

Iranian National Self-Care Support System Pattern

Shahram Yazdani,¹ and Maryam Akbarilakeh^{1,*}

¹Department of Medical Education, School of Medical Education, Shahid Beheshti University of Medical Sciences, Tehran, Iran

* Corresponding author: Maryam Akbarilakeh, Department of Medical Education, School of Medical Education, Shahid Beheshti University of Medical Sciences, Tehran, Iran, E-mail: m.akbari@sbmu.ac.ir

Received 2016 August 20; Revised 2016 October 03; Accepted 2016 October 16.

Abstract

Context: Most of the studies proved that effective self-care of patients depends on continuing systematic support of patients to improve their knowledge, skills, and confidence of self-care. With regard to the importance of self-care support system, the design of a pattern for it in Iran was placed on the agenda through the ministry of health and medical education (MOHME) project. The aim of this article is to develop a pattern through two steps; the first is critically analyzing the literature on the structure and functions of self-care support system, and the second is to summarize potential factors which can be used as self-care support system components in health system to synthesize the pattern.

Evidence Acquisition: Systematic literature searches of papers published between 2002 - 2014 were carried out using the electronic databases. Critical interpretive synthesis (CIS) was then undertaken to provide a comprehensive overview of the topic for developing the national pattern. Finally, scrutinizing the pattern was done through focus group discussion of experts in MOHME.

Results: We found the steps of designing a system for self-care support. Then, we set the goals and strategies of self-care support program and factors affecting the choice of self-care support pattern. Then, series of interventions were selected as self-care program pattern by a team of health care providers from all levels of the health system. Components of self-care support system in the country based on their interactions with patients and place of the program in the health care system were categorized in a matrix.

Conclusions: To empower the staff of self-care support system, an appropriate training design is needed beside a good self-care support program. Self-care team members must teach specific information or skills to patients and their families. These members must possess special knowledge and skills. Also, the evaluation of self-care support program is one of the main components of the national system of self-care.

Keywords: Self-Care, Self-Management, Patients Support

1. Context

Self-care includes any human function about health which is self-initiated. Self-care is what people do for themselves to establish and maintain health and prevent and deal with illness. It is a broad concept encompassing: hygiene (general and personal); nutrition (type and quality of food eaten); lifestyle (sporting activities, leisure etc.); environmental factors (living conditions, social habits, etc.); socioeconomic factors (income level, cultural beliefs, etc.); self-medication, and etc. (1).

Establishing differentiates between the self-care, self-management and self-efficacy is important. self-management is a form of self-care which happens in patients with chronic diseases. Self-efficacy is called the ability and confidence to maintain independence, do daily activities, and achieve life goals with minimal dependence on others. Then, self-efficacy can be considered one of the most important goals of self-care (2).

There are four types of self-care: Self-care of healthy state, self-care of minor ailment, self-care of chronic diseases, and self-care of acute illness (3).

Self-care support is preparations and interventions done by the health and social system to facilitate and guarantee the self-care for people. It means providing the conditions and infrastructures that lead to the empowerment of individuals and communities to have a suitable self-care. Patient education, self-care skills training, health and social care information, self-diagnostic tools, self-monitoring devices, peer support networks, and home adaptations are the approaches of Self-care Supporting. For supporting the self-care, designing a system is needed (4).

Extensive researches have proved the effect of self-care on improved health outcomes and reduced costs of health-care. Meanwhile, the same researches showed that production of educational materials or holding educational programs for patients have little effect on self-care (5). Most of these studies proved that effective self-care of patients depend on continuing and systematic support of patients to improve their knowledge, skills, and confidence of self-care. In addition, participatory process of setting goals for treatment, regular monitoring of health status and improvements, and detection and timely addressing of prob-

lems and impediments are crucial parts of an effective self-care support system (6).

Therefore, with regard to the importance of self-care support system, design of a pattern for self-care support system in Iran was placed on the agenda through the ministry of health and medical education (MOHME) project. The aim of this article is to develop a pattern through two steps; the first: critically analyzing the literature about the structure and functions of self-care support system, and summarize potential factors which can be used as self-care support system components in health system to synthesize the pattern. The second: scrutinizing the pattern through focus group discussion of experts.

2. Evidence Acquisition

Our national self-care pattern was developed by critical interpretive synthesis (CIS). CIS is a research method used in literature reviews that enables us to synthesize large amounts of diverse literature. This pattern is developed because; there was a need to synthesize previous studies; there were few previous studies on self-care support program in our context; previous studies have been conducted using different methods and the literature review helps to serve as a tool for evidence-based practice and decision-making and having a clear understanding of the conceptual 'building blocks' of it. Therefore, CIS is used as a basic activity in the development of the pattern (7).

CIS sees the induction and interpretation synchronously. This approach is used to synthesize in a qualitative manner. It intended to develop new concepts and theories with a large sample of diverse papers. Clarification of the concept of self-care support system, re conceptualizing it in health system, fundamental factors affecting it, the central components in health care support system and the impact of them in the delivery of services, and determining the process of self-care support system define the core content of self-care practice education (8).

At the beginning of CIS, the search strategy will be designed to access electronic databases such as CINAHL, Medline, Cochrane library, PsycINFO, Embase, EBM reviews, and Thomson scientific web of science database, which contains the science citation index, and the social sciences citation index. In this search, we found literature relating to the research question and over 500 articles related to the topic of research; the 30 articles related to the research objective were studied by purposive sampling. Purposive sampling was used initially to select papers and later used theoretical sampling to add, test, and develop the emerging analysis. This project includes each type of research design.

CIS prioritizes the papers that appear to be relevant to the research subject, instead of focusing on particular study types or papers with specified methodological standards. Quality assessment is done during analysis and synthesis through Value judgments of many discourses and arguments in various articles by researchers. We included the articles which help to develop our own synthetic argument (8, 9).

In both qualitative and quantitative papers, data extraction was done by extracting the headlines of the categories and sub-categories using the terms of the paper itself as well as a summary of the relevant material.

In CIS, interpretive synthesis strategies such as meta-ethnography were done with some modifications. Refutational synthesis attempts made a synthesis from contradictions between the findings of the articles. Reciprocal translational analysis attempts to translate the concepts into each other and helps in order to develop our own synthetic argument from various judgments of discourses and arguments (7).

Lines of argument synthesis involve building a general third order construct grounded in themes or categories extracted before from separate studies findings which help to clarify the main question (9).

CIS analysis was begun with detailed inspection of the papers, gradually identifying recurring themes and developing a critique (9). Generated themes helped to explain the perfect definition of self-care support system, fundamental attributes of it, central components in health care system, and the impact of them in the delivery of services in health system by constantly comparing the theoretical structures and categories of our analysis and the relationships between them and synthesis that was conducted through reconceptualization. We developed our national pattern by comparing our domestic extracted attributes with what is existed and experienced in other countries through systematized searching, and determined the process of self-care support program in our own country.

Critical review of literature about structure and functions of self-care support system process steps, developing the first draft of the structure and functions of self-care support system program, scrutinizing the draft through collaboration with health system experts in MOHME and managers from different parts of Iranian healthcare system, and finalizing the policy statement according to expert feedback were done.

After extracting the critical components of the concept, then, the opinions of experts were obtained during five expert panels' group discussions, each lasting four hours and including 8 participants. The participants were chosen from people who have had experience with policy making, and administrations of self-care programs were

done by purposive sampling. The ultimate goal of these meetings was to finalize the main components of self-care pattern in the context of Iran. We wanted to bring together a diverse group in order to maximize our exploration of different perspectives within a group setting. The ultimate goal of these meetings was to analyze the components for developing the native pattern in our context. Therefore, the participants were invited through (MOHME), and the importance of the sessions was emphasized for them. As we wished to focus on the factors perceived as influencing the self-care pattern, all the experts at sessions emphasized this topic. Each session included two moderators: one who was familiar with medicine domain, and one who was familiar with management and foresight planning.

3. Results

For supporting the self-care; designing a system is needed (10-13). We should know the following steps about national system to design suitable support self-care pattern:

1. To determine the place of stewardship for self-care support program in the health system
2. To determine the staffs of self-care support program in the health system
3. To determine the content of self-care program in the health system
4. To determine the target population groups who receive self-care services
5. To determine the data protection mechanism of self-care process
6. To design the protocols of the self-care support styles by health service providers
7. To determine the essential trainings for health service providers in the field of self-care
8. To determine the patients communication ways with health care providers during the self-care process
9. To determine the coordination mechanism between various members of the health care team in the field of self-care

We should know goals and strategies of self-care support program to design suitable support self-care pattern as below (14):

- To create opportunities for each individual of community to manage their health and health cares
- To build the capacity in individuals and organizations providing services for evidence-based care services
- Capacity building in the community to support evidence-based self-care approaches
- To provide evidence-based self-care services

We should know factors affecting the choice of self-care support pattern to design suitable support self-care pattern (15):

- General literacy level of the target groups
- Health literacy of the target groups
- Computer literacy level of the target groups
- The scope and influence of the communications infrastructure (email, mobile) in the target groups
- The scope and influence of information infrastructure (Internet) in the target groups
- Integration of the self-care pattern in the primary care system
- The need to employ new staffs in the primary cares
- The need to train current staffs of primary care
- The cost of self-care pattern development in the country
- Social acceptance of self-care pattern
- Political acceptance of self-care pattern
- Evidence or best practices confirming the effectiveness of self-care pattern

Therefore, series of interventions are selected as self-care program pattern which are done by a team of health care providers from all levels of the health system (16). Components of self-care support system in the country based on their interactions with patients and place of the program in the health care system can be categorized in the following matrix:

Family physicians and primary health care providers are responsible for the entire face to face patients' communications with health care providers inside the health care team of self-care program in the health care system.

Face to face patients communication way with health care providers, finally leads to codification the personal self-care plan (17).

Patient selection criteria in order to provide face to face support for self-care are:

- Patients with the most severe disease
- Patients who are most at risk or complications risk.
- Patients who have the greatest potential for cost savings
- Patients who take more benefit from the self-care
- Patients with the most cooperation and capacity for change.

Telephone counseling service providing by primary care services providers is one of the most effective ways to patient communicate throughout the self-care process. Packages of pamphlets and guides for self-care are utilities for self-care. This package may include: action plans, visit reports, calendars, diaries, monitoring and recording tables and tools, written education materials, and multimedia education materials (18). The purpose of the pamphlets and guides are empowering patients with chronic diseases

Table 1. Components of Self-Care Support System Based on Patients Interactions

		Patients Communication Ways with Health Care Providers		
		Face to Face	Via Telephone	Without Communication
Place of the self-care program in the health care system	Inside the health care team	Self-care services with presence of the patients in primary health care systems	Telephone counseling service providing primary care services	Packages of Pamphlets and guides for self-care
	Outside the health care team	Specialized centers for supporting self-care	Direct contact health centers	National portal and national book for self-care

to take care of themselves in order to improve health outcomes and optimal use of health resources in the country.

Developing the national guidelines self-care for healthy lifestyle is done in six stages:

- Literature review and evidence extracted by responsible departments and offices.
- Content development for recommendations
- Formulating recommendations message words
- Scrutinizing by experts and finalizing

Health education unit of the city network is responsible for the Patients' face to face communications with health care providers outside the health care team of self-care program in the specialized centers for supporting self-care of health care system. Specialized centers supporting self-care are being provided in public hospitals in cities (19).

Specialized centers supporting self-care tasks include the following:

- Training of professionals of medical sciences in the field of self-care
- Providing advising on self-care to family physicians through a direct line
- Monitoring self-care services of family physicians
- To create, update, and manage electronic database of chronic patients
- Providing specialized face to face self-care services such as complex counseling
- Off-center services (services in the home, community, and family doctors' offices)
- Distribution of self-care utilities to family physicians in the city
- Distribution of self-diagnostic and self-monitoring equipment to chronic patients in the city
- Promote, create, and support self-help groups to support common chronic diseases in the city

Department of health education and health promotion of health assistant in medical sciences universities are responsible for direct contact of health centers in outside the health care team of self-care program in the health care system. These centers provide health services by phone (20).

Direct contact center quality standards are as following:

- Accessibility: appropriate hours of operation, at least blockage and call abandons
- Speed of answer: appropriate service level and average speed of answer, at least longest delay in queue
- Quality of service: first call resolution rate, call transfer, call back, self-service availability, telephone etiquette
- Quality assurance: call record, quality assurance, documentation, continuous education and professional development

Office of health promotion and education in MOHME is responsible for national portal and national book for self-care. Self-care national portal is a network service all over the country and is available by all members of society (21).

Self-care national portal includes the following sections:

- Self-care pamphlets for common diseases
- Guidelines for drugs consumptions
- First aid guide
- Electronic health library
- Discussion forums devoted to specific diseases and chronic diseases
- Review and awareness about health issues in the media
- Health service to answer questions via e-mail

National book for self-care is one of the main pillars of the national self-care system of Islamic republic of Iran. The book focuses on healthy lifestyle behaviors, knowledge of common and transient diseases, how to use non-prescription drugs, and how to refer to physicians and service providers. This book provides the basic knowledge bases for families during the process of self self-care of maintaining healthy status and self-care of minor illness (22).

Based on the components extracted in above, the panel experts agreed and finalized the self-care pattern in our context. The components were approved in panel discussions and approximately consistent with those experts expected.

4. Conclusions

As the results of this study, in the primary self-care teams the family physician is responsible for the care services. Family doctors are usually in early interacting with patients' who developed the "individual self-care plan". Responsibility for ensuring the follow-up of this plan usually is by nurse or technologist who is responsible for self-care. Primary self-care team members must teach specific information or skills to patients and their families (23-25). For this reason, these members must possess special knowledge and skills. To empower the staff of self-care support system, appropriate training is needed to design. Staffs training modules for self-care may be includes: Care management skills, motivational interviewing, Cognitive skill-building, Care management software, behavioral health information, self-care skills, standards and protocols of care, knowledge about the disease (including common complication), pharmacology of disease, scientific foundations of sport and exercise, nutrition, sensitivity to the problems of patients, and patients with low literacy skills (26).

Self-care support is a key for the future of our country's health care. However, careful planning is needed to establish self-care support mechanisms and care pathways in our health system. Well trained and well organized staff to facilitate self-care support will lead to respond better to the complex challenges of achieving improvements in self-care behavior. These changes are needed to stem the rising tide of resource use associated with long-term conditions and to help prevent the future burden of lifestyle-related illness.

In the near future, Iran will need to undergo major changes for appropriate self-care. When planning for these changes, decision-makers should consider the various factors that affect it in our developed pattern.

The evaluation of self-care support program is one of the main components of the national system of self-care. Supporting self-care process must be constantly reviewed and revised based on the results of the evaluation. Self-care supporting evaluation framework may be answering these questions (27): Is the self-care program structure consistent with the obligations of the contract? Is the health care process and self-care activities carried out correctly? Is patients knowledge and self-reliance increased? Has following the instructions and advices of the health team been increased by patients? Do the doctors adhere to protocols and do clinical practice guidelines have been increased? Is the control of the disease improved? Are patient health outcomes improved? Is the patient satisfaction increased? Is the use of services by patients declined? Do patients' social performances increased? Is health care costs declined?

Acknowledgments

The authors wish to thank the vice-chancellor on research in MOHME who approved and financially supported this study.

Footnote

Conflict of Interests: The authors declare that there is no conflict of interests.

References

1. World Health Organization. . Implementation of WHO's revised drug strategy. Safety, efficacy and quality pharmaceuticals. 47. World Health Assembly Resolution; 1994.
2. Choy DK, Tong M, Ko F, Li ST, Ho A, Chan J, et al. Evaluation of the efficacy of a hospital-based asthma education programme in patients of low socioeconomic status in Hong Kong. *Clin Exp Allergy*. 1999;**29**(1):84-90. [PubMed: [10051706](#)].
3. Fries JF, McShane D. Reducing need and demand for medical services in high-risk persons. A health education approach. *West J Med*. 1998;**169**(4):201-7. [PubMed: [9795579](#)].
4. Groessl EJ, Cronan TA. A cost analysis of self-management programs for people with chronic illness. *Am J Community Psychol*. 2000;**28**(4):455-80. [PubMed: [10965386](#)].
5. Mannix LK, Solomon GD, Kippes CM, Kunkel RS. Impact of headache education program in the workplace. *Neurology*. 1999;**53**(4):868-71. [PubMed: [10489058](#)].
6. Montgomery EB, Lieberman A, Singh G, Fries JF. Patient education and health promotion can be effective in Parkinson's disease: a randomized controlled trial. PROPATH Advisory Board. *Am J Med*. 1994;**97**(5):429-35. [PubMed: [7977431](#)].
7. Dixon-Woods M, Cavers D, Agarwal S, Annandale E, Arthur A, Harvey J, et al. Conducting a critical interpretive synthesis of the literature on access to healthcare by vulnerable groups. *BMC Med Res Methodol*. 2006;**6**:35. doi: [10.1186/1471-2288-6-35](#). [PubMed: [16872487](#)].
8. Yazdani S, Akbari lake M, Ahmady S, Forootan A, Afshar L. Critical Interpretive Synthesis of the Concept of Value in Medical Education. *Res Dev Med Edu*. 2015;**4**(1):31-4. doi: [10.1517/irdme.2015.005](#).
9. Annandale E, Harvey J, Cavers D, Dixon-Woods M. Gender and access to healthcare in the UK: a critical interpretive synthesis of the literature. *Evid Policy*. 2007;**3**(4):463-86.
10. Oosterhuis A, Klip EC. The treatment of insomnia through mass media, the results of a televised behavioral training programme. *Soc Sci Med*. 1997;**45**(8):1223-9. [PubMed: [9381235](#)].
11. Vickery DM, Golaszewski TJ, Wright EC, Kalmer H. The effect of self-care interventions on the use of medical service within a Medicare population. *Med Care*. 1988;**26**(6):580-8. [PubMed: [3288818](#)].
12. Cherry JC, Moffatt TP, Rodriguez C, Dryden K. Diabetes disease management program for an indigent population empowered by telemedicine technology. *Diabetes Technol Ther*. 2002;**4**(6):783-91. doi: [10.1089/152091502321118801](#). [PubMed: [12685802](#)].
13. Farmer AJ, Gibson OJ, Dudley C, Hannaby K, Hayton P, Tarassenko L, et al, editors. Impact of real-time telemedicine support on glucose self monitoring and blood glucose control in young adults with type 1 diabetes: a randomised controlled trial. *Diabetologia*. 2005; Springer 233 spring street, New York, ny 10013 USA; p. A319.
14. Farmer AJ, Gibson OJ, Dudley C, Bryden K, Hayton PM, Tarassenko L, et al. A randomized controlled trial of the effect of real-time telemedicine support on glycemic control in young adults with type 1 diabetes (ISRCTN 46889446). *Diabetes Care*. 2005;**28**(11):2697-702. [PubMed: [16249542](#)].

15. Levine PH, Britten AF. Supervised patient-management of hemophilia. A study of 45 patients with hemophilia A and B. *Ann Intern Med.* 1973;**78**(2):195-201. [PubMed: [4630527](#)].
16. Ryan D, Cobern W, Wheeler J, Price D, Tarassenko L. Mobile phone technology in the management of asthma. *J Telemed Telecare.* 2005;**11** Suppl 1:43-6. doi: [10.1258/1357633054461714](#). [PubMed: [16035991](#)].
17. Ryan P, Kobb R, Hilsen P. Making the right connection: matching patients to technology. *Telemed J E Health.* 2003;**9**(1):81-8. doi: [10.1089/153056203763317684](#). [PubMed: [12699611](#)].
18. Timpka T, Graspemo G, Hassling L, Nordfeldt S, Eriksson H. Towards integration of computer games in interactive health education environments: understanding gameplay challenge, narrative and spectacle. *Stud Health Technol Inform.* 2004;**107**(Pt 2):941-5. [PubMed: [15360951](#)].
19. Barbanel D, Eldridge S, Griffiths C. Can a self-management programme delivered by a community pharmacist improve asthma control? A randomised trial. *Thorax.* 2003;**58**(10):851-4. [PubMed: [14514935](#)].
20. Katon W, Rutter C, Ludman EJ, Von Korff M, Lin E, Simon G, et al. A randomized trial of relapse prevention of depression in primary care. *Arch Gen Psychiatry.* 2001;**58**(3):241-7. [PubMed: [11231831](#)].
21. Vale MJ, Jelinek MV, Best JD, Dart AM, Grigg LE, Hare DL, et al. Coaching patients On Achieving Cardiovascular Health (COACH): a multicenter randomized trial in patients with coronary heart disease. *Arch Intern Med.* 2003;**163**(22):2775-83. doi: [10.1001/archinte.163.22.2775](#). [PubMed: [14662633](#)].
22. Coleman EA, Eilertsen TB, Kramer AM, Magid DJ, Beck A, Conner D. Reducing emergency visits in older adults with chronic illness. A randomized, controlled trial of group visits. *Eff Clin Pract.* 2001;**4**(2):49-57. [PubMed: [11329985](#)].
23. Trento M, Passera P, Tomalino M, Bajardi M, Pomero F, Allione A, et al. Group visits improve metabolic control in type 2 diabetes: a 2-year follow-up. *Diabetes Care.* 2001;**24**(6):995-1000. [PubMed: [11375359](#)].
24. Trento M, Passera P, Borgo E, Tomalino M, Bajardi M, Cavallo F, et al. A 5-year randomized controlled study of learning, problem solving ability, and quality of life modifications in people with type 2 diabetes managed by group care. *Diabetes Care.* 2004;**27**(3):670-5. [PubMed: [14988283](#)].
25. Riegel B, Carlson B. Is individual peer support a promising intervention for persons with heart failure?. *J Cardiovasc Nurs.* 2004;**19**(3):174-83. [PubMed: [15191260](#)].
26. Tsay SL, Hung IO. Empowerment of patients with end-stage renal disease—a randomized controlled trial. *Int J Nurs Stud.* 2004;**41**(1):59-65. [PubMed: [14670395](#)].
27. Wong KW, Wong FK, Chan MF. Effects of nurse-initiated telephone follow-up on self-efficacy among patients with chronic obstructive pulmonary disease. *J Adv Nurs.* 2005;**49**(2):210-22. doi: [10.1111/j.1365-2648.2004.03280.x](#). [PubMed: [15641953](#)].