Review Article

An empowering approach to promote the quality of life and self-management among type 2 diabetic patients

Azar Tol, Fatemeh Alhani[1], Davoud Shojaeazadeh[2], Gholamreza Sharifirad, Nahid Moazam[3]

Department of Health Education and Promotion, School of Public Health, Isfahan University of Medical Sciences, Isfahan, [1]Department of Nursing, School of Medicine, Tarbiat Modarres University, [2]Department of Health Education and Promotion, School of Public Health, Tehran University of Medical Sciences, Tehran, [3]Department of Nutrition, School of Nutrition, Isfahan University of Medical Sciences, Isfahan, Iran

ABSTRACT

Type 2 diabetes is one of the most serious health concerns and policy agendas around the world. Epidemiological evidence suggests that it will likely continue to increase globally. Diabetes is strongly associated with the patients' unhealthy lifestyle and behavioral patterns and socio-economic changes. New model of thinking is required to recognize whether the patients are in control of and responsible for the daily self-management of diabetes. Such a new approach should be based on 'empowerment and involvement' to be more applicable to daily activities in diabetic patients. Rapid changes toward patient empowerment and increasing involvement of patients in their care plan indicate more emphasis on disease prevention and health promotion and education than on mere disease and its treatment. Such changes make a step toward pervasive sense of responsibility among patients about their illness for their daily activities. Using the empowerment approach, healthcare professionals would help patients make informed decisions in accordance with their particular circumstances. Patient empowerment implies a patient-centered, collaborative approach that helps patients determine and develop the inherent capacity to be responsible for their own life. Empowerment is something more than certain health behaviors. Empowerment is more than an intervention, technique or strategy. It is rather a vision that helps people change their behavior and make decisions about their health care. It has the potential to improve the overall health and well-being of individuals and communities, and to change the socio-environmental factors that cause poor health conditions. The main concept of this change is the tendency to change.

Key words: Empowerment, quality of life, self-management

INTRODUCTION

In the past, infectious diseases and malnutrition were the central elements on which a nation health policy was made. Although, many low and middle-income countries are still dealing with the said issues, health care and immunity promotion can tackle with the problems to some extent. In different nations, on the other hand, rapid changes in nutritional lifestyles and the lack of physical activities has taken place along with the changes in the patterns of non- communicable diseases diabetes, osteoporosis, cardiovascular disease and obesity and a large number of malignant diseases, just to name a few. Developing countries are experiencing an epidemiologic transition and what has

Address for correspondence: Prof. Gholamreza Sharifirad, Department of Health Education and Promotion, School of Public Health, Isfahan University of Medical Sciences, Isfahan, Iran.
E-mail: sharifirad@hlth.mui.ac.ir

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become known as new world syndrome that is following an unhealthy nutritional pattern, adopting sedentary lifestyle, consuming junk food and increasingly taking drugs. Consequently, nations are prone to non-communicable diseases epidemics in future years. Type 2 diabetes is one of those diseases.

Adult diabetes is a major health problem in the world. World Health Organization (WHO) is introducing diabetes as an overt epidemic strongly associated with the patient life style and economic conditions? Given the increasing statistics in diabetes prevalence, WHO introduced diabetes as a covert epidemic and has called upon all countries worldwide to fight with this disease. Diabetes prevalence is worriedly increasing worldwide. The total number of people with diabetes is projected to rise from 171 million in 2000 to 366 million in 2030.[1] Currently, there are more than 3 million diabetic patients in Iran, which is going to be around 7 million, if necessary measures are not taken in this regard. According to the latest report delivered by WHO, the world's adult population is going to increase by 65% from 1995 to 2025 and diabetes epidemic rise from 4% to 5/4%. The world's diabetes affected population is going to increase by 123%. The major part of this numerical will occur in developing countries.[2]

According to the statistics produced by different resources, diabetes prevalence varies in Iran. Azizi *et al*.[3] stated that the prevalence of adult diabetes has risen from 2% to 10% and Iran Ministry of Health and Medical Education[4] revealed 2/3 percent diabetes prevalence.[5] Despite of the impressive achievements in controlling the disease, diabetes still causes a premature death in patients.[6,7] The early death happens as a result of an aggravation in cardiovascular defects and other failures. In 1990, life expectancy was reduced by 0/22 years in women and 0/31 years in men with diabetes, but the negative effects of diabetes on life expectancy have been sharply increasing.[8]

Diabetes is the fifth leading causes of death in western countries and the fourth common reasons for a doctor visit.[3] Also, approximately 15% of health care expenses in the Unites States have been devoted to diabetes.[9] Diabetes death rate is 1/5-2/5 percent higher than that of the general population. Diabetes causes 75% of death in people under 35. Compared with the general population, people with diabetes,[10] particularly women, are 2-4 times more likely to die from cardiovascular diseases caused by diabetes.[11,12]

Considering the fact that diabetes is an acute, non-communicable and costly disease, a high financial burden should be borne by the patient, his family, society and the country.[13] According to an estimate made by Dali Index, diabetes financial burden equaled 306,440 years in 2001 in Iran. This value is rising due to an increase in diabetes.[14] The chronic nature of diabetes greatly affects the patient body, mentality and his socio personal functions. Therefore, a careful evaluation of the patient's health and life quality is of a great importance. Diabetes as a general hygiene problem, poses a threat to patient' life quality, and causes chronic and acute consequences. Also, in many countries diabetes is a major cause of disability and death.[15]

Scientific evidences indicate that only a small proportion of chronic diseases like diabetes are treated by specialists, whereas a number of diseases are managed by the patient himself and his family.[16] Self-management interventions cause positive changes in attitudes, expanding the relevant health and hygienic knowledge and developing health skills in patients.[17] Life style-activities such as physical activities, nutrition and rest, controlling and monitoring blood sugar, interacting with specialists and people who affect the patient, self-control activities and following a regime therapy are adopted as self-management variables.[18]

Today, various choices and options are proposed in health care and treatment. With increasing costs of health care and treatment, health care resources limitations and changing disease patterns, different assessments are carried out with respect to the evaluation of the effectiveness of different types of treatment strategies. Such assessments make the decision process difficult. This measure is given priority in order to treat chronic diseases, particularly diabetes, for this disease can be controlled through self-managing and adopting self-care behaviors.[19]

It seems, therefore, that comprehensive management of diabetes through educating and managing the disease is effective in the improvement of glycemic control. It is necessary for diabetic patients to learn self-blood sugar monitoring. Blood sugar monitoring facilitates the changes in lifestyle by using a feedback mechanism on controlling blood sugar level. The changes are made to improve hygienic behaviors through physical activities and nutritional behavior.[20]

The studies reveal that the type of treatment (insulin therapy) provided for diabetic patients affects their quality of life. Although, the type of treatment is affective for the patient, it is important to pay meticulous attention to his supportive care issues. The issues need to receive full attention in all aspects to develop the metabolic control.[21]

Mosaku *et al*.[22] pointed out in his study that depression is the most common mental disorder among the patients. Factors such as the patient's age, poor condition under which blood sugar is controlled and the duration of disease can predict the depression in diabetic patients. Also, factors like depression and anxiety are associated with the patient's general welfare. Depression along with underlying diseases is predictors of the patient's low quality of life.

Over the past decades, the approach for diabetes education changed and strengthened the motivation in both educators and patents. Consequently, patients enjoyed greater benefits. Fresh information on the importance of metabolic control, exploration of new treatment strategies, development in the technology of monitoring and measuring blood sugar were

all the factors that raised hope in patients. The mentioned factors decreased patient's dependence and increased diabetes self-management. Also, theory and research-based education were introduced to diabetes education and great attention was devoted to its value. And finally, educational standards were set for educators.[23]

Although, conventional education could sufficiently meet the patient's knowledge requirements, knowing the environmental and socio-psychological effects on patients' behavior lead to employing educational techniques for the purpose of changing their behavior. Focus was shifted from "building capacity to adhere to the treatment" approach to "self-effectiveness and self-management" approach. The educator was substituted by the patient-educator interaction and the power between them. And also the focus on "the lack of responsibility to build the capacity for the patients who were experiencing a poor adherence to treatment" was shifted to "their participation in taking responsibility for their own health" through interaction with educator.[24] It is only the patient who can estimate which knowledge or behavior he has learned.[23] The present study aims at the assessment of a dominant approach with respect to the education of diabetic patients and the development of both management skills and life quality.

DISCUSSION

The global focus shift toward the empowerment and involvement of patient into self-caring, reflects a stress and focus on health, disease prevention and the education of health care rather than a mere focus on the disease and its treatment. This is a step towards developing the sense of responsibility of the patient about his disease. In the past, treatment guidelines in association with the medical model were presented. It was a mandatory practice in adherence to treatment of chronic disease. The communication strategies employed for this purpose were the only attempts in managing the disease. According to the experiences, such strategies are not effective enough, particularly if they are related to chronic diseases. People are empowered when they are fully provided with the necessary information to make wise decisions, exercise an appropriate control over themselves and having a fine condition under which a decision was taken into action, also when they have a wealth of experience to evaluate the efficacy of the decision.[25]

The patient empowerment movement started in early 1970s at the same time when the patient rights charter was drawn up. The goal of patient empowerment is to build up the capacity of patients to help them to become active partners in their own care, to enable them to share in clinical decision making, and to contribute to a wider perspective in the health care system.[26]

Empowerment is a positive concept that refers to the patient's facilities, abilities and surrounding environment. The concept was formed in order to detect problems, defects and interfere in them. It enables and empowers people and causes the power and strength to pass from one person or one group to another one.[26] Power is an inner feeling of self-awareness and self-education.[27] Empowerment is both a process and a consequence.[28] Empowerment is achieved through interaction between people and causes interpersonal and intrapersonal communications.[29]

By 2010, empowerment will be hygienically an achievable goal for patients and they try to improve their health conditions through active participations and making smart decisions.[30] Empowerment is a practical strategy in improving health condition.[31]

Empowerment skills include solving problems, boosting self-confidence and creating strategies to create mutual trust.[32] Empowering a patient in health care issues means improving the patient's self-determination and self-regulation. Therefore, people's potential for health and welfare will rise to maximum. Empowerment process begins with providing the patient with information and education and ends when he can actively participates in making smart decisions about his disease.[33] In this pattern, health professionals help patients make informed decisions regarding their particular conditions. Patients are encouraged to fully participate in their treatment process by sharing their knowledge and experiences and making decisions through mutual assistance. Empowerment discovers and expands one's inner capacity to accept responsibility toward their health. The main concept of this change is the tendency to change. Empowerment is something more than certain health behaviors and develops the potential to develop the overall health and well beings in people and communities. Empowerment is an intervention or a strategy to help people change their behavior in order to adhere to the treatment plan.

Empowerment is a practical strategy in promoting health.[31] Craig and Lindsay define empowerment as a process through which people can dominate their condition.[32] Jones and Meleis describe the concept of empowerment as a "social process of recognizing, promoting, and enhancing people's abilities to meet their own needs, solve their own problems, and mobilize necessary resources to take control of their own lives."[28] In other words, patient empowerment is a process of helping people to assert control over factors that affect their health. Empowerment is also defined as a skill and ability to participate. Empowerment skills cover issues such as problem-solving, self-confidence and strategies to develop trust.[32]

Funnel *et al*.[25] define empowerment as improved self-concept; critical analysis of the world; and identification with members of a community participating in, organizing for, and carrying out environmental change. Based on his writings, "empowerment education" places people in a group effort, enables them to assess the social and historical roots of the problem, and allows them to envision a healthier society, thus *empowering* them to develop strategies to solve their problem. Such community/group participation enhances a person's

belief in their ability to influence change in personal and social realms. Empowerment education targets individual, group, and structural change. To empower individuals, the motivation and skills that enable them to advocate for social reforms must be developed. In this definition, empowerment includes prevention, as well as community connectedness, self-development, improved quality of life, and social justice. Funnel *et al*., also, state that empowerment include self-reliance matters, self-responsibility and self-care, however, hygienic behavior has been reported more often.[33] There is a strong and close link between empowerment and development in the society. WHO health promotion glossary illustrates a difference between individual empowerment and community empowerment. Individual empowerment refers primarily to the individuals' ability to make decisions and have control over their personal life. Community empowerment involves individuals acting collectively to gain greater influence and control over the determinants of health and the quality of life in their community.[25] Empowering outcomes include having positive self-esteem, having and achieving goals, gaining control over life and having a sense of hope for the future.[34]

The empowerment process can be achieved through training and support. There are ranges of options available including providing information sheets, multimedia programs, use of information technology, and skill building such as a diabetes self-management program. The initial step in gaining respect and meeting patient's needs or preferences is to solicit their views and listen to what they say. Multiple studies have demonstrated that patients who are involved with decisions about their care and the management of their conditions have better outcomes than those who are not involved.[25]

In order to build capacity and adhere the treatment program, Various theories of learning and behavior such as the health belief model, the socio-behavioral model, self-efficacy and empowerment analyze the information from the perspective of short-term and long-term results, base on mechanisms by which the patient's psychosocial and environmental context affects his/her acceptance, capacity building and adherence to regimens. They also provide guidance for investigators in their efforts to develop patients diabetes education (PDE) approaches to fit better with human behavior. This would allow improved compliance and regimen adherence and consequently long-term diabetes control.[35]

Pattern is a major plan that sets the general view about a subject. The pattern clarifies educators' view on what activities should be done.[22] Pattern is an educational process which provides the necessary guidelines for educational assessment and intervention design and facilitates this process. Models are used to help people understand a particular problem to organize information. They are often used to present the process and sometimes to explain the process. Models provide health educators with a framework for design, implementation and assessment of the program. Choosing a proper pattern in health education is the first step to design an educational program.

One of the theories frequently advocated in the literature as a useful model for PDE is patient empowerment. It has been suggested as a new approach for PDE, in order to cope with rapidly changing patterns of diabetes care and management, and to integrate its clinical, psychosocial and behavioral components and self-management education. This approach recognizes the nature of the actual experience of having diabetes and views the health care professional as a resource person/consultant. The purpose is to provide a combination of diabetes knowledge and self-management skills, and heightened self-awareness regarding values, beliefs, needs, and goals so that patients can use this power to make informed decisions about their behaviors and act for their self-care. Advocates believe that empowerment expand overall health status by affecting individuals behavior and using personal and social resources.[23]

PDE designed to empower patients to self-manage diabetes in the bio-psychosocial context has a very different goal than PDE designed simply to persuade patients to comply with the treatment recommendations in order to improve their health status. Empowering is based on mutual respect, which is the result of placing value on human life and building a patient-caretaker relationship. To empower, the PDE approach needs to be adapted to meet patient's needs, and to reflect and express his/her lived experience with diabetes through recognition and promotion of individual strengths, informed choices, and personal goals.[23]

Empowerment includes several hidden concepts that can be evaluated: Perceived concepts, knowledge, attitude, self-efficacy, skill, self-expectancy, health definition, motivation, self-confidence.[36]

Perceived threat consists of two parts: Perceived susceptibility and perceived severity. Perceived susceptibility is one's subjective perception to harmful condition resulting from specific behaviors and has a cognitive dimension and depends on one's knowledge. To build perceived susceptibility, it is important to state the negative consequences and highlight the possible hazards for the patients. However, unrealistic fear or phobia should not be aroused. Perceived severity One's belief of how serious a disease and its consequences are, has a strong cognitive component, which is dependent of one's knowledge. Different people have different perceptions of risk. Health educators need to build perceived severity by describing the serious negative consequences and personalizing them for the patient.

One of the key concepts in empowerment is self-efficacy, which was defined by Albert Bandura. Self-efficacy has become a key variable in clinical, educational, social, developmental health and personality psychology. It has been proved that self-efficacy not only matches the disease with treatment, but it affects health activities. It also has many uses in behavior change. Bandura defines self-efficacy as capacity perceived by an individual to successfully execute a given behavior.[37] Self-efficacy is a cognitive construct

that contrasts instrumental behavior demand with personal abilities. Perceived self-efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Unless people believe they can produce desired effects by their actions, they have little incentive to act. Self-efficacy is the most important precondition for behavior change. There are four efficacy-enhancing strategies: (a) The client needs to feel successful in implementing new skills. (b) Another strategy involves breaking down the overall tasks of behavior change into smaller, more manageable subtasks that can be addressed one at a time. (c) Instead of focusing on a distant end goal, the client is encouraged to set smaller, more manageable goals. (d) Therapist can also enhance self-efficacy by providing the clients with positive feedbacks.

Bandura points to four sources affecting self-efficacy: 1. Mastery Experiences 2. Social Modeling 3. Social Persuasion 4. Psychological Responses. Moods, emotional states, physical reactions, and stress levels can all impact how a person feels about their personal abilities in a particular situation. Self-efficacy or one's belief in the ability to do a specific behavior is a principle connection between knowledge. Self-efficacy also affects the choice of behavior, settings in which behaviors are performed, and the amount of effort and persistence to be spent on performance of a specific task. The level of self-efficacy in diabetic patients can be assessed through self-management behaviors and consequences.[38]

Self-esteem is a concept following self-efficacy in empowerment. Self-esteem is the degree to which one feels confirmation, verification, acceptance and value as a person. Self-esteem and self-efficacy are two primary components in learning process. They are correlated and complementary to each other and there is a mutual relationship between them. Study shows that people who have low self-esteem and place low value on themselves, poorly look after their health and also encourage the others to do so. They experience desperation, depression symptoms, bad eating habit, the sense of victimhood and the lack of ability to improve communication with others. Increasing self-esteem and consequently improving self-efficacy could be of a great importance in empowering diabetic patients.[39] There is a meaningful relationship between self-esteem and health behavior and also between self-efficacy and one's vision of his/her ability. Boosting self-esteem through group discussion can raise self-efficacy. Therefore, one can expect that preventive health behavior adoption will be promoted following this program.[36]

Self-control is another concept of empowerment theory. Internal locus of control promotes one's sense of responsibility toward their behaviors, for if the person takes the responsibility of his own health, he will try to change bad behaviors and adopt acceptable behavior. People with low self-esteem have external locus of control and people with high self-esteem have internal locus of control. In this theory, self-control means people's perceived severity will be developed once they acquire enough knowledge about their disease. Having high self-esteem and enough level of self-efficacy, they develop skill at adopting preventive behavior. Therefore, they reach self-control gained with cognition, decision-making, self-efficacy and a value system to stabilize preventive health behavior.

The empowerment approach is based on three key principles related to diabetes, its management and the psychology of behavior change. The principles are summarized below:

- The reality of diabetes care is that more than 95% of that care is provided by the patient; therefore, the patient is the locus of control and decision-making in the daily treatment of diabetes
- The primary mission of the health care team is to provide ongoing diabetes expertizes education and psychological support so that patients can make informed decisions about their daily diabetes self-management
- Adults are much more likely to make and maintain behavior changes if those changes are personally meaningful and freely chosen.

Key concepts of empowerment relevant to diabetes education are listed below:

- Emphasis on whole person: This approach takes into account the cognitive, biophysical, psychological and social aspect of a person. It assumes that the person's value, beliefs and opinions are to be respected and considered. In addition to providing information, the major contribution of the educators is to provide a trusting relationship in which patients feel valued, trusted and psychologically safe
- Emphasis on personal strengths, rather than deficits: Each person has useful knowledge and there is value in each person's culture and ethnic tradition
- Patient selection of learning needs: This helps to ensure the relevancy of the information presented and decreases the likelihood of so-called inert knowledge- that patients will know but still not able to do
- Setting of shared or negotiated goals: Treatment and behavior-change goals are mutually agreed upon. Behavioral strategies are not used as a way of getting patients to do what the educator wants, but rather as ways to help patients attain their personal blood glucose level, weight or other goals
- Transference of leadership and decision making: Because diabetes education and care are currently delivered in an episodic way with limited follow-up, and because diabetes requires multiple daily decisions, persons with diabetes must assume responsibility for their care to ensure its adequacy
- Self-generation of problems and solutions: Problems that are identified and solutions that are chosen by patients tend to be more relevant and meaningful because they are generated within the context of their life-styles, values, beliefs and support systems. The educator facilitates this process by helping patients to explore problems, express feelings, develop alternative options, consider the consequence of various options and come to

appropriate decisions. The educator serves as a sounding board and a resource person
- Analysis of failure as problems to be solved rather than as personal deficits: This approach helps patient maintain the long-term motivation needed for a lifelong illness
- Discovery and enhancement of internal reinforcement for behavior change: One can expect more consistent, long-term adaptions when changes are internally motivated rather than externally imposed and reinforced by others
- Promotion of escalating participation: As patients gain control over their diabetes through the acquisition of knowledge, problem-solving experience ad negotiation skills, they are able to assume more and more responsibility for their own care. This responsibility is gradually transferred to the patient through systematic education and support
- Emphasis on support networks and resources: This philosophy assumes that, although most people have learned some behaviors that are barriers to health, they still have a fundamental drive for health and desire to overcome barriers to optimal self-care.[25]

There are two major challenges health care professionals often face in successfully implementing empowerment approach to diabetes care.
- The first challenge is the discomfort some health care professionals experience when discussing the emotional content of diabetes or a diabetes problem that a patient has identified. Having and caring for diabetes has a potent emotional component for most patients. Adults seldom make and sustain significant changes in their lives unless they feel a strong need to change. If the change process is to be successful, it is crucial for the health care professional to elicit the patient's feelings related to the issue. If the patient does not experience strong feelings about the current situations, the likelihood of sustained behavior change is small. Health care professionals are not required to solve or change patient's emotions but rather to create an environment in which the patient's emotional experience is validated and can be express freely
- The second major challenge is the tendency of many health care professional to solve problems for patients rather than with them. If a patient is clearly asking for technical expertise possessed by the health care professional, such behavior is appropriate. Most of the problems involved in the daily treatment of diabetes are more psychological than technical. The process of helping patients discover their capacity to solve their own problem reinforces their self-efficacy and personal responsibility for the treatment of their diabetes.[35]

There are also challenges that patients may need to face to successfully implement this approach to diabetes care. Many patients in the past were blamed or criticized for their efforts at diabetes self-management that they were reluctant to visit health care professionals. Discussing openly their daily efforts related to diabetes care, expressing any disagreement with health care professionals and asserting their own needs or values related to the treatment of their diabetes all points out that the patient needs to actively participate in the process of his own care. Effective diabetes care requires new roles for both health care professionals and patients. By creating a collaborative relationship, both the health care provider and the patient can find themselves in a satisfying partnership that results in improved glycemic control for the patient and an enhanced sense of self-efficacy and a level of satisfaction with care for both parties.

CONCLUSION

Considering the rapid spread of diabetes in developed and developing countries and the chronic nature of diabetes, the evidence revealed that the interventions made based on self-management information caused positive changes in beliefs, expanded health information related to diabetes and developed health care skills.[17]

Enhancing self-management behaviors is being discussed as a bridge built to reach the welfare and quality of life for diabetic patients. We need to point out five general principles of self-management education in this regard. Diabetes education is effective in improving and developing clinical results and a better quality of life, at least in the short term.[40-46] Diabetes self-management education program has shifted from traditional approaches to empowerment-based models.[43-47] Since there are many factors involved in choosing educational approach, there is no perfect program or approach. They change according to the patient's needs and goals. Besides, group education is effective.[40,44,48-50] Within the educational program, Continuous support is crucial to stabilize the changes in participants.[43-53] Setting behavioral objectives is a fundamental strategy in supporting self-management behavior.[54]

Empowerment has been discussed as a dominant approach in supporting the patients with chronic disease, particularly type 2 diabetes. It is hoped that it could be possible to shift from traditional approach to empowerment approach in dealing with patients with chronic disease by building capacity to strengthen their skills, competencies and abilities, so that they can manage to enhance the quality of their lives.

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