

## ORIGINAL ARTICLE

# Nurses' Empowerment in Self-Care Education to Stroke Patients: An Action Research Study

Zahra Aslani<sup>1</sup>, MS; Nasrollah Alimohammadi<sup>2</sup>, PhD; Fariba Taleghani<sup>2</sup>, PhD;  
Parvaneh Khorasani<sup>3</sup>, PhD

<sup>1</sup>Students Research Center, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran;

<sup>2</sup>Nursing and Midwifery Care Research Center, Isfahan University of Medical Sciences, Isfahan, Iran;

<sup>3</sup>Department of Management and Community Health Nursing, Isfahan University of Medical Sciences, Isfahan, Iran

### Corresponding author:

Nasrollah Alimohammadi, PhD; Nursing and Midwifery Care Research Center, Isfahan University of Medical Sciences, Isfahan, Iran

**Tel:** +98 031 37927516; **Fax:** +98 031 3699398; **Email:** alimohammadi@nm.mui.ac.ir

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### ABSTRACT

**Background:** Self-care needs are major problems among stroke patients. Nurses can support them through interventions such as education, a change in their attitude and emphasis on their remaining abilities. However, research has shown some weak points in the quality of care given to these patients. So the aim of this study was to improve the nurses' practice in self-care education to stroke patients.

**Methods:** This is a participatory action research, conducted in internal neurology ward of Al-Zahra hospital in Isfahan, Iran during 2013-2014 in five stages of diagnosis, planning, action, reflection and evaluation. Participants comprised 27 nursing personnel including staff nurses, matrons, educational supervisors and the staff in charge of Nurse Educators' Al\_Zahra Role Expansion Action Research (NEAREAR) project. In the evaluation stage, data were collected from five personal interviews and two focus group discussions and analyzed by qualitative content analysis.

**Results:** The findings of evaluation phase showed that during action research, approaching the nurses' empowerment in self-care education to stroke patients has been set in motion. The nursing practice improvement, knowledge based practice, nurses' attitude change, ability to respond against routinization, and motivation promotion emphasize the success of change process. Facilitators and barriers of educating patients are acknowledged by the participants as a factor influencing the continuation of change.

**Conclusions:** The lack of nurses' educating performance skills was overcome using action research and changes were made to improve the performance of nurses.

**KEYWORDS:** Action research; Empowerment; Nursing; Self-care; Stroke

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## INTRODUCTION

Stroke is a major cause of disability worldwide.<sup>1</sup> 45% of the medicare patients discharged from the hospital after stroke, ≈return directly home, 24% are discharged to inpatient rehabilitation facilities, and 31% are discharged to skilled nursing facilities. Of stroke patients returning directly home, 32% use home healthcare services.<sup>2</sup> These patients suffer from weakness, imbalance, mental changes, lack of mobility and dependency in activities of daily living (ADLs).<sup>3</sup> Self-care is essential as a strategy to adapt with life tensions and events and it results in independency,<sup>4</sup> improvement of healthy behaviors, self-efficacy and decreases the patients' referrals to emergency ward and disability.<sup>5,6</sup> Self-care includes activities of daily living (ADLs) such as mobility, moving in the bed, sitting and moving, eating, making up, wearing cloths, bathing, respecting personal hygiene and going to WC.<sup>7</sup> Research shows that despite the importance of self care, the caregivers lack adequate knowledge and skill in this context and thus need more information and hands-on training on managing the patients' ADLs.<sup>8</sup> Therefore, the stroke patients report feeling not ready to manage their daily life when discharged and lacking support to regain former and new roles.<sup>9</sup> Therefore, educational interventions can empower stroke patients to take up self-care responsibility for living with the disease.<sup>10</sup> Nurses play a pivotal role in patient education and rehabilitation. They can help the patients to enhance their ability in doing daily activities by educating, changing attitudes and focusing on the remaining abilities of the patients.<sup>11</sup>

In our hospitals, patient education is the missing link for effective clinical care that results in a failure to provide effective services to patients to achieve "self-care".<sup>12</sup> Research showed that providing the patients with education on self care by nurses is merely based on the nurses' knowledge and experience.<sup>13</sup> Nurses in Iran often neglect their educational role so that only 10% of nurses in a health center educated the patients

disirably.<sup>14</sup> Their playing educational role was also poor and only 31.7% of the nurses' activities, adopted for patient education, were appropriate.<sup>15</sup> In addition, the nurses' educational function concerning the nature and complications of the disease, medication, physical activities, nutrition etc, was also poor.<sup>16</sup> Meanwhile, the nurses' educational interventions and care should be performed so that they provide the stroke patients with the required knowledge and skills, and empower them to accept the responsibility of their own self-care.<sup>10</sup> It should be noted that the prerequisite for achievement of such a goal is that nurses feel empowered within the process of the clients' empowerment. Therefore, the need to acquire the skills and capabilities to support the patients should be detected and their skills of patients' self-care education should be developed.<sup>15</sup> As nurses are counted as adult learners, their active participation in designing and administering educational programs should be considered in educational planning and reforming human resources. Adults are self-conductive and expect to be effective on and participate in feedbacks and evaluation.<sup>17</sup> Action research is a study with participatory nature, i.e. with the participation of people who are having difficulty the solutions to the problem are found, applied, and evaluated.<sup>18</sup> Also, some Iranian researchers have worked on improving the educational performance of the nurses via quasi-experimental intervention and action research,<sup>19,20</sup> yet, no research has focused on empowerment of nurses in self-care education provided for stroke patients. So, this action research was conducted to improve the quality of patient and family education and given care through reconstruction of nursing knowledge through an action review process. The main aim of this study was to improve the nurses' practice in self-care education to stroke patients.

## MATERIALS AND METHODS

This is a participatory action research, attempting

to share the experiences and knowledge derived from evaluation step of this action research. This research was conducted in internal neurology ward of Al-Zahra university hospital in 2013-2014. Convenience sampling was applied to select the participants. Participants in all the steps of action research except the evaluation step comprised all nursing personnel working in the ward including staff nurses (23 BS) as well as the matron, health education supervisors, and the leader of the NEAREAR project; it has been a trigger for empowerment programs in patient education since 2012. The nurses who didn't wish to continue participating in the study or during the study period were moved to another part were excluded. The study was conducted based on the steps of action research as follows (Figure 1).

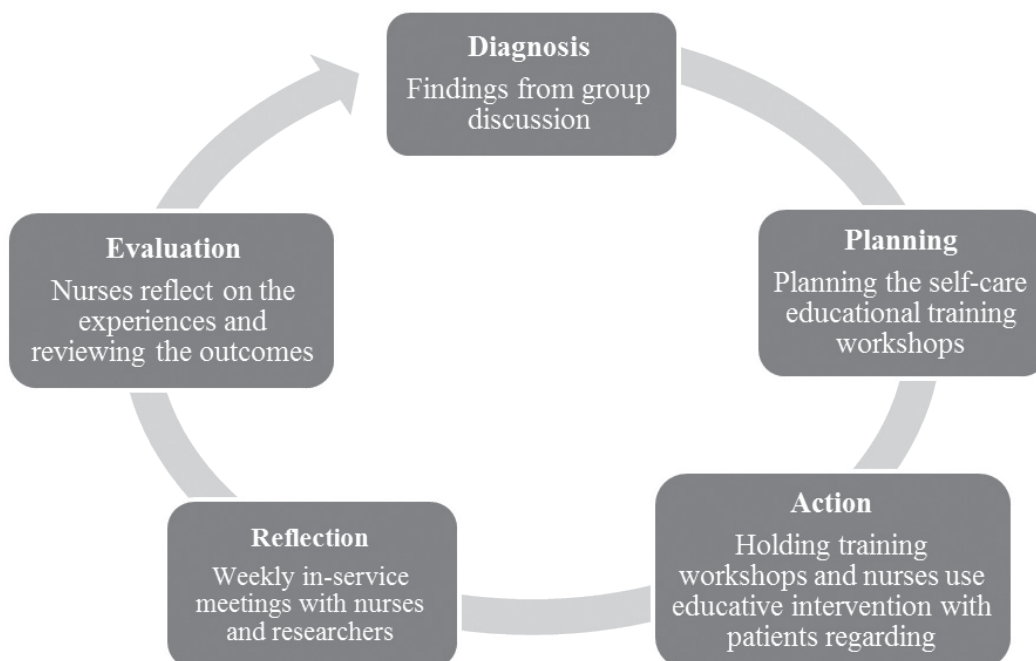
#### *Diagnosis*

Three group discussions with presence of research team and the participants were held. Participants stated that the NEAREAR project expanded the educational role of the nurses in this hospital,<sup>19</sup> but the nurses' empowerment programs on patient education in common diseases are required. Also, they noted that the number of annual stroke patient hospitalization in this center is 2000 (Reference: Hospital

Medical Records Department) and during the recent decade no nursing educational program have been conducted as to stroke patients' self-care education (Reference: the head of the Health Education Office). So, a study on the empowerment of the nurses about the stroke patients' self-care education was among educational needs of nurses in this center.

#### *Planning*

At this step, two focus group discussions each lasting 40 min were held with presence of research team and the participants. The study objectives, methodology and evaluation process were explained to the attendants of the empowerment program and their agreement with the necessity for participation in action research. Then, based on the literature review, the content and models of the nurses' empowerment package concerning self-care education to stroke patients was developed by the research team. The content of the package included the patients' daily living activities such as defecation and urination control, personal hygiene, eating, mobility, wearing cloths, etc. Six focus group sessions each lasting 20 to 30 min were held in the presence of the participants, and some issues were discussed such as care needs of patients and



**Figure 1:** The cycle of the action research process for this study

family, communication, self-care education, nurses' needs for empowerment in self-care education, strategies to improve the quality of nursing care and patient education regarding self-care, content of suggested package, and administration and evaluation modes. In these sessions, the participants reported their other educational needs including the way of medication, skin care and prevention of pressure sore, care for patients' psychological and mental disorders, principles of patient education, NGT feeding, respiratory care, making communication in the case of verbal disorders, types of stroke, etiology and prognosis of stroke, patients' agitation control, pain control and type of nutrition. The form of the program was also determined as theoretical and practical workshops and preparation of pamphlets and power points. At this step, two focus group discussions lasting 30 min with stroke patients' family caregivers were held and their educational needs were reviewed.

After determination of self-care educational needs and priorities from the viewpoints of participants and nurses, 12 educational pamphlets were designed and prepared through library study and literature review with their cooperation.

#### *Action*

At this step, the participants were divided into three groups (each containing 9 attendances). A two-day workshop was held for each group and attendees got familiar with principles of stroke patient education to increase the patients' self-care. In the practical section, the teacher assessed the patient' and caregiver' educational needs based on the teaching plan, followed by the teaching sessions for patients and their families in the context; then, the learners were evaluated using oral questions and educational pamphlets given to them. During and after the workshop through related feedback loops, the participants learned how to communicate with different stroke patients, and were empowered with the knowledge and skills required for needs assessment and self-care

patient education.

#### *Reflection*

During implementation of the program, revision sessions were held with the goal of review on content, and the problems of project administration were discussed. Essential modifications in the volume of theoretical and practical elements of the workshop schedule were made. According to the reflection phase, the participants preferred self-preparations on the theoretical issues before attending the workshop.

#### *Evaluation*

Qualitative approach was adopted to evaluate the programs. Eleven nurses were selected purposefully for qualitative evaluation in this stage which introduced in the results. Semi-structured personal and group interviews were done and qualitative data were analyzed continuously. Data saturation was the cut off point for the sampling. Due to the similarities in the participants' viewpoints and experiences, for avoiding early saturation of the data, two focus group discussions lasting 40 to 60 min with three participant nurses were held. Five personal interviews lasted from 30 to 40 min. Interviews were conducted almost three months after holding the workshops. The participants believed that this time interval would give them a chance to apply the skills at least for some of the patients.

Interview guideline in personal interviews included some open questions that let them express their experiences in detail about the effect of the empowerment program. At the end, they were asked to express the positive and negative points of the program. Interviews were conducted in a private room and based on a pre-arranged appointment.

Conventional content analysis with inductive coding was applied to examine the transcribed interview data. Data were analyzed using constant comparative method in steps:

1- After repeated listening, reading, and immersing in all collected data, a general



picture was obtained. The obtained data were read and their verbatim meaning units were extracted. For this, the exact words of the text that expressed key ideas or concepts were highlighted.

2- At this point, meaning units that represented similar concepts were condensed and coded.

3- Similar codes were abstracted and grouped together based on a common characteristic into sub-categories.

4- Sub-categories were combined based on their associations and similarities and the main categories were extracted.

Credibility and dependability were used to assure various aspects of trustworthiness. To assure the credibility of data, we applied peer debriefing method; in it, the data, codes and themes were assessed by two colleagues experienced in qualitative inquiry and comments were applied to verify the results. To assure dependability of the data, we used member checking of the findings by research participants, focusing on the research objectives and trying to question the same areas for all the participants. For member-checking, two participants reviewed the transcription and emergent categories to make sure whether the codes and categories revealed their comments.

#### *Ethical Considerations*

This article is a part of a master's degree dissertation, approved by Ethics Committee of Isfahan University of Medical Sciences (No 392562). Principles of ethics in research including informed consent, anonymity, confidentiality of data, participants' rights to withdraw from the study and obtaining permission from the relevant university and

research environment were followed.

## **RESULTS**

Participants comprised all the nursing personnel in internal neurology ward of Al-Zahra hospital (n=23), matron and educational supervisors (n=3), all of whom had a Bachelor of Science (BS) degree in nursing, and NEAREAR project leader with a PhD of nursing who attended actively in all steps of planning, action and reflection. In the stage of evaluation, the participants were eleven nurses (10 female and 1 male), including the supervisor of health education, head nurse and nine staff nurses with a BS degree in nursing with a mean age of  $32.3 \pm 6.2$  years (ranging from 24 to 45 years), 1 to 23 years of work experiences (mean= $6.8 \pm 6.1$ ), and work experience in internal neurology ward of two months to 15 years (mean= $4.5 \pm 4.1$ ).

The analysis resulted in emergence of 32 codes, seven sub-categories and two main categories of "*professional development*" and "*effective factors on patient education*" (Table 1).

#### *Professional Development*

Professional development in nursing leads to provision of patients with high quality care. The participants stated that promotion of educational skills for patients have resulted in increasing interaction with patients and improving nursing care services. A nurse with 15 years of work experiences, in this respect, said: "*Most nurses used to take V.S, give medications and never talk to the patients. However, they now talk to them and their care giver, and give them instructions. The patients ask the nurses questions and the nurses can answer them.*"

**Table 1:** Categories and their sub-categories

Themes	Sub-themes
Professional development	Nursing practice improvement Knowledge based practice Nurses' attitude change Ability to be responsive against routinization Motivation promotion
Effective factors on patient education	Patient education facilitators Patient education barriers

In fact, improvement in relationships between nurses and patients is a prerequisite affecting the desired results of care.

Most of the participants acknowledged that the implementation of this program has led to promotion of their knowledge level in regard to educating stroke patients and providing the patients with accurate and scientific education. Another nurse with 5 years of work experiences, in this regard, stated: *“Previously, I did not have enough information about some subjects and was not able to give the patients complete and precise answers; for example, I had nothing to say about back rub but giving a back massage; however, when I did it practically at the workshop, I learned how to do it correctly.”* Based on the participants’ experiences, the promotion of professional knowledge and quality of patient education can create a sense of empowerment and professionalism in nurses.

Empowerment plan promotes the educational performance of nurses via making the nurses aware of the importance of patient education on resolving the patients’ needs. A nurse with 2 years of work experiences reported: *“I was not aware of the patients’ needs previously or I did not care about their needs. But now that I know what instructions I’m supposed to give them, I’m more determined to give them instructions.”*

Another finding with regard to empowerment of the nurses was the ability to answer the patients’ questions. A nurse with 15 years of work experiences explained her and her colleagues’ experiences on independence in patient education as follows: *“Formerly, when there was a problem, we asked each other what instructions to give the patient or told the patient to ask his/her doctor but now we are trained independently.”*

Motivation is a factor that moves people toward a certain goal and makes them more prepared to take the required measures. Some subjects argued that providing the patients with education and training leads to variety in doing the routines and a sense of usefulness, which in turn increases work motivation and

job satisfaction. In this respect, the nurse with 14 years of work experiences said: *“I’m bored with the system, but when I see the patient’s care giver is doing gavage or giving a back rub correctly after an education program, I feel good and regain energy and enthusiasm.”*

#### *Effective Factors on Patient Education*

The participants stated that providing contents for patient education, providing the patient educational skills, and the existence of supervision are facilitating factors in self-care education to stroke patients. A head nurse with 23 years of work experiences stated the following with respect to the advantage of accessing teaching pamphlets given time limitation and the big workload of nurses: *“By putting the pamphlets in the ward, education increased and became easier. In spite of the high number of patients and workload, presenting pamphlets along with their explanations is less time-consuming. The caregiver is also able to study the pamphlets and recall instructions.”*

According to the research data, the lack of time on the part of nurses, high number of patients, high number of patients’ companions and many questions asked by them are barriers to educating the patients. A nurse with 5 years of work experiences explained the problems of teaching stroke patients as listed below: *“In spite of little time for education, some questions also arise for the patients that we should answer, necessitating more time for education.”*

#### **DISCUSSION**

Professional development in nursing results in high quality care for the patients, an integration between novice and experienced staffs’ function and nurses’ retention in profession.<sup>21</sup> One of the requirements and services necessary for teaching is possessing proper communication skills. If the nurses lack such skills, teaching would not be appropriate.<sup>22</sup> One of the most important outcomes of professional development is efficient interaction and communication with

the patients and giving them correct answers. Participants through efficient interaction, awareness about stroke, its complications, treatment and patients' self-care were taught to the patients and their families that improve the quality of their care. In this regard, a study conducted a participatory action research on improvement of the quality of nursing care for older acutely ill hospitalized medical patients. Its findings were in line with those of the present research, which showed that to solve professional problems, cooperative actions work better than planned changes on the part of managers. The enforcement and improvement of the nurses' performance by action research may promote the quality of giving care to the patient, thus enhancing the nursing profession.<sup>23</sup>

The nurses' knowledgeable practice and competency result from their professional knowledge.<sup>24</sup> However, in the studies, nurses reported that their lowest competency was for "patient education and guidance"<sup>25</sup> and only 50% of the nurses were able to conduct proper patient education; this is mainly because of lack of knowledge in the process of patient education.<sup>24</sup> The participants in this research believe that their professional and clinical knowledge on stroke patients education has been expanded, and they have learned to teach the patients and their families in practice. So, promotion of knowledge and quality of patient education could remove the barriers in the trend of professional development and result in the nurses' empowerment.

Another implication of empowering the nurses in the present study was the ability to answer the patients' questions and is formed by some elements such as independence in patient education, feeling of self-confidence and mastery at patient education. The participants believe that a professional nurse administrate the nursing care based on his/her knowledge and analysis of his/her information, not just based on orders in a blind manner. Results of some studies revealed that the imbalance between the nurses' low knowledge, accompanied with their non-scientific practice in relation with patient care

and being irresponsible to the patients leads to the nurses' dependence on the routines.<sup>24</sup> Professional development through decreasing the gap between the nurses' needed skills and available skills<sup>26</sup> and developing a sense of self-esteem and competence that comes from acquisition of skills and abilities for practice empowers the nurse.<sup>27</sup> Another action research was carried out in Ireland to change the educational practice of nurses. The result of this study showed that lack of nurses' educational practice skills was modified by an action research and their increased knowledge and skill in patient education also led to an increase in their self confidence.<sup>28</sup>

Being interested and having a motivation are the basics of nursing profession. The participants stated that spiritual results of patient education such as positive feeling resulting from helping others, and compliance with work commitment lead to increased occupational motivation. The findings showed that strengthening spiritual attitudes, feeling of inner satisfaction of nursing work, mobility and efforts to develop the professional capabilities and loving the nursing profession are important factors in promoting the careers.<sup>29</sup>

The second major theme of the study includes "the effective factors on patient education", which show the facilitators and barriers of patient education. One of the facilitating factors was making pamphlets suitable to patients' general knowledge. Based on the participants' experiences, with regard to multiple complications of stroke patients and their complicated clinical condition as well as the nurses' time limitation, existence of a standard educational package could, in addition to saving nurses' time, provide a unique method to select educational content, which is similar to the results of other studies.<sup>28</sup> Furthermore, another study showed that 80% of the nurses believe that unavailability of standard educational materials was the barrier in patient education.<sup>30</sup>

The participants emphasize the role of supervision and control in facilitating

the educational performance of nurses. The efficiency of staff activities in each organization is for the greatest part dependent on how much they are supervised. Proper supervision promotes and improves the work.<sup>31</sup> The head nurse during the action research encouraged the nurses to change the existing situation and gave them a change to promote their profession by providing opportunities to improve their performance.

From the perspective of the participants, problems such as barriers related to nurses (shortage of personnel, lack of time) and patients (low education and illiteracy of the patients, high number of nurses and the variety of educational needs of patients with stroke due to the frequency of problems) have blocked the way for efficient and perfect teaching of patients. This research and other studies have shown that one of the common barriers to the efficient teaching of patients is the lack of nursing forces as well as its implications such as the low proportion of the nurses to patients, busy and exhausting work schedules,<sup>32-34</sup> and lack of time for patient education.<sup>23,35</sup> The findings also represent that low education and illiteracy of the patients were the other barriers the nurses faced while oral education, given to low educated and illiterate patients, brings about problems for the highly educated health experts.<sup>35</sup>

The limitations of this study were lack of familiarity of many nurses with action research, nurses' resistance due to increased workload and responsibility in clinical field, and time-consuming nature of the study. To solve these problems, discussion sessions between researchers and participants were held constantly, the staff were trained to strictly implement the performance, and the nurses were encouraged to develop their scientific and professional competencies.

## CONCLUSION

In the current study, the nurses' lack of skills about stroke patients' self-care education was a problem, and the solution was found in

implementation of an empowerment program through action research, which resulted in change and improvement in the nurses' practice. Therefore, the background for empowerment programs should be made to achieve professional promotion. It also shown that changing process is difficult and all relevant stakeholders should be involved in making such changes.

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