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The effect of family empowerment training based on self-compassion on self-care and fasting blood sugar in female patients with type 2 diabetes

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Abstract

Aim: The purpose of this research was to determine the effect of family empowerment training based on self-compassion on self-care and fasting blood sugar in female patients with type 2 diabetes. **Method:** In a randomized clinical trial study with a control group and pre-test and post-test, 60 women with type 2 diabetes who referred to the endocrinology department of Imam Hossein (AS) hospital located in Tehran province in Fall 2021 were selected by random sampling method. became Then the subjects were randomly assigned in two experimental and control groups through Excel office software. The experimental group (n=15) (under self-compassion-based family empowerment training for 8 weekly sessions of 90 minutes each session) and the control group (n=15) underwent routine hospital training. The data collection tool of diabetes self-care scale questionnaire and fasting blood sugar were collected in three stages of baseline, after intervention and three-month follow-up. The data was entered into SPSS statistical software version 21 and analyzed using multivariate repeated measure analysis of variance. **Results:** The findings showed that in the group under family empowerment training based on self-compassion, the average score of self-care is significantly higher than the control group. In addition, women with diabetes in the experimental group decreased significantly in the average fasting blood sugar score compared to the control group ($P < 0.001$). **Conclusion:** The results of this research showed that teaching the family empowerment model based on self-compassion can be effective in improving self-care and reducing fasting blood sugar in women with type 2 diabetes.

Keywords: *Self-care, family empowerment, self-compassion, diabetes.*

Introduction

Diabetes is a complex metabolic disorder characterized by blood sugar levels that are higher than normal, resulting in impaired secretion or function of insulin or both (Radholm et al., 2020). Chronic complications of diabetes can generally be divided into two groups, vascular and non-vascular complications. Vascular diseases such as heart diseases, retinopathy, neuropathy, nephropathy, cataracts. Non-vascular complications also include infections, skin changes, hearing loss, digestive diseases, sexual dysfunction (Collier et al., 2020). In all societies, the prevalence of type 2 diabetes increases with age, and this disease is more common in women and is associated with a decrease in life expectancy by an average of 10 years (Le Blanc et al., 2017). It is predicted that due to problems such as the prevalence of old age, lifestyle changes, lack of proper diet and exercise, the rate of diabetes will reach more than 435 million people (Gadgil et al., 2017). In Iran, diabetes is a serious threat to the health of our countrymen. Currently, more than three million people in Iran are suffering from diabetes, which according to the World Health Organization estimate, if effective measures are not taken. This number will reach nearly 7 million people by 2030, and Iran, with a prevalence of more than 8%, is one of the regions with the highest prevalence of diabetes in the world (Percorich et al., 2019). The age of diabetes in Iran is 10 to 15 years lower than the global standard (Hogendoorn et al., 2019). Therefore, it is expected that the actual prevalence of diabetes in Iran is more than the reported figures (Rezaei et al., 2019). Therefore, the World Health Organization (2014) has introduced it as a silent epidemic (Zhang et al., 2019).

The first essential step of patient empowerment is diabetes self-care education, without this education, patients cannot consciously take care of themselves. Empowerment in diabetes self-care education seeks to increase knowledge, self-care skills, self-awareness and a sense of individual independence to enable patients to accept individual diabetes care (McGovern et al., 2016). Successful diabetes care requires the ability to set goals and make effective decisions that fit the lifestyle of patients and take into account many metabolic, psychological, social and interpersonal factors. Therefore, in recent years, the concept of the empowerment of the patient and their family has been given a special place in nursing and medical research and it is mentioned as the necessity of patient care (Binning et al., 2019).

One of the effective methods of empowering chronic patients is the implementation of the family-oriented empowerment model (Salimi et al., 2016). The family, as the most basic element of the society, is responsible for providing correct and appropriate health care to the patient and those around him (Dogro et al., 2019). Teaching family members about disease control and even prevention can be very useful, because there is a strong connection between the family and the health status of its members. People especially in chronic diseases are dependent on their family members and even their attitude is influenced by the family (Calderon, 2018). The family environment can play an important role in the adaptation of diabetic patients to lifestyle changes in order to properly control blood sugar and prevent its complications (Chelano et al., 2019). To increase the self-care of patients, a family-centered empowerment model has been designed with an emphasis on the effectiveness of the role of the individual and other family

members in three motivational, psychological dimensions (self-confidence, self-control, and self-efficacy) and the characteristics of the problem itself (knowledge, attitude, and perceived threat). (Kahrmani et al., 2017). The results of empowerment include positive self-confidence, the ability to achieve goals, and having a sense of control over life and change processes, as well as a sense of hope for the future (Safari et al., 2019). In 2005, Gilbert used the structure of compassion-based education in his training sessions and established this training, which can be used as the main and even supplementary training (Gilbert, 2015; Razavi et al., 2016). Self-compassion in people provides a balanced approach to emotional experiences, so that a person neither runs away from his feelings nor merges with them and drowns in them. Self-compassion is also related to emotional intelligence. People who have higher self-compassion report more emotional coping skills, are more capable in distinguishing between their feelings and mood reconstruction of negative emotional states, which is a necessary process in the course of self-care in patients with diabetes (Nazir et al., 2016). The combination of family empowerment and self-centered compassion training can be effective in controlling the symptoms of diabetes. Considering the above, this research was conducted with the aim of answering the following question:

1. Is family empowerment training based on self-compassion on self-care and fasting blood sugar effective in female patients with type 2 diabetes?
2.

Method

In a randomized clinical trial study with a control group and pre-test and post-test, 60 women with type 2 diabetes who referred to the endocrinology department of Imam Hossein (AS) hospital located in Tehran province in Fall 2021 were selected by random sampling method. became Then the subjects were randomly assigned in two experimental and control groups through Excel office software. The experimental group (n=15) (under self-compassion-based family empowerment training for 8 weekly sessions of 90 minutes each session) and the control group (n=15) underwent routine hospital training. The data collection tool of diabetes self-care scale questionnaire and fasting blood sugar were collected in three stages of baseline, after intervention and three-month follow-up. The data was entered into SPSS statistical software version 21 and analyzed using multivariate repeated measure analysis of variance.

Results

The findings showed that in the group under family empowerment training based on self-compassion, the average score of self-care is significantly higher than the control group. In addition, women with diabetes in the experimental group decreased significantly in the average fasting blood sugar score compared to the control group ($P < 0.001$).

Conclusion

This study was designed and implemented with the aim of investigating the effect of family empowerment training based on self-compassion on self-care and fasting blood sugar in female patients with type 2 diabetes. In this study, it was observed that the results related to the individual characteristics of the research units, which include patients, in the two control and intervention groups in terms of individual

characteristics, did not have a statistically significant difference, and in other words, the two groups were homogeneous in terms of these characteristics; Therefore, the comparison of two groups was done better according to the intervention.

In explaining these findings, it can be said that in patients with diabetes who suffer from psychological disorders such as depression and anxiety, the threat and self-protection system is severely overworked, which will result in high levels of stress and worry in these people; In the continuation of this process, compliance with education and self-care decreases in these patients, the result of which is an increase in fasting blood sugar (Razavi et al., 2016).

Compassion-focused training works for these people like physical therapy for the mind; That is, by stimulating the soothing system, it provides the basis for its transformation, and with the transformation of this system, it increases resilience against depression and anxiety, and ultimately leads to the improvement of mental health and increased self-care in these patients. Therefore, the basis of education based on compassion is the education of the compassionate mind towards oneself and others. In this technique, the student is taught the skills and qualities of compassion. Compassion mind training helps students to change their problematic cognitive and emotional patterns. With the changes created in destructive mental patterns, the patient becomes kinder to himself and others, and the sensitivity to shortcomings and adversities decreases. These changes bring peace of mind and increased self-care for the patient (Safari et al., 2019). The creation of positive emotions in the patient after compassion-based education is also strengthened, which, as a result, increases the quality of life in these patients.

It is suggested to use larger samples to achieve the true effect size of the program. In order to expand the findings of this study, researchers are suggested to implement education based on acceptance and commitment on similar patients in other hospitals.

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