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Original Article

Clinical Supervision Saves Lives of Cardiac Patients

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ABSTRACT

Background: Clinical supervision is a mutual relationship between a health-care provider and a supervisor and promotes the professional skills of the health-care provider. This study aimed to investigate the effects of the implementation of a clinical supervision model on the level of education provided to cardiac patients.

Methods: This quasi-experimental study used a before-after design with no control group. A stratified random sampling method was used (N=300). First, the researcher used a data-gathering form to assess the level of education provided to cardiac patients. The clinical supervision model was designed and implemented by the researcher. Using the same form, the researcher re-assessed the level of education given to the cardiac patients and compared the results before and after the implementation of the model. The data were analyzed in the SPSS software, version 19, using descriptive and inferential statistics.

Results: The findings showed that after the implementation of the clinical supervision model, the level of education provided by health-care providers significantly increased (P<0.001). The findings also showed that the cardiac patients were satisfied with the received education (P<0.001).

Conclusions: A continuous and regular supervision plays a significant role in the implementation of patient education. It is recommended to set management and supervisory programs for health-care providers in order to save the lives of cardiac patients.***(Iranian Heart Journal 2018; 19(4): 6-12)***

KEYWORDS: Clinical supervision, Patient education, Health-care provider

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Heart diseases account for between 25% and 45% of all deaths in the world. In Iran, deaths from heart diseases are projected to reach 44.8% by 2030.[1] Heart diseases are influenced by a group of manageable and controllable factors such as obesity, diabetes, hypertension, smoking, and diet.[2-3] Educating cardiac patients and raising

their awareness are key prevention measures, which can reform their lifestyles and can save their lives.[1] Although families play a crucial role in improving the condition of cardiac patients,[4-5] health-care providers are mainly responsible for educating and raising the awareness of these patients. Evidence, however, reveals some deficiencies in this regard. Management barriers are known as the most important impediments to patient education.[6] Clinical supervision is a mutual relationship between a health-care provider and a supervisor and promotes the professional skills of the health-care provider.[7] A supervisory approach focuses on educational aspects. It educates health-care providers, facilitates their learning, and develops their professional skills in quality-care provision.

As the last task of management, supervision completes the management cycle. It is the most important managerial issue.[8] The effectiveness of organizational activities depends to a large extent on the quality of supervision. Proper supervision can improve the quality of activities. An unorganized supervisory model is one of the major obstacles to the implementation of patient education.[7, 9] Clinical supervision is a professional learning and support process in which health-care providers can improve their performance through talking and discussing with their experienced and expert colleagues.[10]

Today, supervision is not just limited to supervisors. Supervised persons can also supervise at different times, and their level of responsibility depends on time, environment, and their expertise and experience. The collaborative approach can help health-care providers better evaluate their own performance and provide quality care.[10]

Losing health and hospitalization doubles the need to learn. Illness provides an opportunity for education and learning. The concept of patient education during illness and hospitalization has been developed in recent decades. Patient education is one of the most significant aspects of treatment. It is also one of the key roles of health-care providers in providing health-care services. As an educator, a health-care provider helps cardiac patients and their families to increase their self-care ability and prevent illness.[11] Patient education also leads to increased patient satisfaction and adherence to treatment, as well as reduced patient anxiety, hospitalization period, and medical costs. In addition, it enhances patients' quality of life and ultimately saves lives.[12] In the United States, about $ 69 to 100 million are spent on medical problems caused by inadequate education.[13]

The patient education program is not implemented properly in Iran, with available evidence showing many deficiencies in its implementation process. It appears that health-care providers face serious obstacles in our country. One of the major obstacles is the lack of organized and systematic supervision by nursing managers.[14]

Accordingly, we conducted the present study in Rajaie Cardiovascular, Medical, and Research Center (RCVMRC) to investigate the effects of the implementation of a clinical supervision model on the level of education provided to cardiac patients, documentation, and patient satisfaction with the received educations.

METHODS

This quasi-experimental study used a before-after design, with no control group. It was conducted over a year to review and evaluate the health education system in RCVMRC. Cardiac patients admitted to the center were enrolled. The study eligibility criteria were comprised of cardiac patients aged between 18 and 60 years; full awareness of time, place, and person; and stable physical and mental conditions. Participants were excluded due to impaired consciousness, intubation, and unwillingness to continue participation in the study.

A stratified random sampling method was used, and a total of 300 cardiac patients were included. First, the population was divided into a number of strata. Then, a number of samples were randomly selected from each stratum. The strata were determined as various hospital wards—including internal and surgical wards, pediatric ward, emergency department, and coronary care units. After the intervention, the findings of all the strata were integrated. Due to the existence of separate data in each stratum, it was possible to analyze each of them separately. The health-care providers involved in research did not know which patients were samples.

First, the researcher used a data-gathering form to assess the current status of the education provided to the patients by the health-care providers as well as the level of patient satisfaction with the education received. The intervention was the implementation of the clinical supervision model. A person was selected in each ward as the health education connector to communicate the executive and supervisory issues raised by the researcher in the meetings to the health-care providers. The researcher developed a patient education policy. Then, she held a 2-hour training session each month with the aim of familiarizing the health education connectors with the implementation of the patient education process. These training sessions drew upon lectures and discussion methods and utilized case studies, pamphlets, and booklets to train the health education connectors. At the end of the sessions, the members recorded the contents of the sessions to communicate them to the health-care providers. The contents were also briefed and dictated to them. In the interval between the sessions, the supervisor used a data-gathering form to collect information on the procedures to achieve the predetermined goals. The clinical supervision model included holding monthly meetings with the health education connectors, providing them with essential information about the contents to be taught by the health-care providers, implementing clinical supervision, follow-ups, identifying the weaknesses of the health-care providers in patient education, and performing corrective actions for 1 year. The researcher thereafter used the same form to re-assess the level of education provided by the health-care providers to the cardiac patients and the levels of patient satisfaction with the received education. Finally, the researcher compared the results before and after the implementation of the intervention.

The researcher provided some explanations about the goals and method of the study to the participants before their enrollment in the study. The patients were also assured about the confidentiality of their information and the possibility of leaving the study at any stage. Afterward, the participants signed a written informed consent. The Research Ethics Committee of RCVMRC agreed with the implementation of the research (RHC.AC.IR.REC.1393.26).

The researcher-made questionnaire consisted of 3 parts. The first part covered the demographic data of the cardiac patients—including age, gender, diagnosis, language, and the education level. The second part encompassed 18 items that used structured interviews to measure the level of education provided to the cardiac patients. Among the 18 items, 6 items were related to the education provided before hospitalization, 5 items were related to the education provided during hospitalization, 5 items were related to the education provided at the discharge time, and the last 2 items measured the levels of patient satisfaction with the received education. The third part of the questionnaire consisted of 13 items that assessed the proper registration of the provided education through observing the patients' records. The scores ranged from 0 to 2.

The face and content validity were used to measure the validity of the questionnaire. After reading relevant books and papers, the researcher prepared a researcher-made

questionnaire. It was provided to 10 faculty members of the Faculty of RCVMRC. Their corrective comments were used to revise the questionnaire. The reliability of the questionnaire was tested by determining its internal consistency using a Cronbach's alpha coefficient of 0.78.

The quantitative data were analyzed using descriptive and inferential statistics. Means and standard deviations were used to describe the quantitative variables. The correlation coefficient determined the correlation between the quantitative variables. Frequencies and percentages were used to describe the qualitative variables. The χ^2 test determined the relationship between the qualitative variables. A paired *t*-test and the Wilcoxon test were utilized to compare the quality of education and the level of patient satisfaction before and after the intervention. The Pearson correlation test was applied to examine the relationship between the individual characteristics and the satisfaction level. The data were analyzed in the SPSS software, version 19.

RESULTS

The majority of the patients (67%) were women. The mean age of the patients was 52±10 years. In addition, 249 (83%) individuals were married. A total of 132 (44%) subjects had elementary education levels. The other demographics data are depicted in Table 1.

The findings indicated that after the implementation of the clinical supervision model, the amount of education documented in the patients' records was much higher than the previous period (72.68±18.8 vs 27.30±15.5), with the difference constituting statistical significance (P<0.001). After the intervention, the level of education provided by the health-care providers before hospitalization, during hospitalization, and at the discharge time significantly increased (P<0.001). The total educational score was much higher than that in the previous period (54.40±27.6 vs 15.80±14.6); this difference was statistically significant (P<0.001) (Table 2).

The findings also showed that the patients were satisfied with the received education after the implementation of the clinical supervision model (P<0.001). The mean score of the level of patient satisfaction before and after the implementation of the model was 22.3±16.25 and 71.15±28.9, respectively (P<0.001).

The Pearson correlation test showed that there were direct correlations between age, marital status, and the length of hospital stay and patient satisfaction (r=1). The older patients were more satisfied with the received education than were the younger patients. The married patients were more satisfied with the received education than were the single patients. The level of patient satisfaction also increased with an increase in the length of hospital stay. There were reverse correlations between gender, the education level, and a history of hospitalization and patient satisfaction (r= -1). This finding indicated that the women and the less educated patients were more satisfied with the received education. In addition, a longer history of hospitalization decreased the level of satisfaction.

Table 1. Demographic information of the participants

Variable	No.	%
Gender		
Female	201	67
Male	99	*33*
Marital Status		
Married	249	83
Single	*51*	*17*
Education Level		
Elementary level	132	44
Middle (guidance) level	63	21
Diploma	69	23
Academic educations	36	12

Table 2. Comparison of the mean number of the educations provided to the cardiac patients and their registration in the patient records

Variable	Before the Implementation of the Model	After the Implementation of the Model	*P*
Education provided before hospitalization	24.97 ± 19.8	61.90 ± 34.5	<0.001
Education provided during hospitalization	14.60 ± 20.7	54.07 ± 26.5	<0.001
Education provided during discharge	18.69 ± 20.6	56.09 ± 30.6	<0.001
Education registered in patient records	27.30 ± 15.5	72.68 ± 18.8	<0.001
Total educational score	15.80 ± 14.6	54.40 ± 27.6	<0.001

DISCUSSION

This study investigated the effects of the implementation of a clinical supervision model on improving the status of cardiac patient education, its documentation, and the level of patient satisfaction with the received education.

The results showed that the mean score of patient education, as well as its documentation, increased significantly after the implementation of the model. The valuable and useful effects of patient education and its proper documentation have been demonstrated in many studies.[15-16]

The results also showed that besides its effects on the education provided by the health-care providers, clinical supervision increased the level of patient satisfaction with the education received. The results of some studies have shown that a systematic and regular presence of supervisor affects the quality, time, and the process of patient education and may have many positive effects on treatment outcomes.[11]

In contrast, some studies have demonstrated that the presence of supervisors does not have a positive impact on education outcomes.[17-18] These differences may be due to the differences in the type of clinical supervision models. A lack of data, objective, and standard measurement indicators for determining the quality of supervision creates challenges for an accurate assessment and conclusion. Determining a clear path and goal can significantly affect the supervision.[11] Therefore, patient satisfaction can be considered among the major goals and indicators used to assess the quality of education.[19-20] This can be deemed an important indicator in assessments, as was the case in the present study.

A review of relevant studies suggests that clinical supervision has a significant impact on patient education outcomes.[21] According to the results, after the implementation of the model, a meaningful educational interaction was established between the patients and the health-care providers and this significantly enhanced the level of patient satisfaction. It can be concluded that patient education requires the establishment of a supervision system. Mahdipour Rabbari et al (2011) quoted from Bastiebel that education provided by health-care providers was able to increase the level of patient satisfaction with education.[22] This is consistent with the results of the current study. Patient education increases the level of satisfaction and quality of life, which is the main objective of health-care providers.[23]

The use of appropriate documentation tools augments the performance of all processes. Park[24] showed that most health-care providers educated patients but failed to keep record of these educations. The reason may be a lack of time and inadequate information about the importance of documentation.

As is shown in Table 2, after the implementation of the clinical supervision model, the mean number of the educations documented in the patients' records was much higher than that in the previous period. This can be attributed to the increased attention and understanding of the health-care providers

about the importance of documentation after receiving proper feedback from the supervisor. Documentation is an important tool for determining the accuracy and effectiveness of health-care interventions. It is also a basis and an important tool for determining the educational needs and the discharge plan of patients. Therefore, health-care providers should be informed about the importance of patient education through the supervision and development of educational programs.

According to the findings of the present study, supervisory activities can improve the educational process at 3 stages: before hospitalization, during hospitalization, and at discharge.

Cummins (2009) quotes from Mc Alee that "The establishment of a clinical supervision system can have many advantages." Clinical supervision can increase support for existing structures. A successful clinical supervision requires designing a suitable system to ensure the availability of sufficient workforce in order to realize prospects and goals.[8] In the present study, this major source was supplied.

The ultimate goal of clinical supervision is to help employees perform their professional activities more effectively and to provide users with the best services. As a part of the quality control process, clinical supervision is achieved only through using a collaborative approach. Managers can take major steps to improve patient education. The promotion of clinical supervision systems is among one of these major steps. They can improve patient education programs and systems through spending more time on supervision and educating health-care providers with specialized information.

The application of changes to the current and routine practices of a well-established system is always associated with resistance. The researcher overcame this problem by consulting with health-care providers in some focus groups.

Careful planning and proper management of patient education and proper documentation in patient records are recommended to improve the quality of care. Considering the importance of cardiac patient education, it is recommended to organize in-service training programs for health-care providers.

Conflict of Interest: The authors have no conflict of interests.

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