IMPROVING CLINICAL NURSING EDUCATION IN, SOUTH OF IRAN 2016–2021: A COOPERATIVE ACTION RESEARCH STUDY

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ABSTRACT

Clinical education is a heart of education. The improvement of it is a challenge for every university. African countries like Iran are developing, especially in higher education. So the work context is almost the same. The present study was conducted to identify the clinical education challenges and improving it by a cooperative action research approach. This study was conducted from 2016 to 2021. The participants were 41 nurses and head nurses, 86 nursing students, and 26 nursing teachers. They worked through two cycles of reflection for 50 months. The data were collected and analyzed using the qualitative and quantitative methods. The findings of the qualitative data by 11 semi-structured interviews and ten focus group discussion revealed that the 8 sub-categories (lack of attention to the evaluation process, non-participatory evaluation, low-staff educational cooperation, ineffective trainer, non-educational clinical context, student educational disability, student drowning in bed, non-planning Participatory) and 3 main themes (planning challenges, implementing challenges and evaluation challenges) were obtained. After change in planning and implementation process, evaluation was done by a standard researcher made questionnaire according to the sub-categories of qualitative data. That showed satisfaction Improvement in 3 main themes in two cycle (planning, implementing, and evaluating). Reflection in every cycle caused change in planning, implementing and evaluating process. Moreover, it caused learning for all participants. These participants made a small change in the style of educational management from authoritarian to participatory. So, run programs introduced in this action research could be applicable for educational managers and policymakers.

Keywords: action research, nursing, clinical education, clinical training, improvement

INTRODUCTION

Clinical education is considered as the first source of learning and shaping the professional identity of medical students (Jayasekara et al. 2018). Clinical education is an important part of the nursing curriculum (Raofi et al. 2016a). The aim of this stage of education is to engage nursing students with the skills that required in the future. The internship stage (final year) is the most important part of clinical education, yet its major objective is not attained by many students (Leufer and Cleary-Holdforth 2020). The discussion about nursing education will not

be complete regardless of its clinical compass. Any problem in clinical education will impair the efficiency and effectiveness of nursing education (Raofi et al. 2016b).

Clinical education is stressful for most students, even in the best or standard situations (Farzi, Shahriari, and Farzi 2018). Most of the time, we see that even conscious students are confused at the patient's bedside and cannot act independently and take responsibility for patient care (San Yi et al. 2019). Some students will not be able to apply their knowledge in the clinical situation. Many reasons for this challenge have been mentioned in several studies. The studies consider it as a global problem (Spence et al. 2019; Shoja et al. 2020).

Sther, revealed that over 60 per cent of all students who left the nursing program prematurely attributed their dissatisfaction and subsequent attrition to challenges during skills acquisition (Mwai 2014). Unsolved challenges in clinical situations can waste a great deal of time and energy, impose heavy financial burden on education system, mental tension, and cause students unable to handle or finish the course in the required and defined time (Drateru 2019).

In Iran, as a developing country, many studies have been conducted in the field of describing and explaining this problem (Jamshidi et al. 2016). In a review study in Iran, in addition to confirming the pervasiveness of this problem, 15 reasons for it were stated in Persian articles (Rassouli, Zagheri Tafreshi, and Esmaeil 2014). A study by Heidari and Norouzadeh (2015) showed that 66 per cent of students have a negative view of the clinical environment.

More than 500 graduate students are studying at the Faculty of Nursing of Jahrom University of Medical Sciences. Their clinical environment includes two 500-bed general hospitals. Several studies in the evaluation of clinical education was doing. Most of them were used quantitative approaches. All of these articles emphasize that there are several challenges in clinical education and policymakers must solve them as soon as possible (Eslami Akbar et al. 2012). The main facilitators of this study have more than 20 years of experience in clinical work and bedside teaching, so they perceive and understood such problems directly. In our experience, nursing students, nursing trainers and head nurses believed that there are some critical challenges in clinical education process. Consequently, they were looking for strategies to improve the clinical education process. A scientific study that can dynamically solve their problems while identifying them was considered by faculty dean.

So doing a qualitative study in the natural situation to provide the context for practical actions based on scientific strategies was necessary. Action research was the best effective and practical research method. Action research is an approach for facilitating change and improving educational system (Chen and Reeves 2020).

African countries like Iran are developing, especially in higher education. So the work context is almost the same. This study provides a good example for similar actions in other

countries. Emancipating higher education from dry thinking and active participation of stakeholders (students) will change the worldview of teachers and positive change in African higher education.

According to the above, the participatory action research approach was designed and implemented to make the necessary changes in the context of clinical education of nursing students with a focus on the role of all stakeholders in all stages and facilitating researchers.

OBJECTIVE

The purpose of this study was to identify the clinical education nursing student challenges and improve it with their participation through an action research study.

METHODOLOGY

Participants

The participants of the study contain 41 nurses and head nurses, 26 nursing trainers, and 86 nursing students (last year) who were chosen through purposive sampling. They participated attended all phases including assessment, planning, implementing, and evaluation. Academic researchers participated as facilitators. Thirty-five nurses and head nurses had bachelor's degrees, six had a master of science in nursing. The mean of the age was 33.17 ± 11.6. The mean of the work experience was 14.15 ± 7.21 years. 85 per cent were female.

Twenty trainers had master's degrees, six had Ph.D. in nursing. The mean of the age was 36.10 ± 5.6. The mean of the work experience as a nursing teacher was 17.5 ± 3.11 years. Fifty per cent were male.

The mean of the age of students was $23.1 \pm .51$, the mean of the grade point was 15.81 ± 2.63. Seventy per cent were female.

The Dean and Vice Chancellor of the nursing faculty, matron and clinical supervisors, engaged in this project. They supported action research, and cooperated in conducting and reviewing the plans.

Data collection

Qualitative and quantitative methods were used for data collection.

Qualitative methods

We used qualitative methods like semi structure interviewing, focus group discussion, field notes, and participatory observation to collect data according to the aims of the study. These

methods are often used in the first stage of the first cycle of study. The facilitators attended most of the morning and evening training shifts at the hospitals. Then, the facilitators recorded all observations. Eleven semi-structured interviews and ten focus group discussion were conducted with the 153 participants. Some interview questions contains of: How do you assess the situation of clinical nursing training? What needs to change? How would you describe this change? How can this change be done better? What do you expect to happen in the future of clinical training?

The no repetition interviews were conducted with 11 participants (two nurses, two head nurses, four nursing students, three nursing trainer). After Individual interviews 10 focus group discussion were done for all four groups (students, nurses, trainers, and head nurses) separately. Coordination for time and place of interview sessions was done 3–5 days ago by participants according to their wishes. Also, a day before the interview, it was coordinated again by phone call.

Moreover, at the beginning of each interview written informed consent was obtained. The mean time of individual and group interviews were (59.33 ± 18.81), and (85.9 ± 10.51) min, respectively. All participants according their jobs were actively engaged in all the phases of the study.

Quantitative methods

During the study, the facilitators concluded that if the evaluation methods were changed from qualitative to quantitative, participants and managers would be easier to understand the concepts. Since the tool should be based on the context problems, it was decided to provide a questionnaire appropriate to the existing problems. Therefore, a questionnaire was designed based on a qualitative study and narrative review. For the development and evaluation psychometrics of the questionnaire used other volunteers except the participants in this study. After analyzing, 45 items were obtained in three categories (planning: eight question, implementation: thirty-one question, evaluation: six question). Categories and questions based on the initial assessment (qualitative content analysis). Content validity rate (CVR = .79), content validity index (CVI = .88) and impact factor (IF = 4.39) were determined by 10 nursing teachers. In the questionnaire's psychometric evaluation phase, 200 participants (50 nurses, 44 head nurses, 76 nursing students, 30 nursing trainers) filled out the 45-item questionnaire. The construct validity assessed. Internal consistency and test-retest methods were used to assess the questionnaire's reliability. In this questionnaire used 5-point Likert scale (very low: 1, low: 2, moderate: 3, high: 4, very high: 5). Higher scores indicate improving clinical education. The questionnaire's Cronbach Alpha was evaluated = 0.736. The reliability of the questionnaire was

investigated using the test–retest method (correlation coefficient = 0.88).

DATA ANALYSIS

Qualitative data analysis

For qualitative data used qualitative conventional content that suggested by Graneheim and Lundman (Graneheim and Lundman 2004). The interviews were listened and reviewed several times by facilitators, transcribed immediately, key phrases were identified and underlined, meaning units were given a code. Then, for approving the codes, the coded were given to the four participants and three professors familiar with qualitative data analysis. Thereupon, all the necessary changes were done. Then, for obtaining a general perspective, categorized according to their similarities and differences. Max Q data software version 10 and Microsoft office Word 2013 was used for data analysis.

Quantitative data analysis

For quantitative data analysis was used SPSS software version 16.

Ethical considerations

The project was approved by the Ethics Committee of Jahrom University of Medical Sciences (IR.JUMS.REC.1395.091). Participants were reassured about objectives, methods, anonymity, and the recording of the interviews, the confidentiality of data and their right to withdraw from the study at any time. The facilitator's contact information were provided for the participants.

THE PRESENT ACTION RESEARCH STEPS

The context

This action research was conducted from 2016 to 2021 at the nursing faculty of a Jahrom University of Medical sciences in the south of Iran. More than 280 graduate nursing students are studying in this faculty. The teacher/student ratio was 15 to one. 20 per cent of teachers are assistance professor in nursing and others have master degree. The nursing bachelor's degree curriculum in this school is 4 years. Approximately 70 students enter the internship level every year. The university has 3 hospitals with a capacity of 500 beds. Each of these hospitals has general (emergency, surgery, medical, pediatric, maternity, OPD clinic) and specialized (ICU, CCU, NICU, Dialysis, Thalassemia, Chemotherapy, Angiography) wards. The current action research was designed and conducted in two cycles for 50 months.

According to the topic, the participants, and the study context the participatory action research approach based on the model introduced by McTaggart, Nixon, and Kemmis was

utilized (assessment of the present situation, planning, action, and evaluation) (McTaggart, Nixon, and Kemmis 2017).

Step one (Observation)

This phase lasted eight months. At this stage, all members of the action research team (participants) tried to explain the problems in the field of clinical internship training, and tried to find the causes of their occurrence. For this purpose, they used observation techniques, literature review, and individual and group interviews (Table 1).

Table 1: Result conducted from qualitative data

Sub categories	Categories	Theme
Personnel no participate in planning Trainers low participate in planning Students low participate in planning Lack of attention to clinical capabilities	Non-participatory planning	Planning challenges
Inappropriate trainer Low attention to the quality of student attendance Unclear job description of the student variety of trainers	Student drowns in clinic	
Low readiness Lack of attention to educational rules Lack of attention to hospital rules Low educational responsibility Low professional commitment Low educational motivation Low ability to communicate with patients and staff	Student educational deficits	Implementing challenges
Low proportion of students and educational space There was no related ward Lack of conference room High time and low training in clinics Inadequate support for education in hospitals Not seeing staff training activities Repetitive activities	Non-educational clinical space	
Unrealistic evaluation Unmotivated trainer Lack of attention to student error Low coordination between staff and trainer Low clinical competency Unmotivated communication Trainers undesired to bedside teaching	Ineffective trainers	
Low coordination between trainers Lack of attention to lesson plan Low adaptation of theory courses to the practice Ineffective notification sessions Low support of staff		
Educational forced labor by staff Student rejection Low staff compliance with standards Improper communication Impaired learning motivation in students	Low Staff cooperation	Evaluation challenges
Low staff participation in evaluation Low participation of students in evaluation Low coordination of trainers in evaluation	Non participative evaluation	
Trainer's concern about student evaluation Low monitoring of teachers' performance Not in-person evaluation Low attention to the quality of student	Lack of attention to the evaluation process	

Step two (Planning the changes)

This phase of action research lasted four months. After reviewing the results of the first phase, the research team and policymakers agreed (in 8 sessions) to change the internship program with the help of stakeholders. Then several Meetings were held with various stakeholders to gather, prioritize, and agree on solutions. All solutions (35 actions) were presented to the faculty education council by the facilitators based on prioritization. The Education Council approved 15 actions. Therefore, 15 actions and interventions were considered and planning as internship training programs changes for the next year (Table 2). S0 the roles and activities of the participants were determined in the plan. The action plan was included goals, people, time, control, and evaluation. This program was written and approved by the participants in four group discussion. The plan uploaded on a social media application (WhatsApp) that everyone has access. Depending on the reflections taken during the action, changes done based on the wishes of the participants in the plan.

Table 2: Approved actions to improve clinical nursing training

Intervention
Preparation a job description list for nursing students in internship phase
Preparation job descriptions for internship trainers
Coordinating and delegating some educational and evaluation powers to the head nurses
Prepare an evaluation form for each internship course
The presence of a full-time trainer in the hospitals
Survey of stakeholders about achieving internship goals
Online communication with students
Holding meetings with stakeholders, policymakers of faculty and hospitals at the beginning and end of every semester.
Provide a faculty department room in hospitals
Provide a suitable Conditions for night shifts for students
Holding briefing sessions at the beginning of the semester
Checking the attendance of students' online
Holding specialized workshops (cardiopulmonary resuscitation, electroshock, etc.)
Preparing lesson plans for internships in management and psychiatry.
Holding an internship (ASCE) exam

Step three (Action for change)

This phase of action research lasted ten months. The approved plan were implemented step by step by clinical trainers, head nurses, and students. The results of daily and weekly visits by educational supervisors were presented to the facilitators. Decisions were reviewed or amended. For example, changing wards and trainers. Besides that, each month, a meeting was held with the participants to review the implementation. All participants were encouraged and supported by facilitators and policymakers.

Step four (Evaluation)

This was the final phase of the first stage, and lasted two months. Quantitative method were used for evaluation by the facilitator and participants. The questionnaire filed out by 150 participants (35 clinical trainers, 40 head nurses and nurses, and 75 internship students). 84.2 per cent were female. Data analyzed by SPSS: 16 (Table 3).

Table 3: Participants' satisfaction with clinical education

Area	items	Second cycle		First cycle	
		Mean	Std. Deviation	Mean	Std. Deviation
Planning	Nurses participate in planning	3.88	.88	3.18	1.26
	Trainers participate in planning	4.61	.39	3.68	.85
	Student participate in planning	3.98	.86	3.02	1.03
	Attention to the clinical capabilities	4.01	.92	3.22	.93
	Selection of trainers according to ward	4.11	.44	3.47	.75
	Attention to the student activity	4.5	.67	3.56	.89
	Clarity of the student's job description	4.3	.09	3.27	1.01
	Fix teachers	4.09	.58	3.44	.98
	Total planning	**4.18**	**.60**	**3.35**	.96
Implementing	Preparing the student for clinic	3.98	.09	3.61	1.04
	Attention to educational rules	4.10	.34	3.68	1.04
	Attention to hospital rules	4.25	.12	3.86	1.03
	Student's educational responsibility	4.01	.73	3.61	.94
	Student's professional commitment	3.99	.98	3.51	.93
	Educational motivation of students	3.87	.06	3.17	1.12
	Student's ability for communication	3.66	.58	3.65	.93
	Standardization of the number of students in the wards	3.28	1.09	3.28	1.08
	Wards appropriate with educational goals	3.10	1.23	3.09	.91
	Conference room availability	2.90	1.05	2.90	1.25
	Proportion between internship time and training goals	3.75	.89	3.14	.87
	Support of education in hospitals	3.45	.03	3.21	.80
	Staff 's participation in student education	4.11	.17	3.10	.96
	Variety in educational activities	2.99	.88	2.98	.93
	Complete evaluation	4.01	.95	3.36	.86
	Educational motivation of trainers	3.41	1.32	3.26	.82
	Attention to students' mistakes	4.65	.33	3.76	.92
	Coordination between staff and trainer	4.76	.19	3.39	.80
	Trainer clinical Ability and knowledge	3.89	1.10	3.61	.71
	Trainer's motivational communication	3.87	.58	3.34	.84
	Clinical training environment	3.55	.22	3.28	.99
	Coordination between trainers	4.35	.56	3.81	.68
	Trainers 's attention to lesson plan	4.19	.33	3.68	.83
	Reducing the distance between clinical education and theory	3.80	1.06	3.72	.56
	Teaching hospital rules	4.18	.58	3.46	.87
	Support of staff	4.29	1.02	3.71	.87

Area	items	Second cycle		First cycle	
		Mean	Std. Deviation	Mean	Std. Deviation
	Compliance of personnel performance with standards	3.98	1.15	3.46	.87
	Proper communication	3.57	.39	3.44	.92
	Motivate students by staff.	3.04	.85	3.06	.99
	Non-educational activities.	4.32	.29	3.51	1.05
	Student rejection by staff	3.65	.08	3.00	1.15
	Total implementation	**3.83**	**.62**	**3.29**	.84
Evaluation	Trainers' coordination in evaluation	3.81	1.19	3.56	.86
	Student participation in evaluation	4.22	.88	3.28	.90
	Personnel participation in evaluation	4.61	.63	4.50	.24
	Monitoring the performance of students	3.87	.09	3.22	.89
	Objective evaluation	4.12	.49	3.64	.82
	Attention to the student ability in evaluation.	4.25	.38	3.41	.91
	Total evaluation	**4.15**	**.61**	**3.6**	.77
	Total	**4.14**	**.61**	**3.41**	.86

Step five (Reflection)

This step lasted two months. Reflection was done individually and in groups during the action (recorded reports, visits and observations, monthly and weekly meetings) and at the end of the first cycle (why doing, how doing, results). In the reflection phase, two sessions were held for each group (trainers, students, nurses, head nurses) with the aim of analyzing, classifying and expressing experiences. Based on the experiences and results, the participants and the policymakers confirmed that the second phase of planning must be done.

Step six (Planning)

The planning step of the second cycle lasted two months. After reviewing the results of the evaluation and reflection phases, the research team and policymakers agreed (in 4 sessions) to change the internship program for a second time. Then several Meetings were held with various stakeholders to revise and strengthen the previous plan. The participants concluded that the eight previous actions should be continued, other key persons who resisted against changes should be used as participants. They also suggested 11 new solutions. All solutions were presented to the faculty education council by the facilitators based on prioritization. The Education Council approved 5 new actions. So, 13 actions and interventions were considered and planning as internship training programs changes for the next year. So the roles and activities of the participants were determined in the plan. Like the previous cycle, the action plan was included goals, people, time, control, and evaluation. This program was written and approved by the participants in four group discussion. The plan uploaded on previous social media application (WhatsApp) So that everyone has access.

Step seven (Action for the change)

This phase lasted 12 months. Participants continued their activities to improve their clinical training and experience. The approved second plan were implemented step by step. Also like the previous cycle, results of daily and weekly visits by educational supervisors were presented to the facilitators. Activities were reviewed too. Besides that, each month, a meeting was held with the participants to review the action. All participants were encouraged and supported by facilitators and policymakers. In the middle of this phase Covid-19 was appeared in Iran.

Step 8 (Evaluation)

This evaluation phase lasted two months. This was the last part of the action research. Again, with the previous questionnaire, the mean of satisfaction of clinical training was evaluated (Table 3). Finally, to encourage the participants in a celebration, all of them were acknowledged and certified. This study is still in the reflection phase to continue in the third cycle.

FINDINGS

Qualitative findings

Overall, 626 initial codes, 46 subcategories, eight categories and three themes were conducted from analyzing the qualitative data in the first cycle (Table 1). They were regarding the challenges of clinical nursing students training. Participants' reflection during present action research was "a stronger relationship was established between the four stakeholders or participant groups, especially between the nursing clinicians and the nursing trainers. It was more understood that all in the same boat. Approximately the authoritarian approach in faculty changed to participatory approach. Two heads are better than one. Finally, it improved the internship of nursing students."

Researcher's reflection during the action research was "By putting an educational supervisor for each shift some interns' challenges were reduced. So with some modification, can be eliminated some weaknesses and satisfaction can be increased. So it is better to talk more about this with the faculty officials."

Quantitative findings

Analyzing quantitative data revealed enhancement in clinical nursing students training in two evaluation phases of every action research stage. At the end, participant's satisfaction change from 3.41 ± 0.86 to 4.14 ± 0.61 (Table 3). The difference of satisfaction using paired t-test in

the evaluation stage of both cycles was significant (t: 10.637 df: 44 sig: 0.0001).

DISCUSSION

The most important part of action research is its first phase (assessment). One of the most comprehensive methods for initial evaluation is qualitative studies (Harris 2002; Hannigan 1997). The first phase of this study aimed to identify the challenges of clinical training of last year nursing students. These challenges were explained by qualitative methods. One of these challenges was planning challenges. Educational Planning for the faculty is as important as breathing for a human. If the challenges of the educational planning are identified and solved, the training plan can achieve its goal (Moran 2020).

Non-participatory planning was one of the categories obtained. Lack of democracy in education planning or lack of democratic views by policymakers was a very important issue that should be considered (Smith Jr. 2019). In the study of Sajadi the inflexibility of educational programs is stated as one of the nursing educational challenges (Sajadi, Mokhtari, and Rajai 2021). Kabir Abdullahi is stated that nursing education programs in Nigeria are static and not dynamic (Abdullahi et al. 2019). Drowning and dropping a medical student in clinical situation was another category obtained from this study. Some studies have mentioned several reasons for it, such as selection of inexperienced trainer in a clinical ward, uncertainty of interns' job descriptions and inconsistency between theoretical courses and clinical work (Jessop, Saunders, and Pontin 2019; Farzi et al. 2018). Planning with the help of all stakeholders, giving them a role and listening to their criticisms was one of the actions done in this study. When the student is taken care of the faculty, and the hospital officials understand that we in the college are following the students' problems, the student automatically saves from drowning in clinical situation. Giving a role to hospital officials as evaluators and controllers of internship students also had a significant impact on students support.

According to the actions and strategies implemented in the first and second rounds, the mean of satisfaction in the field of planning were reported 3.35 ± .96 and 4.18 ± .60, respectively, which was acceptable. Policymakers wanted to maintain and improve this level of satisfaction by keeping the changes.

In this study, the challenges of implementing educational training accounted for the largest volume of codes and sub categories. Which indicated that the existing programs were not running well. Therefore, the facilitators, in addition to the changes they had to make in the strategies and content of the training plans, had to be well aware of how the new actions were to be implemented. An extensive review was conducted during the present study to explain the problems, which made it clear that these challenges are not specific to the educational context

of Jahrom, but have been observed in more than 8 other studies in other provinces and other universities (Rassouli et al. 2014; Jasemi et al. 2018; Changiz, Malekpour, and Zargham-Boroujeni 2012; Sanatkhani, Molla, and Akbari 2012). According to the actions in both cycles, the mean of satisfaction with the scope of implementation was reported 3.29 ± .84 and 3.83 ± .62, which shows that researchers and participants pay more attention to this challenge in the next cycles.

Despite the somewhat acceptable changes in the mean of stakeholder satisfaction, there is no acceptable change in the seven items of the implementation area. These items are: "student's ability for communication, standardization of the number of students in the wards, wards appropriate with educational goals, conference room availability, variety in educational activities, reducing the distance between clinical education and theory, motivate students by staff". These mean scores show that the plans to change these seven items were not very effective. For the next cycle, in addition to the continuation of the status, it is better to focus more on these items. However, each of these items can be the subject of a separate action study. Because some of these cases require a change in the hospital structure or major changes in the national educational curriculum and national rules that must be followed with different team and in a different approach. As stated by researchers and experts in action research, some changes cannot occur in one or two cycles. As action research progresses, it may reveal its major and larger issues (Coghlan 2019; Chen and Reeves 2020).

Accurate clinical evaluation of nursing students' performance is essential for patient safety. However, evaluating nursing students in the clinical setting is complex due to the environment in which learning takes place and the multiple domains of learning that are assessed (Hundley 2019). In evaluation Lack of attention to new democratic techniques in evaluation, lack of coordination between trainers, Non-intervention of head nurses in evaluation were main issues. Review studies show the prevalence of these problems in other context. Unfair evaluation, and unstructured evaluation were some themes in other studies (Nikbakht-Nasrabadi et al. 2012). Most studies have shown that this field needs to be revised and acted upon (Baraz, Memarian, and Vanaki 2015; McCutchan 2010). Perhaps some evaluation problems are related to the implementation of the curriculum, As Duke (1996) and Farsi et al. (2010) explained in their studies that inexperienced sessional clinical instructors are a main challenge in clinical evaluation. According to the strategies implemented in the first and second rounds, the mean of satisfaction in the field of evaluation were reported 3.6 ± .77 and 4.15 ± .61, respectively, which was acceptable. Policymakers wanted to maintain and improve this level of satisfaction by keeping the changes.

Although, research findings indicate that the level of complete or partial satisfaction of

students in clinical education during the internship was 38.8 per cent (Beigzadeh et al. 2019).

It seems, this action research has achieved some successes and can be a good model for other nursing schools. So, can be said that the most satisfaction has been created in the field of planning, evaluation and implementation, respectively. Which indicates the need to pay more attention to the implementation challenges in next cycles.

Validity

Participants were present at all stages of the study (assessment to reflection) and decisions were made by consulting them and gaining their opinions. We attempted to use constant reflection in every phase, two cycles of action plane, triangulation, prolonged engagement, varied experiences, and peer checking and disseminating the results for improving validity in our study.

Generalizability

However, the generalizability of action research studies is weak, but the researchers tried to make all phases and cycles transparent. Attempts were made to clear explain the method, sampling, data gathering, analysis, and implementation. Some disciplines such as anesthetic nursing tried to learn about the new program and improving clinical training.

If we were able to make a small change in education in Iran, then professors can make a change in African universities as well Africa is full of talent and talented scientists who are eager for such studies because Nelson Mandela was the greatest action researcher so this study will have a place in African culture with your attention. This study is an example to improve the natural conditions among teachers and researchers who deal with university work. Active participation in development of the role of stakeholders is the most important reason for the decolonization of education, which is well demonstrated in this study. The main focus of this study is the liberation of the educational system. Student participation, is the most important factor that can decolonize higher education.

CONCLUSION

In the present action research study, quality of clinical training improved. The actions taken in this study are a very good example for educational managers to be able to make the most beneficial changes in their context at the lowest cost. In other words, they can democratize the relationship between education and the clinic and the relationship between education and stakeholders. So problems are revealed and solutions are discovered.

Study limitations

Despite all the efforts of the participants, some problems still remain. Like the small number of trainers compared to the student, the lack of sub-specialized wards, and Low salary of trainers which often requires managerial intervention at the upper levels of the university. Another limitation of this study was that it was conducted in a college with 500 students, which may reduce the generalizability of the study. It is worth mentioning that the implementation and evaluation phase in the second round of the study coincided with the temporary closure of the faculty for several months, which itself created problems for stakeholders. The Covid-19 epidemic caused certain changes in education and therefore this action research should be continued.

AUTHOR CONTRIBUTIONS

All authors designed the study. Mohsen Hojat and mohamad ali montaseri gathered, interpreted and analyzed the data. All authors wrote and revised the manuscript.

DECLARATIONS

In this article, the author was active as the project manager in all stages of design, implementation and evaluation of action research. All stages of writing and editing of the article were done by the author alone.

CONFLICT OF INTEREST

There is no conflict of interest.

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