



Impact of Pender model training program on lifestyle of parents of children with Thalassemia Major

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General Note



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ABSTRACT

Improving the lifestyle and promoting health are fundamental needs for human beings. Parents of children with thalassemia need to enhance their lifestyles. This study aimed to determine the effect of educational program of Health Promotion Model on lifestyle of

parents of children with thalassemia major. This quasi-experimental study was performed on 34 parents of children with thalassemia under treatment in Imam Khomeini Hospital of Zabol, Iran. The participants divided into two groups as intervention and control, randomly. Pender model was used for educational intervention on promoting lifestyle during two 1-hour sessions as single-face-to-face. Data were analyzed by SPSS software version 22 and t-test. Mean and standard deviation changes of parents' lifestyle dimensions scores of children with thalassemia major after training become significant than before ($P < 0.001$). Training program enhances the lifestyle of parents of children with thalassemia major. Therefore, it is suggested that the training program of lifestyle promotion should be considered as an important part of parents' health programs, so that, they can actively participate in caring for their children and succeed in their life and work.

Keywords: Pender training model, Lifestyle, Thalassemia Major, Parents

1. INTRODUCTION

Thalassemia is the most common genetic disorder in all over the world (Ansari et al., 2014). It is estimated that there are 270 million carriers for main hemoglobin defects in the world and, 300000 up to 400000 babies are annually born with anemia the world (Shahnoosis et al., 2015). The abundance of people with thalassemia varies from 3 to 100 per 100,000 people in different provinces of Iran. Sistan and Baluchestan province in the south east of Iran with 2700000 populations, has 2300 patients with thalassemia major. Zabol has 217 patients with thalassemia major (Mirimoghaddam et al., 2012). Patients with thalassemia major have a large range of developmental disorders. They are short with slow growth speed and also with a poor body mass index, and have difficulty with sexual maturity, which may be due to low hemoglobin, anemia, high levels of body ferritin and insufficient treatment with bonds (Arashi et al., 2012). Despite therapeutic actions conducted on patients with thalassemia major, their clinical manifestations and symptoms have affected different aspects of the life of every person and family like any other chronic disease and will affect undesirable effects on mental, physical health and the life of patient and family (kesheke et al., 2014). The results of a study by kesheke et al., in 2012 showed that people with thalassemia have many problems, such as depression, which affecting on their families as well, so paying attention to their needs is essential (kesheke et al., 2013). Ali et al., conducted a prospective cross-sectional study about mental distresses and coping strategies among parents of patients with thalassemia major, that showed the parents of children with thalassemia not only are concerned about their children, but also are concerned about their children's life standards and effects that diagnosis and treatment of the disease have on family life (Ali et al., 2011). The parents of these patients have many mental and emotional problems (Dadipoor et al., 2015). Training helps to understand better the nature of the disease and its therapeutic care goals; therefore, there are more motivation for acceptance of the disease and long-term care (Qodvasi et al., 2016). One of the educational models that can be useful in the process of changing and promoting a lifestyle is Hpm. Hpm Emphasis on lifestyle promotion that, means empowering people to identify the factors influencing on individual-social factors and making the right decision in choosing promotional behaviors and therefore, observing healthy lifestyles (Cheari et al., 2008). The most important factors of lifestyle are: suitable nutrition, physical activity, self-care, spiritual health, social interactions, and stress management (Nasrabadi et al., 2010).

Nowadays, the emergence of non-communicable diseases, especially cardiovascular diseases, cancers, accidents have increased due to lifestyle changes and becoming mechanical. According to the World Health Organization in 2014, lifestyle-related diseases has dedicated 38 million (68%) of world mortality in 2012 (Mendis, 2014). The World Health Organization believes that changing and modifications of lifestyle can confront with many of the risk factors that are the most important factors of mortality. Despite therapeutic actions conducted for patients with thalassemia major, its clinical symptoms like any other chronic disease, affect different aspects of family and individual life and have undesirable effects on the mental, physical health and life of patient and his/her family and make problems for the patient, family, and health-therapeutic system of the country (Nasrabadi et al., 2010). Changes in lifestyle should be considered along with other treatments as a fundamental factor in decreasing complications and improving the symptoms of patients (American Diabetes Association, 2018). Improving lifestyle can decrease the prevalence and severity of chronic disease, so applying lifestyle can increase people's quality of life and health and decrease health care costs (Long et al. 2019).

No comprehensive study was found on the Pender's training program on parents' lifestyle of children with thalassemia major. Considering the negative effect of the disease on different aspects of the parent's life, it is necessary to try to find ways for improving the lifestyle. According to several studies have shown the positive effect of using educational program on improving the

lifestyle of other groups of chronic patients and caregivers, evaluation of the effectiveness of nursing educational interventions seems necessary in improving the lifestyle of parents of children with thalassemia major (Radmehr et al., 2013). People with thalassemia are those patients who make changes in lifestyle of family and need a lot of attention. They need education to improve their lifestyle. So this study has been done to determine the effect of Pender's training program on parents' lifestyle of children with thalassemia major.

2. MATERIAL AND METHODS

This semi-experimental study was performed on 34 parents of children with thalassemia in thalassemia ward. Samples were selected based on purpose and assigned into two intervention and control groups with random allocation method. Having a child with thalassemia major, reading and writing literacy, willingness to participate in the study voluntarily, lack of problem in communicating (sight, hearing), ability to make phone calls, lack of known mental disease were the criteria of parents for entering this study.

The criteria for exiting the study included: inability to continue study participation, concurrent participation in other studies, and even having one absence session in the educational classroom. The sample size was calculated based on Gheibizadeh et al. (2016) study and mean differences formula for two groups (Abdollahimohammad and Firouzkouhi, 2019).

To perform the study, firstly, demographic information questionnaire of parents, general information of patient with thalassemia and Pender's lifestyle promotion questionnaire were used after obtaining parents cooperation to participate in the study, and with all ethical considerations in the study, confidentiality of information, getting written testimonial from parents, voluntary participation in the study. In this study, content validity method was used for scientific validity of the questionnaire. For this purpose, after preparing the questions, the questionnaire were provided for a number of faculty members and experts through the study of existing books, articles, protocols and standards, and their corrective comments were included in the questionnaire. The questionnaire of Pender's lifestyle promotion with 52 four-choice questions of never, sometimes, often, always that were used from 1- 4 to score, respectively. The validity of the questionnaire was confirmed in other studies (Qodvasi et al., 2016; Cheari et al., 2008).

Pender's training program in the intervention group, educational intervention was conducted in two methods: 1) direct method (single-face-to-face) 2) indirect method (educational pamphlet). The educational content was prepared based on valid sources, model structure, and pre-test results. Direct method was performed as single-face-to-face (in two single 1-hour sessions), with questions and answers based on the Pender's model due to parents' problems to participate in training session. Educational pamphlets and question-and-answer of them were used to affect parents' behavior and behavioral intention. The training sessions were as follows:

1. The first session focused on healthy nutrition , physical activity, and health responsibility
2. The second session focused on stress management, interpersonal relations and spiritual growth.

Finally, after one month follow-up, the subjects answered the questionnaires again and the results of the educational program and model implementation were analyzed, in the control group, training nursing personnel of ward was considered as a criterion and the parents answered the questionnaire before starting the study then they completed the questionnaire again after one month. Data were analyzed by 22 SPSS software using t-test.

This study was approved (IR.ZBMU.REC.1397.170) by Ethical Committee of Zabol University of Medical Sciences, Iran.

3. RESULTS

The results of the study showed that the majority of subjects were women in both intervention and control groups (70.6%). In terms of education, the majority of people in both groups had primary education. In terms of age, the average of age of the control group was 41 years and in the intervention group was 35 years. There was no statistically significant difference between the two groups in terms of sex, education and age ($P > 0.05$).

Lifestyle subgroup scores were analyzed in two intervention and control after the intervention groups (one month after training) that the results of the t-test showed that the average of scores of lifestyle were statistically significant difference after intervention between the two groups in the dimensions of (responsibility, physical status, nutrition, spirituality and communication and stress) ($P < 0.001$) (Table 1 and Fig. 1).

Table 1 Comparison of mean scores of post-training lifestyle dimensions between the intervention and control groups before and after intervention

| Variable | Mean(SD) before | | p-value | Mean (SD) After | | p-value |
|---------------------|--------------------|--------------|---------|--------------------|--------------|---------|
| | Control | Intervention | | control | Intervention | |
| Responsibility | 20.82 (4.96) | 30.88 (2.54) | <0.001 | 25.47 (4.55) | 31.00 (2.64) | <0.001 |
| Physical activity | 15.41 (4.95) | 24.76 (3.28) | <0.001 | 16.53 (4.48) | 24.76 (3.28) | <0.001 |
| Nutrition | 19.52 (3.76) | 28.29 (4.17) | <0.001 | 23.23 (3.33) | 28.29 (4.17) | <0.001 |
| Spiritual | 20.47 (4.58) | 28.11 (4.88) | <0.001 | 24.29 (5.57) | 28.11 (4.88) | 0.041 |
| Social interactions | 20.11 (4.22) | 29.52 (3.48) | <0.001 | 24.76 (4.19) | 29.52 (3.48) | 0.001 |
| Stress | 17.82 (5.31) | 25.82 (3.64) | <0.001 | 19.41 (4.78) | 19.41 (4.78) | <0.001 |

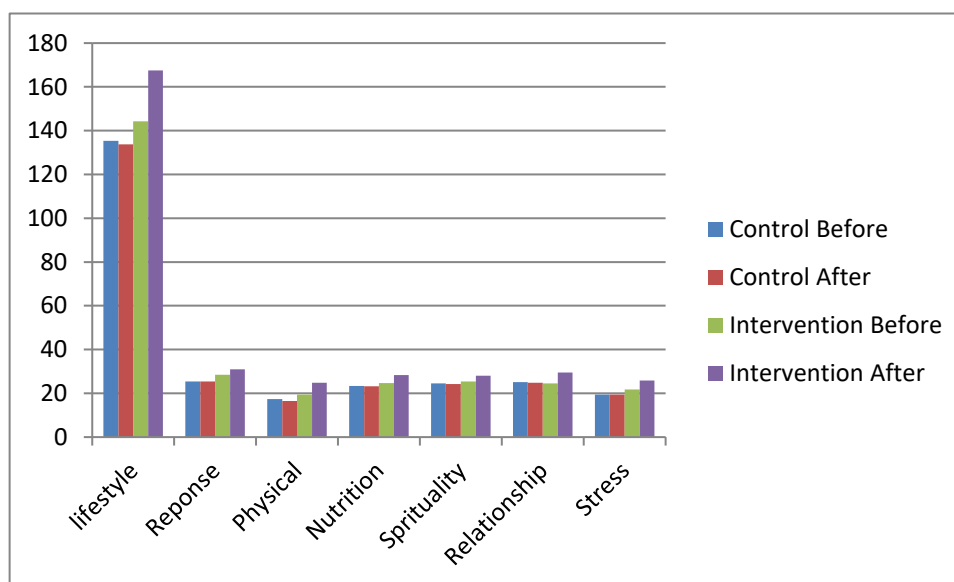


Figure 1 Comparing the effect of Educational program on lifestyle and its subscales before and after intervention

4. DISCUSSION

This study was to determine the effect of Pender's model training program on lifestyle of parents of children with thalassemia major. The role of lifestyle improvement is very important in resolving family problems and better care of children with thalassemia and in better implementing their care plans.

It was previously thought that the physician was able to provide desirable conditions for patient by providing effective treatments and controlling the symptoms of the disease, but now, evidences show that lifestyle is not just about controlling symptoms and what is important in treating a chronic disease such as thalassemia, is improving the patient's lifestyle in addition to controlling the symptoms of the disease (Zarea et al., 2012). Nowadays, we know that education encourages patients in treatment and better confronting with existing problems. Training also promotes learning and learning is a process to reach knowledge, skill, and it has also developed the ability of persons to perform health cares, therefore, it changes behavior (Heydari and Khorashadizadeh, 2014). The results of this study showed that the average of dimensions of lifestyle after training have changed and have become significant in determining the effect of health promotion training program on lifestyle dimensions of parents with thalassemia major.

Although no study was found on the parents' lifestyle of children with thalassemia, but, the results of similar studies were used to support the results of the current study. The results of the study showed that lifestyle level in healthy men and women is moderate in terms of health promoting behaviors (Golmakani et al., 2013; Charandabi et al., 2014). Whereas evidences show that healthy persons do not follow healthy lifestyles generally and need some actions to establish healthy lifestyles in general, they may be

particularly affected if they are exposed to certain conditions, such as chronic diseases and their lifestyles changes that need help to achieve better conditions (Gheibizadeh et al., 2017). Also in this regard, the results of studies show that health and care of chronic patient are related to each other and it makes life unpleasant and people do not tend to pay attention to activity, nutrition, interpersonal relationships and face constant stress. But they can make changes in their lifestyle with training that are in line with the results of the current study (Wang et al., 2008; Tol et al., 2013).

In the current study, all dimensions of post-training lifestyle have changed and the results have been meaningful. While, only a few dimensions have changed in the similar studies. In this regard, studies had been conducted on women that the result study of Quintiliani et al., had reported changing in dimensions of physical activity (Quintiliani et al., 2010). Hosseini et al. and Zhang also reported changes in physical activity and spiritual growth (Hosseini et al., 2012; Zhang et al., 2013). But in another study on women, the dimension of spiritual growth had been reported as the lowest score among the samples. The reasons that had been mentioned in the above studies, were different target group and high volume of study sample, cultural and religious background, less attention to sport and physical activities, especially among women of the society, but in the current study samples were trained single due to have some problems and there was the home-follow up, and the researcher was more closely associated with the sample, so the changes can probably be associated with these reasons.

This study had some limitations such as single differences and mental status of the research samples have affected the educational program follow then lifestyle and its related factors and their control was beyond the researcher. And also, researcher's inability to adjust for confounding factors affected lifestyle conditions of parents who could affect dimension of lifestyle. One of the strengths was the study of the single training of parents' lifestyle upgrades due to their specific living conditions, which were not able to participate in group style classes, and more effective of intervention.

5. CONCLUSION

According to the results of this study, implementation of health promotion training programs in the form of designed educational interventions is suggested to help improve the lifestyle of parents. Overall, this study showed that training, guidance, and counseling of parents had an important role in improving lifestyle. In cases where there are chronic childhood diseases and parents have an effective caring role, it is necessary, the training should be considered as a special part of care plans that parents can actively participate in care and confront with the current situation better. It is necessary for all, especially nurses, to try increase awareness and improve the health of people who caring for chronic diseases.

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