field, announced four appropriate results about on-the-job learning and interaction with other colleagues and stated that in clinical decision-making factors The following play the most important role: the culture governing the work community, the physical structure of the space and the duties of each work unit, management, and interpersonal relationships. These researchers stated that knowing nurses' experiences of work-based learning and the factors behind these experiences provides an opportunity to raise learning challenges in the fields required by health organizations [10].

Chakkaravarthy *et al.* [28] in a study titled "Predictors of preparation in nurses and midwives using the self-learning method" presented four main themes as predictors of the preparation of nurses and midwives in the self-learning method, which are: individual characteristics, environment Work, online learning, and the nature of the learning process itself. The researchers stated that the work environment can affect the self-learning process of nurses and midwives more than the individual characteristics of people. In this study, it places individual factors in the second order [28], which is somewhat in line with the results of the present study.

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Chan *et al*. [29] used the clinical partnership model in research to facilitate learning in clinical environments in nursing students. The results indicated that under the supervision of a clinical instructor (individual agent) in the real environment while doing work, learning by nursing students is better formed and this model is very effective in facilitating learning. It has been suggested that learning results be evaluated with this approach in the long term [29]. In clinical fields, the individual factor is the most effective in learning. In addition, nowadays, several students work for limited hours as student work and without the presence of a teacher as personnel, and they can acquire experiential learning while working. If organizational and management barriers do not create an obstacle in their presence in the clinical environment, the only facilitator for receiving such learning can be individual factors.

Grealish *et al*. [30] in a study titled Redesigning clinical education for nursing students and novice nurses, investigated the educational model called cluster training among colleagues in nursing students. The experience of implementing this model, how nursing students and novice nurses do learning by attending local units that are meant for clinical environments other than universities, and the training that can be done to support this type of learning in organizations and to have suggested the improvement of clinical performance. In this study, in line with the current study, the appropriate organizational platform and then removing the organizational and managerial obstacles are introduced as the most important factors in promoting on-the-job learning [30].

Conclusion

From the total results of this research and other similar research, it can be concluded that the use of the work-based learning approach is one of the interactive and active learning methods that causes professional development in some fields, including nursing. Thus, it is essential to identify the factors that affect the non-implementation or implementation of this learning method, so it is necessary that healthcare organizations and executive managers, especially in the field of clinical, consider the requirement to perform work and improve the nursing services quality in clinical and hospital environments, identify other factors that prevent on-the-job learning and, as much as possible, to familiarize employees with new and active educational methods and, if necessary, integrate them with other learning methods.

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