

The Effect of Pender Model on Elderly Health Promotion Behaviors in Iran

Research Article

Atefeh Fahami¹, Minoo Motaghi^{2*}

1. MSc Student in Community Health Nursing, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran

2. PhD, Nursing Department, Faculty of Nursing and Midwifery, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran

Abstract

Background: The statistical indices show rapid aging in Iran's population. World health organization considers physical activity as the health index in a society. Therefore, one of the best ways to evaluate the health of the elderly is the evaluation of functional status in daily life. Pender health promotion is an appropriate framework to help you diagnose and understand the effective factors on physical activity promotion behaviors. Aim of this study is evaluating the effectiveness of Pender model on elderly health promotion behaviors referring to welfare centers. **Method:** The present study is a quantitative and semi-experimental study. 95 elderly were investigated using multi-stage sampling method in an intervention group and control group. In order to collect data, a physical activity questionnaire and a researcher-made questionnaire "Pender Health Promotion Model for Physical Activity" were used. After confirming the validity of the questionnaire by the experts, in order to determine the reliability, a questionnaire was provided to 50 elderly people and the Cronbach's alpha coefficient 88 was obtained. For statistical analysis, t-test and correlation were used in the software SPSS 16. **Result:** The results showed that there was no significant difference between the physical activity of the elderly in the experimental and control groups before intervention, but after intervention, physical activity of the experimental group showed a significant increase ($p < 0.001$). **Conclusion:** According to the results, it is recommended that from all nine proposed constructs that are in the form of a Healthy Phenomenon Model should be used in the educational interventions planning to promote health behaviors, including physical activity.

Keywords: Old Age (aging), Health Promotion, Daily Life Activities, Activities.

Introduction

All stages of human life from childhood to adulthood with particular complexity. Aging is a phenomenon that is caused by changes in the body's biology, physiology, biochemistry and anatomy, including the gradual disappearance of the body's structure and body that occurs over time and changes the structure and function of the various organs of the body (1). The world population is aging, and many countries consider health care needs as a challenge (2). Indeed, with the advancement of health science, the number of elderly people in the world increases every year [3]. Also, population control through birth control as well as the advancements in technology that increase the longevity of the human population have led to a change in the population pyramid towards aging (4). While the aging population is the greatest success of human health, one of the fundamental troubles of today's world are also considered because of belief in the 21st century, this phenomenon increases the social, economic, and medical needs And health in all countries (5). The Honduran Health Promotion Model (HBM), which has beliefs, is a good model for

helping to identify and understand the effective factors in physical activity promotion behaviors (10).

Pender's health pattern generally tries to upgrade certain behaviors and helps them to work on them. For this reason, this model is very suitable for prevention programs. According to Pender's model, when individuals consider illness as serious, they change their behavior; otherwise, an attempt is not made to change behavior (11). The treasure of data and information in the field of theories, adaptation to the living conditions, the natural process of aging, or the pathophysiology of aging in combination with psychology, biology, and other social and biological sciences, are fundamental principles for promoting nursing practices in the field of health and well-being (12). The importance of physical activity as a tool for the continuation of independence in elderly people, through many studies over the past 20 years, these facts have necessitated the implementation of nurses' health and nursing interventions in order to promote physical activity. Because of the rising life expectancy at an elderly age, the importance of the informed nurse has increased (13). The nurse focuses on family, social, psychological and physical issues related to elderly care, and provides older people with a focus on the positive aspects of aging (14). The purpose of this study was to determine the impact of Pender model on the daily activity status of elderly patients referring to health centers done.

Materials and Methods

The present study is a semi-experimental study

*Corresponding Author:

Minoo Motaghi,

PhD, Nursing Department,
Faculty of Nursing and Midwifery,
Isfahan (Khorasgan) Branch,
Islamic Azad University, Isfahan, Iran.
Email id: m.motaghi912@yahoo.com

that has two groups (test-control). The population consisted of elderly people referred to Shahrekord health centers. This study was conducted in 2018. A randomized multistage sampling method was used to select the samples. After visiting the health centers of Shahrekord and presenting a letter to the authorities, 5 clinics from 18 clinics in the north, south, east, west and center The city was selected by random method and after identification of the elderly referred to the simple method, the study was entered into the study and randomly assigned by random allocation method using the numerical score table, the subjects were divided into two groups of test and control.

In this study, five educational sessions were held for intervention. The training sessions were held for 60 minutes in the form of lecture, group discussion, question and answer and oral reciprocation. At the first meeting, the objectives of the classroom were explained to the audience and the reasons for the importance of inertia control and illnesses that are becoming more and more frequent were discussed. The second session describes the symptoms of illness that is caused by sedentary and inactive, and ways to reduce complications such as blood pressure and dysfunction, and increased cardiovascular and pulmonary disease, and increased osteoporosis and decreased self-confidence and anxiety. Depression caused by it and reduced the vitality and life satisfaction and the importance of regular exercise and physical activity and controlled with active participation of the elderly. blood pressure in the elderly were monitored. Session 3: To introduce a variety of special exercises for the elderly such as: _ Training of shoulder stretching back and forth. Training of shoulders and hands up and back and forth _ The stretching of the waist and back bones - the upward swinging of the legs, the stretching of the back of the thigh and the stretching of the forehead and at the walking distance) and the benefits of each physical exercise were discussed and presented with daily endurance training for motivating the elderly Increasing the hours of walking and replacing them with the use of urban services and outsourced services for daily and small supermarkets are, of course, described in terms of conditions. At the fourth session of the lecturer, discussions were held on factors that prevented the elderly from engaging in activities and caused the elderly to return to inertia, and reduced the desire of the elderly before the meetings, and interviewed with the elderly voluntarily and at a meeting Concerned about the worker's concerns and the effects that family members and close relatives had on the elderly, they provided lectures on how to reduce the worries and negative behaviors of those around them. The fifth session of the Teacher, with the help of the elderly, was taught to have a regular program for exercising exercise control and physical activity management for the elderly. A commitment to re-training these exercises was recommended.

To determine the sample size, Cochran formula (Equation 1) was used (15):

$$n = \frac{NZ^2pq}{Nd^2 + Z^2pq}$$

n = number of cases, N = number of employees, Z = confidence coefficient, meaning that the significance level in this study was considered 0.05. After calculating, for each group, 50 and 100 were determined, and 20 percent were added to the calculated amount due to the probability of falling. Finally, 95 subjects (46 in the control group and 49 in the intervention group) for each The group was calculated. Inclusion criteria include: having at least 65 years of age, having a speech and having the physical ability to perform physical activity, and being covered by the clinic, and exit criteria including absences of more than 3 elderly seniors (in this case, 5 were excluded) In the course of the study, there is a problem for the elderly who is not able to have a good physical activity (in this case, 4 elderly people were excluded from the study) and the elderly were reluctant to continue working (in this case, 11 elderly people were excluded from the study) In order to collect the statistical data, the RAPA questionnaire and the researcher-made questionnaire "Pender Health Promotion Model Constructs in Relation to Physical Activity" were used. The first part of the questionnaire was related to demographic information, and the second part was related to 83 items in the dimensions of primary affiliated behavior (16 items), perceived benefits (12 items), perceived barriers (12 items), interpersonal effects (9 items), perceived self-efficacy 8 items), the effect of dependent activity on behavior (10 items), positional effects (5 items), commitment to practice (5 items), and behavior related to lack of orientation (5 items). The method of scoring was that each question A completely disagreeable option (with score 1) to a fully qualified option (with a score of 5) was scored, and finally the scores for the questionnaire were calculated for a better interpretation of 100. After verifying content and formality, a questionnaire was provided to 50 elderly people and the alpha coefficient of Cronbach was 88. (Elderly people who were examined for reliability were not included in the general sample and by the 10 elderly, face validity was also controlled). Physical activity questionnaire includes 9 items. This scale was used by Khajavi et al. And verified by verifiable analysis of its validity. Factor analysis led to the extraction of two factors, the first factor being physical activity (items 1 to 4) and the second factor to severe physical activity (items 5 to 9). The reliability was confirmed (correlation coefficient = 0.87). (Khajavi et al., 1392). The collected data were analyzed by SPSS 16 software and descriptive statistics (mean, standard deviation), and nonindividual tests (independent t and one way analytic analysis). In this study, the significance level was considered (0.05). All participants completed the study on the ethical satisfaction form, and this study from the Ethics Committee of the Islamic Azad University of Isfahan Code of Ethics was numbered IR.IAU.KHUSIF.REC.1397.136.

Result :

The research results are presented in two descriptive and inferential views. The demographic characteristics of the samples were listed in Table (1).

Table (1) Frequency distribution of demographic characteristics of the units under study (research findings).			
Demographic variables	N(%)		p
	Control	Examination	
Gender	Male	22(44.9)	0.59
	Female	27(55.1)	
Age	65-70	17(30.6)	<0.001
	71-75	15(34.7)	
	76-80	9(18.4)	
	More 81	8(16.3)	
Marital status	Single	21(42.9)	0.80
	Has a spouse	28(57.1)	
Education level	Illiterate	13(26.6)	0.63
	Elementary	18(36.7)	
	Cycle	12(24.4)	
	Diploma and higher	6(12.3)	
Income per month (\$ 1,000 per month)	Less than 500	14(28.6)	0.57
	Between 500 and 1	30(61.2)	
	Less than 500	More than 1 million	

Mean and standard deviation of nine physical activity scores in the elderly of the experimental and control group before intervention with the S index were shown after the intervention with the index P in Table (2). In tables, the indexes of 1 primary affective behavior, 2 perceived benefits, 3 perceived barriers, 4 interpersonal impacts, 5 perceived self-efficacy, 6 activity effects, 7 situational effects, 8 behavior related to commitment to action, 9 behaviors related to behavior Lack of tenderness. The nine subjects in the two groups were compared before and after the intervention.

The present study aimed to investigate the effect of Pender's model on health promoting behaviors of elderly people referring to Shahrekord health centers in 96 years. The research is semi-experimental and the tool for measuring the questionnaire is based on the Pender promotion template in 9 items. In order to investigate the relationship between the variables of the research hypotheses, t-test was used to evaluate the independent variables with the standard mean at a significant level of statistical significance. The results of Table 1 indicate that between the demographic characteristics (gender, marital status, Education and income level), there was no significant difference between the control group and the control group ($P > 0.05$), but the independent t-test showed a significant difference between the participants in the case and control groups. The results show that the test and control group were homogeneous in terms of gender, marital status, education level and income, and did not affect the intervention process. The current study suggests that older people in the age group of 65-70 have a better score.

Table 2: Comparison of mean and standard deviation of physical activity scores in the elderly of the experimental and control group (research findings).

Pre	Mean (SD)		p-value	Post	Mean (SD)		p-value
	Control	Experimental			Control	Experimental	
S1	4.10 ± 1.74	4.55 ± 1.73	0.21	P1	4.14 ± 1.76	7.85 ± 2.73	0.001
S2	24.95 ± 4.13	25.42 ± 2.07	0.48	P2	25.25 ± 4.21	39.04 ± 7.39	0.001
S3	25.36 ± 2.09	25.55 ± 2.81	0.71	P3	25.10 ± 2.17	19.18 ± 3.07	0.001
S4	1.01 ± 0.78	1.05 ± 0.84	0.82	P4	1.00 ± 0.88	10.81 ± 6.76	0.001
S5	1.87 ± 0.28	1.84 ± 0.70	0.13	P5	1.04 ± 0.58	6.26 ± 4.40	0.001
S6	84.12 ± 84.12	27.24 ± 6.74	0.003	P6	84.12 ± 84.12	27.24 ± 0.74	0.001
S7	1.04 ± 0.88	0.97 ± 0.43	0.09	P7	1.11 ± 0.35	9.46 ± 3.34	0.001
S8	1.12 ± 0.89	1.02 ± 0.88	0.48	P8	1.23 ± 0.60	3.71 ± 2.03	0.001
S9	15.14 ± 1.64	15.69 ± 1.60	0.1	P9	14.72 ± 1.83	11.06 ± 1.95	0.001

Table 3: Mean comparison and t-test. The physical activity scores of the elderly in the experimental and control groups according to physical activity questionnaire.

p-vlaue	activity	Expremental N(%)	Control N(%)	p-vlaue
Before intervention	No activity	6 (2.12)	5 (6.10)	P=0.18
	Low	17 (7.34)	13 (7.27)	
	Regular style	11 (4.22)	14 (8.29)	
	Low average	13 (5.26)	13 (7.27)	
	Regular	2 (1.4)	2 (3.4)	
After the intervention	No activity	4 (2.8)	14 (8.29)	P<0.001
	Low	5 (2.10)	13 (7.27)	
	Regular style	19 (8.38)	12 (5.25)	
	Moderately low	15 (6.30)	5 (6.10)	
	Regular	6 (2.12)	3 (4.6)	
p	-	0.29	0.001	-

As shown in Tables 2, there was no significant difference between the primary behavior of the elderly in the experimental and control group in terms of physical activity ($P > 0.05$). However, after the intervention, the primary behavior of the elderly The experimental group had a significant increase ($P < 0.05$). The statistical population of the study population with a mean of 4.55 ± 1.73 and control group with an average and standard deviation of 4.10 ± 1.74 was not very active in their affiliated behaviors; however, three increase in mean units with significant difference in dependent behaviors Ability to prepare meals, sort things out at home, sort the room, exercise, walking, going to the store, buying groceries, personal grooming, preparing food, being able to dress, bathing, going to bed) in the test group It turned out The results of this study were in line with the report of Norouzi et al. (2010), which was conducted to determine the impact of Pender Health Promotion Model on physical activity in women with diabetes (17). This is also the result of Amirzadeh Iranagh et al. (1394) (18). From the perspective of the perceived benefits, a significant difference was obtained before and after the intervention ($p < 0.05$). In the health promotion model, perceived benefits are considered as direct causative factors. In the direction of the most important perceived benefits of physical activity by the elderly of the statistical society, the importance of improving family relationships, improving mental status (happiness and Satisfaction, increased self-esteem), improvement of physical condition (strengthening of respiratory organs, prevention of cardiovascular disease), and prevention of depression and admission in the community; which is consistent with the findings of Secrest et al. Studies, which showed that the average score of perceived benefits After the intervention, there is a significant increase (19). However, the results of this study are not consistent with the Soltani et al. (1393) report with the statistical population of the students that the average perceived benefits of the test group did not increase significantly after the intervention. 20 (. The aging community is embraced by positive approaches and educational interventions that this age group can

mentally and emotionally accept are positive changes and improvements to their current conditions. Therefore, perceived benefits can be a powerful tool for behavioral predictions in order to improve the quality of life of the elderly group. A significant difference in the perceived barriers of elderly people in the test and control group is another result of this study ($p < 0.05$). In other words, there is a reverse and significant correlation between perceived barriers and physical activity. There was also a significant difference between the perceived barriers of the test group and the physical activity before and after the intervention. After educational intervention, the relationship between knowledge and all attitudinal structures of the Pandar Health Promotion Model and the perceived barriers structure as one of the predictive levers of the physical activity of the elderly population of the statistical society. Several studies have identified the role of perceived barriers such as lack of need for dietary changes, lack of time to exercise, lack of family (financial and spiritual) lifestyle changes, lack of convenient and accessible facilities, Chronic diseases, academic engagement, lack of motivation, weak self-control as a predictor of behavior. As a result, only improving awareness is not enough to help improve health behaviors; helping to improve health behaviors can help increase the perceived barriers to applying health promotion behaviors to and control patients and reduce them. The results of the same experiment were obtained from the interpersonal effects of the elderly in the experimental group ($p < 0.05$). There is a positive and significant correlation between daily activity with interpersonal influencers and the significant difference in the mean score of the interpersonal influences of the experimental group before and after the educational intervention, in line with Radmehr et al. (1392) in the elderly (21). If a person has a positive attitude to behave and those who consider it important to confirm his behavior, then he intends to do the same. In research, the construct's alphabet has interpersonal effects, such as social support (encouragements Instrumental and emotional), modeling (learning through the observation of others). The result is the same Then, the perceived

self-efficacy of the elderly in the experimental and control group is also plausible ($p < 0.05$). This correlation is between perceived self-efficacy and daily activity and physical activity, in line with Banaye Jeddi et al. (2015), which has a positive and significant relationship between Self-efficacy and behavioral health of the statistical population of the students and the elderly have been reported (22); but contrary to the results of Kinsler et al. (2004) (23). Accordingly, the expression of strategies for perceived self-efficacy promotion, self-efficacy and self-efficacy on maintaining physical activity, The effect of encouraging physical activity, family members' emphasis on encouraging their elderly to do physical activity To encourage verbal, practical, and emotional encouragement, as well as the implementation of educational programs such as providing positive feedback and daily progress reports, to enhance the self-efficacy of individuals for activities such as group and individual exercises, in order to enhance the behavioral process in individuals, To be considered. As a result, the stage of self-efficacy can act as a predictor of the behavior of the elderly's physical activity. In the other dimension, the effect of the behavior of the health of the experimental and control groups was statistically significant before and after the intervention ($p < 0.05$). Feeling pleasure and relaxation in performing physical activity after intervention in studies Amirzadeh Iranagh et al. (2018).

According to Table 4, there was no significant difference between the physical activity of the elderly in the experimental and control groups before intervention, but after the intervention, physical activity of the elderly was significantly increased ($p < 0.05$). The results are consistent with Mansourizadeh et al. (2018). According to their reports, Pender Health Promotion Model with the design of physical activity planning has been introduced to promote physical activity and the mental health of middle-aged women with type 2 diabetes (24). In a non-experimental study, a descriptive correlation study by Amini et al. (2017). In order to investigate the relationship between understanding the concept of health and health promotion behaviors in nursing students of midwifery faculty, understanding the concept of health based on clinical model and role play has been associated with decreasing and increasing health promotion behaviors (25). According to findings Research, implementation of the Pender Health Promotion Model, has increased the physical activity of the elderly In another study, Karimy et al. (2012) reported similar results to the present study and stated that the design and implementation of a training program using a health promotion model had a positive and beneficial effect on the creation and promotion of physical activity. Therefore, it is recommended that, while providing the physical and environmental facilities necessary for physical activity and exercise, motivation to motivate people to use similar educational interventions (26) is recommended.

The findings of this study showed that the implementation of the Pender Health Promotion Model has been shown to increase the physical activity of the elderly. Therefore, implementation of this model in

nursing care for the elderly is recommended in order to provide the necessary preconditions for promotion of physical activity of these people. Obviously, with the increase in the level of physical activity of the elderly, their quality of life also improves. Pender Health Promotion Intervention Improves Physical Activity (as part of daily activities). On the other hand, there is a cyclical relationship between the role of educational intervention in knowledge, attitudes and attitudes of the health promotion model (perceived benefits and barriers) and promotion of physical activity. It is believed that regular physical activity is subject to a wide range of psychological variables, usefulness and probable losses, and it is reasonable to consider these factors in interventions aimed at improving the physical activity of individuals. The results of this research are indicative It is suggested that this model has a good predictor of the performance status of the elderly's physical activity promotion and can be used as a template to advance goals such as planning interventions to predict, improve and enhance the physical activity of the elderly.

Reference

1. Hatefi, M., Tarjoman, A., & Borji, M. (2019). Do religious coping and attachment to god affect perceived pain? Study of the elderly with chronic back pain in Iran. *Journal of religion and health*, 1-11.
2. Abdi, A., Soufinia, A., Borji, M., & Tarjoman, A. (2018). The effect of religion intervention on life satisfaction and depression in elderly with heart failure. *Journal of religion and health*, 1-10.
3. Hatefi, M., Abdi, A., Tarjoman, A., & Borji, M. (2019). Prevalence of Depression and Pain among Patients with Spinal Cord Injury in Iran: a systematic review and meta-analysis. *Trauma Monthly*(In Press).
4. Mohammadi MM, Esmaeilvand M. Attitudes Toward Caring of the Elderly From the Perspective of Nursing and Midwifery Students in Kermanshah Province in 2015. *Iranian Journal of Ageing*. 2017;11(4):476-83.
5. Moghasemi S, Vedadhir A, Simbar M. Models for Providing Midwifery Care and its Challenges in the Context of Iran. *J Holist Nurs Midwifery*. 2018;28(1):64-74.
6. Salehi L, Eftekhari H, Mohammad K, Taghdisi MH, Shojaeizadeh D. Physical activity among a sample of Iranians aged over 60 years: an application of the transtheoretical model. *Archives of Iranian medicine*. 2010;13(6):528-36.
7. Hatefi M, Tarjoman A, Borji M. The Relationship Between Lifestyle with Chronic Pain and Pain Acceptance in Elderly with Stroke, *Arch Neurosci*. 2019 ; 6(1):e83717. doi: 10.5812/ans.83717.
8. Arabzadeh M, Nikdel F. Examine the factor structure, reliability and validity of short form Social Production Function Instrument for the Level of wellbeing in older people. *Educational Measurement*. 2016;7(25):75-87.
9. Entezari M, Shamsipour Dehkordi P, Sahaf R. Effect of Physical Activity on Cognitive Flexibility

- and Perfectionism in the Elderly. *Iranian Journal of Ageing*. 2018;12(4):402-13.
10. Diddana TZ, Kelkay GN, Dola AN, Sadore AA. Effect of Nutrition Education Based on Health Belief Model on Nutritional Knowledge and Dietary Practice of Pregnant Women in Dessie Town, Northeast Ethiopia: A Cluster Randomized Control Trial. *Journal of Nutrition and Metabolism*. 2018;2018:10.
11. Zelalem A, Endeshaw M, Ayenew M, Shiferaw S, Yirgu R. Effect of nutrition education on pregnancy specific nutrition knowledge and healthy dietary practice among pregnant women in Addis Ababa. *Clinics in Mother and Child Health*. 2017;14(3):265.
12. Liguori I, Russo G, Curcio F, Bulli G, Aran L, Della -Morte D, et al. Oxidative stress, aging, and diseases. *Clinical interventions in aging*. 2018;13:757.
13. Karimi Z, Majlesi F, Tol A, Rahimi Foroushani A, Sahaf R, Ali Gol M, et al. The Effect of Educational Intervention on the Promotion of Physical Activities of the Elderly Men in Qom City: Application of Trans-Theoretical Model. *Iranian Journal of Ageing*. 2015;10(3):182-91.
14. Azizi S, Farhikhte F. Content, Correspondence and Meta Method Analysis of Marketing Theses in Selected Universities in Tehran. *Journal of Business Management*. 2013;5(3):105-24.
15. Khajavi D, Khanmohamadi R. Predicting depressive symptoms of the elderly according to physical activity level and demographic characteristics: Examining the role of age and gender. *Development and motor learning*. 2015;7(1):87-103.
16. Azadbakht M, Garmaroodi G, Taheri Tanjani P, Sahaf R, Shojaeizade D, Gheisvandi E. Health Promoting Self-Care Behaviors and Its Related Factors in Elderly: Application of Health Belief Model. *Journal of Education and Community Health*. 2014;1(2):20-9.
17. Norouzi A, Ghofranipour F, Heydarnia A, Tahmasebi R. Determinants of physical activity based on Health Promotion Model (HPM) in diabetic women of Karaj diabetic institute. *Iranian South Medical Journal*. 2010;13(1):41-51.
18. Amirzadeh Iranagh, Motallebi j. The effect of health belief model based on education intervention on physical activity of elderly women. *Journal of Nursing and Midwifery* 2016;13(12):1050-8.
19. Secrest J, Iorio DH, Martz W. The meaning of work for nursing assistants who stay in long-term care. *J Clin Nurs*. 2005;14(8b):90-7.
20. Soltani k, avafian s, Vakili s. Influence of Educational Program Based on Health Belief Model in Health Beliefs in AIDS Among Students. *Armaghane danesh*. 2014;19(9):797-807.
21. Radmehr M, Ashktorab T, Neisi L. Effect of the educational program based on Pender's theory on the health promotion in patients with obsessive - compulsive disorder. *Journal of Nursing Education*. 2013;2(2):56-63.
22. Banaye Jeddi M, Babazadeh T, Hashemian Z, Moradi F, Ghavami Z. Cognitive-Behavioral Determinants of Oral Health in students: an Application of Pender's Health Promotion Model. *Journal of Education and Community Health*. 2016;3(2):1-8.
23. Kinsler J, Sneed CD, Morisky DE, Ang A. Evaluation of a school-based intervention for HIV/ AIDS prevention among Belizean adolescents. *Health education research*. 2004;19(6):730-8.
24. Mansourizadeh M, Anoosheh M, KazemNejad A. The Effect of Physical Activity Program Based on Pender Health Promotion Model on Type 2 Diabetic Middle-Aged Women's Mental Health. *Iranian Journal of Health Education and Health Promotion*. 2018;6(2):159-67.
25. Amini R, Maghsodi M, Khodaveisi M, Soltanian AR. The Effect of Peer Education on Health Promotion Behaviors of Nursing Students in Hamadan University of Medical Sciences. *Scientific Journal of Hamadan Nursing & Midwifery Faculty*. 2018;26(1):11-8.
26. Karimy M, Eshrati B. The effect of health promotion model-based training on promoting students' physical activity. *J Kermanshah Univ Med Sci*. 2012;16(3):e78795.
