

Original Article

Effect of family-centered empowerment model on self-efficacy in patients with obsessive compulsive disorder: A quasi-experimental study

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Abstract

Objective: Obsessive compulsive disorder is one of the most common disorders affecting the individuals' performance. Promotion of self-efficacy is important in these patients. This study determined the impact of family-centered empowerment model on self-efficacy in patients with obsessive compulsive disorder. **Material and Methods:** This was a quasi-experimental single group before-after intervention study, which conducted on 36 patients with Obsessive compulsive disorder. The samples were selected with purposive sampling method using inclusion criteria. The family-centered empowerment model was implemented in 5 sessions for 3 months focusing on four categories (perceived threat, self-efficacy, educational contribution, and assessment). The instrument used consisted of two parts including demographic information questionnaire and Self-efficacy Questionnaire which was completed before, immediately after, and 1.5 month after intervention by the study units. The data were analyzed with SPSS21 using descriptive Statistics, repeated measure ANOVA and paired t-test. **Results:** The mean self-efficacy scores were 47.78 ± 8.71 and 51.44 ± 10.83 before and after intervention, respectively ($P=0.04$). Also, a comparison of self-efficacy scores with t-test before and after intervention and follow-up indicated a significant correlation ($P<0.05$). **Conclusion:** Our findings showed the implementation of family-centered empowerment model could be recommended to increase the rate of self-efficacy in patients with obsessive compulsive disorder.

Keywords: Empowerment; Family-centered; Self-efficacy; disorder; Nursing

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Introduction

Obsessive Compulsive Disorder (OCD) and the related disturbances are manifested by anxiety

induced by thoughts, images, disturbing tendencies or obsessions, and repetitious behaviors to reduce discomforts and compulsions¹. Anxiety and worry

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influence detrimentally the activities of daily living (ADL) in these individuals². The most common obsessions are related to thoughts and imaginations such as fear of hurting others or the self, contamination, fear of committing wrong or inappropriate behaviors, discipline, simultaneity and symmetry, and the related religious or sexual thoughts and feelings³⁻⁵. The most common compulsions include controlling, cleaning, repeating words, counting, and storing³. If OCD left untreated, it may develop into a chronic condition leading to severe performance dysfunction and reduced quality of life⁶⁻⁷. The exact etiologic cause of the condition remains unknown yet⁸⁻⁹. This disease was untreatable until three decades ago; however, the situation changed by the emergence of new mental drugs and specific behavioral techniques influencing the lives of many OCD patients^{10,11}. Presently, the most common treatment for OCD is pharmacologic therapy¹⁰. Over the last two decades, much attempt was made to replace the pharmaceutical therapies with non-pharmaceutical treatments or to reinforce the efficacy of pharmaceutical therapies¹². Some studies have suggested that non-pharmaceutical therapies such as cognitive behavioral therapies have exerted more influential effects compared to drug therapy. Moreover, the combined application of these treatment modalities has greatly improved the results¹³. The OCD affects adversely not only the patients, but also their family members. According to research carried out so far, there is the need for some educational programs for teaching and coordinating the families of these patients to diminish their mental burden¹⁴⁻¹⁵. Studies have indicated that activation of family members in treating the patients improves the results¹⁶. Additionally, such interventions have shown a reduction in family stress in treating psychotic patients^{17, 18}.

Family plays a considerable part in forming individuals' self-efficacy at various stages of life¹⁹. Self-efficacy is a psychological parameter that influences tolerance of stress and communicative skills of family care-givers²⁰. Based on some available evidence, patients with higher self-efficacy enjoy a better mental health status²¹. Besides, reduced self-efficacy serves as an important problem in patients with chronic disease. Regulation of this factor is one of the important indices in adjusting health behaviors and modifying life style²²⁻²⁴.

The empowerment approach is an effective way to

promote health knowledge and subsequently, foster self-efficacy^{22, 23, 25}. In the empowerment process, the patients have a greater responsibility and a more active role in decision-makings about their health²⁶. In recent years, proper interventions and healthcare policies have been developed with respect to patient empowerment, specifically for patients with chronic disorders²⁷⁻²⁹. One of the less known educational models in the healthcare system is the family-centered empowerment model, which is based on educational steps aimed at increasing information, self-esteem, and self-efficacy in patients and their families³⁰. This model leads to controlling of learning and increasing the knowledge and information emphasizing the patient's role as the learner. It consists of "determination of needs, extraction of goals, planning, education, and assessment of educational results"³¹. OCD is a chronic disease which involves the family affecting individuals' self-efficacy adversely. Health care providers try to enable the patients and their family to contribute to the treatment process using the family-centered empowerment model³². Considering the nature of OCD and its severe complications, the empowerment of the OCD patients and at least one of their family members who is most responsible in the patient care is pivotal in increasing the efficacy of care-giving. Some studies have explored the effects of family-centered empowerment on other patients^{23, 24, 28-34}. However, no study was found to have investigated the effect of family-centered empowerment model on self-efficacy of patients with OCD. Consequently, the present study aimed to evaluate the effect of family-centered empowerment model on self-efficacy of patients with OCD.

Methods

This study used a quasi-experimental single group before-after intervention design in which the samples were selected with purposive sampling method from among the OCD patients who presented to psychiatric clinics in hospitals affiliated to Shahid Beheshti University of Medical Sciences in Tehran, Iran, in 2017. The number of participants was estimated with a test power of 90%, test error of 5%, and subject attrition rate of 15%.

The data in this study were collected after obtaining the required permissions from the authorities of the study hospitals. Informed written consent was obtained from each patient and their active family

member. The research goals and procedures were explained to the participants and they were assured of information anonymity and confidentiality. The patients were asked to introduce one of their family members who was active in their treatment and care-giving. In this way, 36 patients and 36 active family members entered the study in a single group design. Confirmation of the patient's affliction with OCD by a psychiatrist on the basis of DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, 4thEdition) and DSM-V (Diagnostic and Statistical Manual of Mental Disorders, 5thEdition) criteria, age of 18-50 years and diagnosis of the disease with at least 6 months were The inclusion criteria. The other criteria were residence of the patient and the care-giver in the same home, care-giver's responsibility of patient care and follow-up at home, mastery of the Persian language by the patient and their active family member, the ability to respond to questionnaire items, and participation in educational programs. Moreover, the exclusion criteria were: patient hospitalization at the time of interventions, being absent in more than two pedagogic class sessions, and affliction with other mental disorders during the research process. The data collection instrument was a questionnaire consisting of two parts: demographic and clinical information questionnaire including 15 items for the patient and 4 items for the active family member, and Sherer et al. Self-efficacy questionnaire. The Sherer et al. Self-efficacy Questionnaire was a 17-item inventory which used a 5-point Likert scale ranging

from completely agree=5 to completely disagree=1³⁵. Various studies have established the validity and reliability of this instrument³⁶ and the present study has referred to these studies for validity. The reliability of the self-efficacy questionnaire in the present study was estimated to be 0.83 (Cronbach's $\alpha=0.83$) following a pilot study and distribution of questionnaire among 30 samples of the statistical population.

The interventions were performed using Alhani's family-centered empowerment model³³. The four steps in the model were completed during three months. One week after the orientation session in the following order: perceived threat, self-efficacy, educational contribution, and assessment. Having completed the interventions fully, the active member of the family was asked to take care of the client for 1.5 months on the basis of the information given by education (Table 1)

Data Analysis

The culled data were analyzed with SPSS21 (Statistical Package for the Social Sciences, version 21) using descriptive statistics, paired t-tests, and repeated measure analysis of variance (ANOVA).

Ethical Clearance: The study was approved by ethics Committee of Shahid Beheshti University of Medical Sciences, Tehran, Iran (IR.SBMU.PHNM.1395.489).

Results

The age of the patients ranged between 18 and 50 years with most frequency belonging to the 18-28

Table 1: Steps of implementing family-centered empowerment model

<p>Step one (Perceived threat)</p>	<p>Improving the participants' knowledge through group discussion (5 or 6 participants in each group) Session duration: 1-1.5hrs. Education on OCD and treatment, controlling and preventing the side-effects, and the risks of OCD. Modifying the education program based on the needs and using the patients' experience in teaching.</p>
<p>Step two (Problem-solving)</p>	<p>The subjects and the authors work to implement problem-solving stages; Teaching essential skills for controlling the disease and the symptoms to the subjects and gather feedbacks; Group discussion each for 1-1.5hrs with 5-6 subjects; Teaching nutrition, medication, and psychotherapy points (ABC method), relaxation method, and mental imaging technique.</p>
<p>Step three (Participation in education)</p>	<p>Transferring the training using educational cards by the patients to their main caregiver at home and gaining their interest in better cooperation; Collecting and answering the questions that the family might have via the patients; Attendance of the patient and the main caregiver to examine the educational materials and teaching the final points.</p>
<p>Stage four (Assessment)</p>	<p>Includes two assessment stages: process assessment and final assessment; Process assessment: implemented throughout the intervention course by asking questions at the beginning and end of each session, collecting feedbacks, and solving problem. Final assessment: demographics questionnaire and GSEs by all the patients and demographics questionnaire by the main caregivers were filled out at the beginning of the intervention; GSEs was filled out by the patients immediately and 1.5months after the final session. Gathering and analyzing the data.</p>

Table 2: Frequency and percentage of the OCD patients based on demographical variables

Variable		N	%
Gender	Female	22	61.11
	Male	14	38.89
Education	Elementary	3	8.33
	Junior high school	4	11.11
	Diploma	12	33.33
	College	17	47.22
Marital status	Unmarried	20	55.56
	Married	10	27.78
	Other (divorced, widow, widower)	6	16.67
Job status	Housewife	7	19.44
	Retired	2	5.56
	Office work	9	25
	Worker	3	8.33
	Unemployed	15	47.67
Age (year)	18-28	15	41.67
	29-38	11	30.56
	38<	10	27.28

years age group with a 14.67% frequency. Most patients (61.11%) were female, had academic education (47.22%), were unemployed (41.67%), and were single (55.56%) (Table 2).

The normality of data distribution was confirmed using Kolmogorov-Smirnov test. Considering that the value of Kolmogorov-Smirnov test in general self-efficacy scores ranged between +2.31 and -2.31 with $P>0.05$, so, the assumption of normal distribution of data was approved with 95% confidence level. The meanscore of patients' self-efficacy was 47.78 ± 8.71 before intervention which increased to 51.44 ± 10.83 after intervention showing that the family-centered empowerment model exerted a positive effect on patients' self-efficacy ($P=0.0456$). Moreover, a comparison of self-efficacy scores before intervention, after intervention, and follow-up indicated a significant correlation with t-test ($P<0.05$) (Table 3).

Table 3: Self-efficacy scores of OCD before intervention, after intervention, and follow-up

Self-efficacy variable	Mean	Standard Deviation	t-value	p-value
Before the intervention	47.77	8.71	2.45	0.04
After the intervention	53.44	10.83	2.45	0.04
Follow up	59.72	10.25	2.33	0.01

Significant levels of $p<0.05$ are bolded.

Discussion

This study investigated the effect of family-centered empowerment model on self-efficacy of patients with OCD. Our findings suggested that this model promoted self-efficacy in these patients. Consistent with our results, the study by Atashzadeh-Shoorideh et al. conducted in Iran showed that the family-centered empowerment model exerted a positive effect on life style, self-efficacy, and HbA1c of diabetic patients²⁸. Additionally, Zhang et al. explored the correlation between "rate of self-efficacy" and "social support and health quality" of families of patients with dementia and found that the patients' families had low self-efficacy due to lack of their active participation in the treatment of their patient. Hence, the family self-efficacy may be enhanced by education and participation of the family in the patient's treatment process³⁷. Jones et al. concluded in their descriptive study that family-centered care would lead to management of the child's disease by parents. Also, mastery of familial life is directly and significantly correlated with offspring's self-management³⁸. Furthermore, Kamimura et al. surveyed the self-efficacy of diabetic patients and their families and found that not only the patients, but also their families suffered from inadequate self-efficacy so that they required some educational programs to empower them in care-giving and prevention³⁹. Au et al. stated that promotion of self-efficacy in care-givers through their increased participation in patient education and care exerts a great impact on the patient's psychosomatic health demonstrating the necessity of improving self-efficacy in patients⁴⁰. Moreover, Nishita et al. reported that empowerment not only fosters self-efficacy in patients, but also controls their diabetes⁴¹. Ghaznavi et al. showed that the contribution of the family in patient care-giving exerts a significant effect on increasing family self-efficacy and improving the patient's life quality⁴²; this is consistent with our findings. The study by Rahnama et al. found that patient education

leads to promoted self-efficacy in hypertensive patients⁴³. Bode et al. concluded in their study that family empowerment and education of children's parents reduced their stress and anxiety⁴⁴. Also, Gerlachand Szecsenyi demonstrated in their study that empowerment of the families of patients with cardiac failure decreased frequency of hospitalization of these patients. Additionally, it was associated with increased quality of life in these patients. They stated that family contribution in their own education and empowerment played a significant role in improving quality of life in patients⁴⁵. In this regards the nurse can play a key role via nurse-patient interactions⁴⁶.⁴⁷. The study by Ghaznavi et al. in Iran suggested that the family-centered empowerment model had no effect on life quality in children with chronic renal failure⁴². The differences in results may be attributed to the target group and the variable under study, i.e., the present study investigated self-efficacy in patients with OCD while Ghaznavi et al. study surveyed the life quality of children with chronic kidney failure. It appears that any change in life quality variable requires a more extended period of intervention time. Given that thus far no study has investigated the promotion of self-efficacy in patients with obsessive-compulsive disorder using family-centered empowerment model, this study can be innovative in this regard and contributes new findings to the field. This study was carried out using a single group design due to limitations in time and sample volume on the basis of inclusion and exclusion criteria. It is recommended that future studies replicate this research using two groups design to determine the

efficiency of family-centered empowerment model using comparison of two groups.

Conclusion

Implementation of family-centered empowerment model enhanced self-efficacy in patients with OCD. The family-centered empowerment program for these patients includes companionship with the patients and their families, explaining the disorder to the patient, responding their questions in simple terms, contribution of the patients in their care-giving decision-makings, emotional support of the patients and their families, and educational contribution of the families. These measures can provide the safe background for improving their self-efficacy. Therefore, it is recommended that this model be applied in educating these patients.

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Conflict of interest: No conflict of interest.

Authors' contributions

AYZ contributed the conception, design, data collection and prepared the first draft of the manuscript. FA and JM critically revised and checked closely the proposal, the analysis and interpretation of the data and design the article. APH carried out the analysis, and interpretation of the data. AM helped to revise the initial draft the manuscript and submitit. All authors read and approved the final manuscript.

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