

Barriers to Clinical Education from the Perspective of Nursing Students in Iran: An Integrative Review

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Abstract

Background and Purpose: clinical education is the main aspect of nursing education enabling students to use the results of theoretical foundations for patients. Understanding such barriers can considerably facilitate high quality education for nursing students. **Materials and Methods:** The present study intended to conduct an integrative review of the qualitative and quantitative studies on barriers to clinical education from nursing students' perspective in Iran. To this end, such databases as PubMed, Scopus, Eric, Science Direct, ProQuest, EBSCO, CINAHL as well as four Iranian databases, namely IranMedex, Magiran, SID and Irandoc were searched without time limit. Relevant Iranian studies have also been included in this study. Once inclusion criteria applied, 16 out of 2620 studies were classified and analyzed accordingly. **Results:** The intended studies introduced a wide range of barriers to clinical education for nursing students, which were subdivided into five main domains: 1. Barriers of clinical environment, 2. Barriers of Clinical education instructors, 3. Barriers of hospital nurses, 4. Barriers of educational planning and 5. Barriers of nursing students. **Conclusion:** based on the results, clinical education has got serious problems for nursing students in Iran within the areas of educational fields, skilled human resources, nursing education program and nursing students' attitude, which should be taken into account by the authorities and planners of the field.

Keywords: Education; Perspective; Nursing Students; Iran; Integrative Review

INTRODUCTION

University is the leading platform of training efficient human resources for the needs of the society. Likewise, universities of medical sciences play a crucial role in preparing skilled human forces due to the importance of their careers in the society ^[1]. Nursing is known as the foremost educational discipline in universities of medical science around the world. Nursing has two areas of theoretical and clinical education with particular merits and demerits for each ^[2]. As nursing is a practical profession, its clinical aspect of education forms the basis of its curriculum helping students to use their acquired knowledge in caring patients ^[3]. Some researchers refer to clinical education as the heart of nursing profession. In addition to helping nursing students to make use of their acquired clinical practices in the real world, clinical education includes socialization of nursing students as an important process for entering and working in clinical environments ^[4-7].

Due to several problems and barriers, nevertheless, not even well-trained and informed students can act efficiently and decide independently for patients in the clinical environment. Therefore, some studies have shown that education in nursing field is a stressful and demanding experience which exposes students to not only educational but also clinical environment tensions ^[8]. That is, the presence of unskilled graduates of nursing in health and medical centers can endanger community health ^[9].

Once working in health and medical systems, although novices are expected to completely use their theoretical learnings for patients, there seems to be a huge gap between what has been learned in nursing and what should be applied clinically ^[10]. Thus, improvements in clinical education and related solutions will result in significant progress in nursing education ^[11].

Literature review shows that the problems nurses face in practice are rooted in their clinical education, meaning that there are still complications in organizing clinical courses and evaluating clinical skills of students ^[12]. Several studies highlighted the fact that the current clinical education is not

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competently capable for training skilled students. According to Iranian researchers, the need for providing appropriate facilities and equipment in clinical environments and assessing clinical evaluation tools and processes is greatly felt in education ^[9]. Moreover, contemporary educational programs do not desirably provide sufficient grounds for raising information and improving skills of Iranian nursing graduates ^[13].

In this regard, no review study has been found in Iran on the classification of barriers to clinical education of nursing students. With respect to the importance of clinical education in training nurses and nursing students, the present integrative review intended to have an overview of the barriers to clinical education of nursing students in Iran up to 2019.

MATERIALS AND METHODS

Research Type

This is an integrative review of descriptive and experimental articles aiming at a thorough understanding of unknown and vague health-related concepts, theories and problems ^[14].

Research Sample and Population

This review was conducted within September 2019 to April 2020. To this end, such databases as PubMed, Scopus, Eric, Science Direct, ProQuest, EBSCO, CINAHL as well as four Iranian databases, namely IranMedex, Magiran, SID and Irandoc were sources of research. The keywords included Train*, Teach*, Educate*, Learn*, Obstruct*, Barrier, Obstacle*, Nursing Students and Clinical* used in combination with Boolean operators such as AND, OR etc. in Persian and English. To ensure the retrieval of all documents, the list of article resources found in previous stage was also searched. Finally, about 2620 articles have been found. No time limit was considered during the searching process so as to store all valuable data, and all related articles accessible up to 2020 were reviewed by the researcher. The whole article was reviewed if its title and abstract were not clear enough to decide whether to include the article in the study.

Inclusion and Exclusion Criteria

The inclusion criteria involved studies that 1. Were conducted in Iran on Iranian nursing students, 2. Reported barriers to

clinical nursing education, 3. Were seminal studies (qualitative and quantitative articles with preliminary data) and 4. Had high-quality based on Newcastle-Ottawa scale.

Accordingly, almost 2604 studies were excluded as they did not conform to the inclusion criteria i.e. 2599 were not adequately relevant or were totally irrelevant to the research objectives or had been done in other countries, 2 were narrative review articles with no preliminary data but analyzing results of other studies, and 3 had low quality based on Newcastle-Ottawa scale. Once inclusion criteria applied, 16 studies were selected and analyzed. Data collection process has been briefed in Table (1).

Research Assessment Tools

As noted earlier, Newcastle-Ottawa scale (NOS) was used to evaluate the intended studies, based on which the selected articles were assessed in terms of selection (in four sections: sample transparency, sample size, unresponsiveness and measurement tools), comparability (confounding variables and affecting factors) and outcomes (results and statistical analysis). Articles were rated from 0 (low quality) to 10 (high quality) in accordance with NOS. The studies rated lower than the mean score (<5) were considered as a low-quality class and excluded. As errors are inevitable in sampling, collecting data and reporting results, only barriers being confirmed by %40 of reviewed articles were introduced as the main barriers to clinical education for nursing students. Observed data were classified, compared and summarized based on research objectives (Table 2).

Data Analysis

All eligible studies were descriptive, out of which 14 were assessed cross-sectionally, 1 descriptive-analytically and 1 comparatively. The intended articles belonged to 2005 to 2017. Sampling method was census for 14 studies, random for 1 and convenience for 1 article. All data were collected based on nursing students' perspective towards the barriers (Table 2). Data were analyzed descriptively and interpreted in details. The obtained information and knowledge of each article was summarized and recorded in terms of purpose, sampling, methods, results and conclusion.

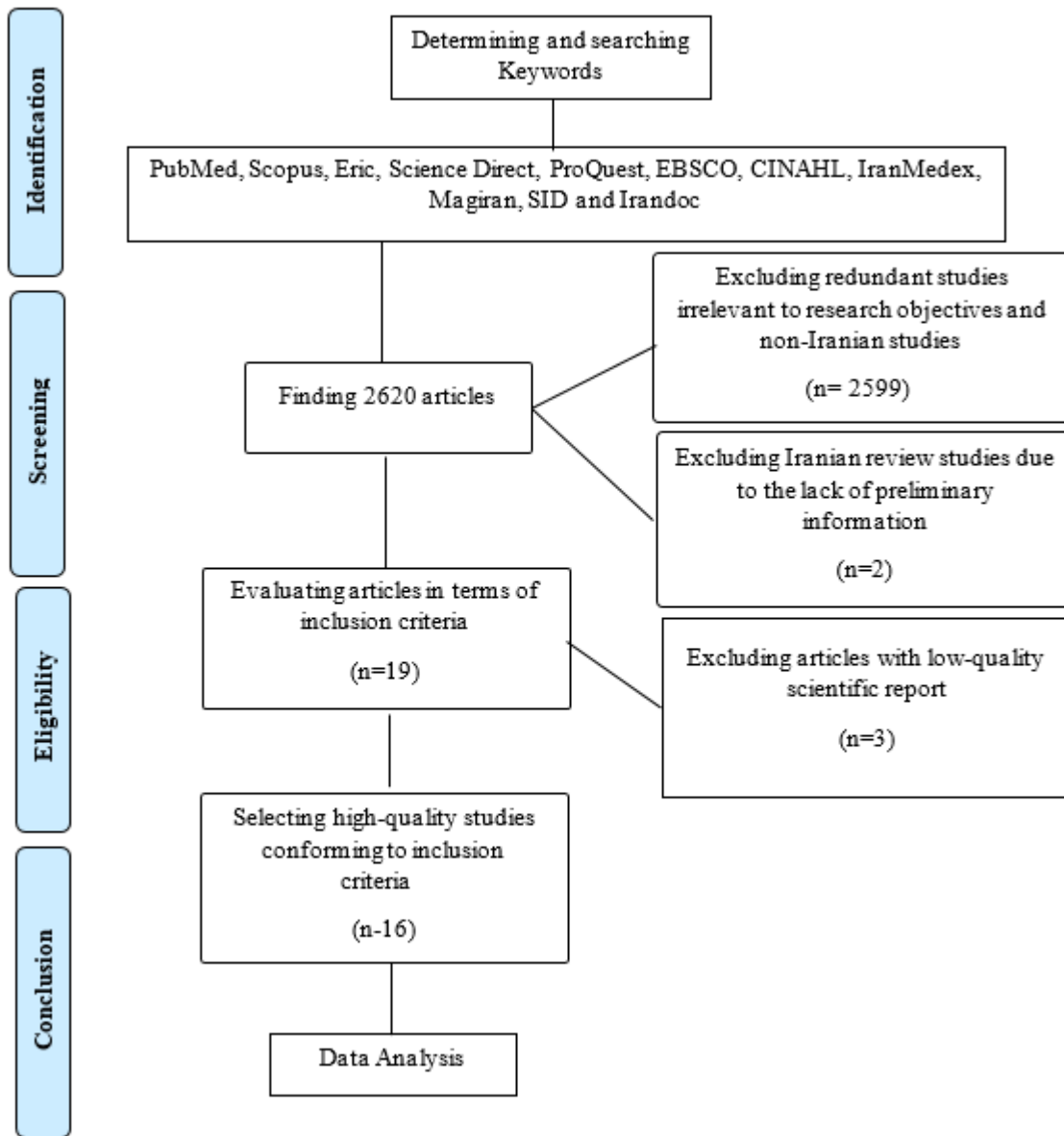


Figure 1: Data Collection Flowchart

Table 1: Evaluating the quality of studies based on Newcastle-Ottawa Scale

Studies	Selection			Comparability			Outcom		Score
	Transparency	Sample Size	Unresponsiveness	Assessment Tools	Confounding Variables	Affecting Factors	Results	Statistical Analysis	
1 Abbasi et al. ^[15]	*	*	*	**			*	*	7
2 Moridi and Khaledi ^[16]							*	*	2
3 Saleh Abadi et al. ^[17]	*	*		*			*	*	5
4 Rezaei et al. ^[18]	*	*	*	*			*	*	6
5 Sahebzamani et al. ^[19]	*	*		**			*	*	6

6	Moghadari Koosha et al. [20]	*		**	*	*	5
7	Niknam et al. [21]	*	*	**	*		5
8	Eslami Akbar et al. [22]	*	*	**	*		5
9	Hadizadeh et al. [10]	*	*	**	*	*	6
10	Mohebbi et al. [23]	*	*	*	**	*	6
11	Heydari et al. [24]	*		**	*	*	5
12	Vahabi et al.	*			*	*	3
13	Abbasi [25]			**	*		3
14	Moqimi et al. [26]	*	*	**	*		5
15	Gholami et al. [27]	*		**	*	*	5
16	Mohammadi et al. [28]	*	*	**	*	*	6
17	Ghafouri Fard et al. [29]	*	*	*	**	*	7
18	Heydari and Norouzzadeh [30]	*	*	**	*	*	6
19	Pordanjani et al. [31]	*	*	*	**	*	7

Table 2: Characteristics of review articles on barriers to clinical education from the perspective of nursing students

	Authors	Year	Type of Research	Purpose	City	Sampling Method
1	Abbasi et al.	2016	Descriptive, Cross-sectional	Clinical education Students' perception of the environment at nursing and midwifery school in Islamic Azad University	Tehran	Census
2	Saleh abadi et al.	2013	Descriptive, Cross-sectional	Clinical education problems and ways of enhancing its quality from the perspective of clinical instructors and students of nursing and midwifery	Sabzevar	Census
3	Rezaei et al.	2017	Descriptive, Cross-sectional	Comparison of Clinical Education Status between the Viewpoints of Clinical Instructors and the Nursing and Midwifery Students	Falavarjan	Census
4	Sahebzamani et al.	2011	Descriptive, Comparative	Comparison the viewpoint of nursing students and their trainers regarding preventing and facilitating factors of effective clinical teaching in Islamic Azad University	Maragheh	Census
5	Moghadari Koosha et al.	2016	Descriptive, Cross-sectional, Analytical	The barriers of the clinical education from the nursing students' view	Hamedan	Convenience
6	Niknam et al.	2013	Descriptive, Analytical	Evaluation of Environmental Barriers in Clinical Education in Viewpoints of Instructors and Nursing Students	Tabriz, Maragheh, Ahar	Census
7	Eslami Akbar et al.	2013	Descriptive, Cross-sectional	Assessment of the priorities of educational obstacles in attaining educational goals of practitioners clinical education according to teachers, head nurses and nursing students in Jahrom University of Medical Sciences	Jahrom	Census
8	Hadizadeh et al.	2005	Descriptive, Cross-sectional	Nursing and midwifery students' perspective on clinical education in Gonabad University of Medical Sciences	Gonabad	Census

9	Mohebbsi et al.	2012	Descriptive, Cross-sectional	View point of the nursing students on challenges in clinical training	Shiraz	Census
10	Heydari et al.	2011	Descriptive, Cross-sectional	Nursing Students' viewpoints about Problems of Clinical education	Isfahan	Census
11	Moqimi et al.	2014	Descriptive, Cross-sectional	Obstacles of Clinical Education and Strategies for the Improvement of Quality of Education	Yasuj	Census
12	Gholami et al.	2015	Descriptive, Cross-sectional	Amendable barriers in Clinical education from Viewpoints of students and clinical instructors at faculty of nursing and midwifery	Mashhad	Census
13	Mohammadi et al.	2006	Descriptive, Cross-sectional	and Comparative study on views of Nursing students nursing staff views about the role of nursing staff in clinical teaching of nursing students in teaching hospitals	Gilan	Census
14	Ghafouri Fard et al.	2015	Descriptive, Cross-sectional	The Status of Clinical Education in Teaching Hospitals Affiliated with Zanjan University of Medical Sciences from the Viewpoints of Nursing and Midwifery Students	Zanjan	Census
15	Heydari and Norouzzadeh	2015	Descriptive, Cross-sectional	Nursing students' perspectives on clinical education. Journal of advances in medical education & professionalism	Tehran	Simple random
16	Pordanjani et al.	2009	Descriptive, Cross-sectional	Clinical Education Status According to the Nursing and Midwifery Students' Point of View	Tehran	Census

RESULTS

Once articles reviewed, the analysis and interpretation of results indicated that there were generally five main barriers to clinical education of nursing students including: **1. Barriers of clinical environment:** Students believed that the most important clinical-environment related barrier was the lack of necessary equipment and facilities for clinical education [9, 15, 17, 18, 20, 23, 24, 26, 27, 29, 31]; the other environmental barrier was discrimination between nursing students and other students of medical sciences. Niknam et al. [21] and Mohebbsi et al. [23] admitted the same problem. **2. Barriers of Clinical education instructors:** In this regard, instructor's unequal treatment with all students [15, 20], Lack of instructors with high academic and clinical skills [15, 18], Unpunctual presence of the instructor at patient's bedside [20], Instructor's poor communicative skills [23], Instructor's inattention to students' educational needs [27] and impossibility of instructor

evaluation by students [31] were considered as the main barriers related to clinical education instructors from student's standpoint. **3. Barriers of hospital nurses:** Amongst which improper cooperation of health and medical staff with students [9, 15, 17, 18, 26, 27] as well as nurses' negligence of evidence-based dysfunction of nursing students [17, 21] were highlighted as barriers related to hospital nurses. **4. Barriers of educational planning** included problems in educational planning [19, 24, 26, 27, 32], non-alignment of education with internship goals [20, 27], Inappropriate evaluation of educational system from student's view [9, 19, 22, 24, 27, 29, 31, 32], inattention to and lack of appreciation of students' opinion [23] and incompatibility of theoretical and practical lessons [20, 31]. **5. Barriers of nursing students** emphasized large number of students in classified groups [17, 22], insufficient clinical knowledge of students [23] and incompetent clinical decision-making skills [27] from the perspective of nursing students (Table 3).

Table 3: Main barriers to clinical education of nursing students

1. Barriers of clinical environment	Insufficient educational equipment and facilities Structural discrimination between nursing students and other students of medical sciences
2. Barriers of Clinical education instructors	Instructor's unequal treatment with all students Lack of instructors with high academic and clinical skills Unpunctual presence of the instructor at patient's bedside Instructor's poor communicative skills Instructor's inattention to students' educational needs Impossibility of instructor evaluation by students
3. Barriers of hospital nurses	Improper cooperation of clinical nurses with students Nurses' negligence of evidence-based dysfunction of nursing students
4. Barriers of educational planning	Problems in educational planning Non-alignment of education with internship goals

5. Barriers of nursing students

Inappropriate evaluation of educational system from student's view

Inattention to and lack of appreciation of students' opinion

Incompatibility of theoretical and practical lessons

Large number of students in classified groups

Insufficient clinical knowledge of students

Incompetent clinical decision-making skills

DISCUSSION

This integrative review intended to evaluate the barriers to clinical education of nursing students from the perspective of nursing students in Iran. The results indicated that the first barrier to clinical education was related to clinical environment focusing on the lack of educational facilities and equipment. The clinical environment of hospitals is a critical place for nursing students whose facilities and appropriateness are predictive of an effective environment leading to a practical clinical education that is highly important for nursing students [23]. It is worth noting that nursing is academic major with a wide range of information. Thus, nursing students should have easy access to educational booklets, conference rooms and other educational facilities during their internship in order to be able to access these sources of information.

The second barrier associated to the barriers of educational planning was clinical evaluation. Experts stated that the main challenge of clinical education instructors is evaluating the clinical performance of nursing students [33]. Evaluation can determine the learning level of students and is the core of future educational planning [9]. An ideal clinical evaluation improves the satisfaction of students with educational system and instructors and will eventually result in better learning and training efficient nurses. To eliminate other barriers of educational planning, authorities should moderate the number of students in internship courses, align educational objectives with clinical goals, determine students' duties and job description, specify expectations of clinical education in internship and schedule appropriate internship time.

Improper cooperation of hospital nurses with nursing students was recurrently considered as the third barrier to clinical education related to the category of barriers of nursing personnel, as found in different studies. This was in line with the findings of Hadizadeh *et al.* [9], Abbasi *et al.* [15], Saleh Abadi *et al.* [17], Rezaei *et al.* [18], Moghimi *et al.* [26] and Gholami *et al.* [27]. In order to control and remove this barrier, health and medical personnel should be encouraged to cooperate with nursing students more than ever by underlining their roles in health-related issues [17].

Moreover, low-quality clinical education for nursing students contributed to the category of barriers of clinical education instructors including instructor's unequal treatment with all students [15, 20], lack of instructors with high academic and clinical skills [18, 20], unpunctual presence of the instructor at patient's bedside [30], instructor's poor communicative skills

[23], instructor's inattention to students' educational needs [27] and impossibility of instructor evaluation by students [31].

Effective education requires various parameters with the atmosphere of educational environment in the core. An educational environment that enjoys mutual respect decreases students' stress and increases their self-confidence. This parameter facilitates the clinical learning process for students and ends in their satisfaction [31]. To find solutions against this barriers of clinical education, such measures as employing instructors with high academic and clinical competence, skills and expertise, monitoring the clinical performance of instructors, evaluation of clinical instructors by students and attention of faculty managers to evaluation results should be taken into account.

Limitations of Study

This study has only used Persian and English articles; moreover, paper works (such as unpublished theses) were not used.

CONCLUSION

The results of this study have shown that the lack of clinical equipment, inappropriate clinical evaluation, non-cooperation of hospital nurses with students, instructor's unequal treatment with students and lack of skilled clinical instructors were 5 important challenges to clinical education for nursing students. This study recommends hospital managers to take necessary actions for improving hospital equipment. With regard to the vital impact of evaluation on the progress of clinical education for nursing students, hospital and university authorities should launch an appropriate integrative evaluation system for students. Moreover, measures should be taken to reinforce nurses and educational instructor's and avoid discriminations between students. Since lack of skilled instructors is known as a barrier to clinical education from students' view, instructors should attend consistent educational program and undergo recurrent evaluations to eliminate this problem.

Clinical Application of Results

No study has been found in Iran with a comprehensive and integrative knowledge over the research subject. As nursing students are involved with human health after graduation and their poor clinical performance can have irreversible consequences, nursing curriculum planners, managers and authorities are expected to put the results of this study into practice so as to prevent training inefficient nurses.

Prospective studies are recommended to evaluate barriers to patients' education as per students' academic year and to find solutions for eliminating clinical education barriers.

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