

EFFECT OF HEALTH COACHING APPROACH BASED ON MOTIVATIONAL INTERVIEW ON IMPROVING UNDESIRABLE NUTRITIONAL HABITS OF HOUSEWIVES

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Abstract

Background and aims: Nutrition disorders are a common risk factor for many clinical disorders, and effective methods for resolving it are motivational interviewing methods that can be useful in encouraging people to promote lifestyle. In recent years, motivational interviews have come up with community health and often people in need of a change in nutritional habits are so vast that they can maintain their health. **Material and method:** This interventional study was carried out on all housewives referring to Mazdak Health home. They were selected by simple sampling method. The sample size was 35 in each subgroup. Food intake was assessed by a feed frequency questionnaire (FFQ) and the energy consumption in kilocalories per day was calculated using Nutritionist 4 software. Using SPSS18 and Chi-square tests, the exact test Fisher, T and Independent Tests, Mann-Whitney, and Wilcoxon were analyzed. **Results:** The mean score of healthy nutrition index after intervention was significantly different in intervention and control groups (p -value = 0.004). Also, in whole grain (p -value = 0.001), dairy (p -value = 0.01) Fruits (p -value = 0.01), vegetables (p -value = 0.003) had a significant difference between the mean of intervention and control groups after intervention. There were no significant differences between the other indices after the intervention in the intervention and control groups. **Conclusions:** The intervention has been effective and generally increases the index of healthy nutrition index after intervention. But on components of dairy, sodium, refined grains, absent calories, proteins have not had any effect.

key words: Healthy Nutrition Index, Yasuj Women's Health, Health Coaching

Background and aims

Food for healthy growth is essential and plays an important role in improving the quality of life, especially in the prevention and treatment of many chronic diseases. Preventing chronic illness requires the homogeneity of choosing the right foods and maintaining long-term healthy eating habits. The maintenance of a diet requires regular review and adaptation to dietary habits in

response to these changes [1]. Health reports and disease prevention suggest that nutrition is a key factor, and with subtle changes in it, diseases can be reduced and general health can be improved [2].

A woman as a person effective in family feeding would be a significant part of this area if they were instructed on nutrition and health and family budget planning for purchase. [3]. Her nutritional literacy is a model of illness and

health of the community. The impact of seductive advertising on food in literate women is less effective. Therefore, the necessity of nutrition education in different sections and increasing the nutritional knowledge of society, especially women, can play an important role in promoting community health. Nutrition neglect can have irreversible consequences for society, and the promotion of nutritional literacy in society today is one of the most important health programs [4].

The goal of nutritional habits is to make nutritional habits corrected [5]. This is based on one of the four following strategies: 1. Awareness of the individual about food habits; 2. Modifying and controlling stimulants that affect eating; 3. Developing principles and techniques for eating to control the rate of eating. and 4. Encouraging positive reinforcement to stabilize and motivating weight control [6].

In recent years, good nutrition status as an indicator of development and women as the next-generation breeders in society are of particular importance. Therefore, in developing countries, nutrition education is targeted at health, economic and social planners in economic and national development [7].

One of the effective methods in health education, health coaching or health education is through coaching. Health coaching works by examining evidence, clinical evidence and clinical interventions, and examining the changing lifestyle of individuals [8]. Types of health coaching approaches include active coaching, neurological coaching, and positive psychology coaching and ontological coaching. Motivational interviews are one of the types of health coaching [9]. One of the effective methods in education is motivational interviewing method that can be useful in encouraging people to promote lifestyle [10]. In

recent years, motivational interviews have come to the health of the community, and most people need to change their nutritional habits to a large extent so that they can maintain their health [11].

The study did not find the impact of coaching-based health-based motivational interviews on undesirable nutritional habits and was conducted through a survey of healthy eating habits among healthy people. Therefore, the present study was conducted to determine the effect of health coaching approach based on motivational interviewing on modifying undesirable nutritional habits of housewives.

Material and method

Study design and patients

The present study was an interventional type. 70 housewives attending the Mazdak Health home participated. The sample size of this study was 31 with regard to $\alpha = 0.05$ (confidence level of 95%) and beta (20%) (Test power of 80%). According to the two groups (subject and control group) and taking into account 10% probable loss, 35 people in each group and a total of 70 people through simple sampling were included in the study, who were randomly assigned to randomized blocks in each group and control group.

The inclusion criteria for the study of non-use of depression and psychosocial drugs, the absence of chronic diseases, the lack of participation in nutrition education classes or the referral to a nutritionist three months prior to the study, having unfavorable nutritional habits (score less than 51) In the food frequency questionnaire, housewives were between 15 and 55 years of age. In this study, the data gathering tool, in addition to the demographic characteristics questionnaire, was a nutritional habits inventory that was completed at the beginning of the study and three months after the completion of research interventions by all

women participating in the study. The nutritional habit questionnaire consists of 168 food items and was used to assess nutrition among adults. All food consumed per person in the past three days was compared with its standard (in terms of food per day and individual daily requirement), and the score for each component of this index was calculated separately. The total maximum score of this index was 100 and was used to assess the nutritional quality. A score of over 80 indicates that a person has a good diet. The score between 51 and 80 indicates that the individual's diet needs improvement and a score of less than 51 indicates that he or she has an undesirable diet. Study samples were taken from women who need to modify nutrition or malnutrition.

In 2010, through a research project, the validity and reliability of the questionnaire were measured by the Institute of Endocrine Sciences and Metabolism of Shahid Beheshti University of Medical Sciences and Health Services. The reliability of nutritional habits questionnaire has been confirmed by test-retest method. Correlation coefficient after adjustment of the effect of age and energy in men ($R = 53\%$) and in women ($R = 39\%$). Repeatability correlation coefficient after energy adjustment with a mean of $59\% = R$ and in men and $60\% = R\%$ in women 115. For analyzing the data in the descriptive statistics section, parameters such as central tendency (mean average), size of dispersion (range of variations and standard deviation) and inferential statistics of Kolmogorov-Smirnov test were used to examine the normal distribution of variables. Then, for intra-group comparison, in the case of normal variables, paired t-test and non-normality was used, the corresponding non-parametric test, Wilcoxon, was used. For inter-group comparisons, in the case of normal variables, independent t-test was used and in case of non-normality, the Mann-Whitney test was used.

Results

The women who participated in this interventional study had an average age of 36.17 years in the experimental group and 35.88 in the control group. In the test group, most people with low education, part of the middle class, were free. All demographic information was homogeneous in two groups. Other information is reported in [Table 1](#).

Comparing the mean of healthy nutrition and nutritional indexes in the control and intervention group before and after intervention, variables of healthy nutrition index ($P\text{-value} = 0.02$) and sub-structures of refined grains ($P\text{-value} = 0.01$) and fruit ($P\text{-value} < 0.0001$) had a significant difference.

Three months after the end of the study, healthy nutrition index ($P\text{-value} = 0.004$), whole grains ($P\text{-value} = 0.001$), dairy ($P\text{-value} = 0.01$), fruits (0.01) $P\text{-Value} =$) and vegetable ($P\text{-value} = 0.003$) had a significant difference.

Discussion

The purpose of this study was to investigate the effect of health coaching approach based on motivational interviewing on undesirable nutritional habits of housewives.

The findings of this study indicate that the intervention and control group at the starting point of the study were demographic and similar in terms of demographic and field variables, and the changes made after the intervention in the Healthy Nutrition Index and Nutrition Induced Interventions Educational has been.

In general, in the intervention group, the mean of sub-nutritional indices of cereals, dairy and vegetables increased and the average intake of fat, sodium, and protein lower feedings decreased and the average intake of fruits did not change.

Regarding the decrease in protein intake, it can be pointed out for the important reason that

the economic situation of the participants has been very influential in this regard, since those who were economically in a weaker position did not have the power to consume more protein and, in the case of Changing the consumption of

fruits can be attributed to the poor performance of female participants, as a high percentage of participants in women who have a relatively low literacy, and this can affect women's performance.

Table 1. A survey of demographic variables in two groups.

Results	control(35)	test(35)	age	
t=0/95 ¹ P-value=0/34	35/08±5/02	36/17±4/5		
fisher=1/3 ² P-value=0/55	19(54/3)	20(57/1)	Under the diploma	educations
	15(42/9)	12(34/3)	Diploma	
	1(2/9)	3(8/6)	Higher than diploma	
fisher=0/63 P-value=0/93	2(5/7)	3(8/6)	Rich	Social class
	11(31/4)	11(31/4)	Fairly prosperous	
	14(40/00)	15(42/9)	Medium	
	8(22/9)	6(17/1)	Weak	
X ² =0 ³ P-value>0/99	7(20/00)	7(20/00)	Employee	occupation
	28(80/00)	28(80/00)	Free	
X ² =1/42 P-value=0/48	5(14/3)	9(25/7)	Under the diploma	Husbands educations
	22(62/9)	19(54/3)	Diploma	
	8(22/9)	7(20/00)	Higher than diploma	
fisher=8/43 P-value=0/11	10(28/6)	16(45/7)	Audio media	nutritional facts
	3(8/6)	4(11/4)	Cyberspace	
	7(20/00)	9(25/7)	Book	
	8(22/9)	6(17/1)	Newspaper	
	3(8/6)	0(0/00)	Brush	
	4(11/4)	0(0/00)	Persons	

These findings were consistent with the results of a large study conducted in Isfahan in 2012 on the nutritional behaviors of employed women. In other words, nutritional behaviors training significantly improved the performance of women in this study and in the intervention group, the consumption of vegetables and dairy products increased and consumption of saliva decreased. In our study, healthy eating index was significantly between the control and intervention groups. Also, this index increased significantly in the intervention group before and after the intervention, which indicates the effectiveness and positive effect of intervention on women. In addition, vegetative and dairy nutrition structures reported an increase in the average consumption and in sodium decreased [12].

In a study done by the Minus in Athens in 2007, the study of the quality of nutrition and nutritional and nutritional intake of women showed that after the intervention, based on a healthy nutrition index, increased intake, fat intake Shoots, milk and calcium and vegetables decreased. In our study, consumption of fatty acids has decreased, but dairy and vegetable consumption has increased. One of the reasons for reducing the consumption of vegetables in the study of minuses can be due to the geographical area and Mediterranean food. Also, in the study of Minus, the average age of women participating in the study was higher than ours, and it can be said that the follow-up of young women was higher than the older women, and consumed more dairy products [13].

In a study conducted by Domin in Paris in 2008 on families whose 80 percent of their

parents were women, they examined the effect of health coaching on nutrition and weight control. In this study, their goal was to improve nutritional performance, meaning that the consumption of complex carbohydrates and sugar decreased, which led to energy and weight control. In our study, the effect of a mentally-

mindedness-based health coaching approach on undesirable nutritional habits was calculated by calculating health nutrition index. The positive effect of intervention was shown, that is, the mean of healthy nutrition index after intervention was increased [14].

Table 2. Evaluation of the Healthy Nutrition Index and Sub-Nutrition Subsystems before and after the intervention in two groups

result	Control group	Test group	Healthy Nutrition Index and Sub-Nutrition Subsystems	
	Mean $\pm$ standard deviation	Mean $\pm$ standard deviation		
$t=2/35^1$ P-value=0/02	5/13 $\pm$ 64/26	5/42 $\pm$ 67/23	Before intervention	Healthy eating index
$t=2/96$ P-value=0/004	6/22 $\pm$ 64/37	6/98 $\pm$ 69/06	After the intervention	
$z=1/87^2$ P-value=0/06	3/13 $\pm$ 4/11	3/13 $\pm$ 5/4	Before intervention	Whole grains
$z=3/37$ P-value=0/001	2/34 $\pm$ 3/71	3/04 $\pm$ 6/17	After the intervention	
$z=1/92$ P-value=0/05	1/02 $\pm$ 1/8	1/08 $\pm$ 2/23	Before intervention	dairy
$z=2/39$ P-value=0/01	1/37 $\pm$ 2	0/86 $\pm$ 2/29	After the intervention	
$z=0/91$ P-value=0/36	1/55 $\pm$ 5/34	2/72 $\pm$ 5/91	Before intervention	Fatty acids
$z=1/85$ P-value=0/06	2/47 $\pm$ 6/2	1/77 $\pm$ 5/29	After the intervention	
$z=2/37$ P-value=0/01	3/25 $\pm$ 8/26	4/37 $\pm$ 5/89	Before intervention	Refined grains
$z=0/19$ P-value=0/84	2/51 $\pm$ 7/29	3/65 $\pm$ 6/86	After the intervention	
$z=0/71$ P-value=0/47	1/3 $\pm$ 9/11	2 $\pm$ 8/63	Before intervention	Sodium
$z=0/53$ P-value=0/59	2/58 $\pm$ 7/94	2 $\pm$ 8/4	After the intervention	
$z=0/58$ P-value=0/55	0/84 $\pm$ 19/86	1/35 $\pm$ 19/74	Before intervention	Null calories

z=0/02 P-value=0/97	1/49±19/66	0/97±19/77	After the intervention	
z=3/92 P-value<0/001	1/1±3/28	2/48±5/57	Before intervention	Fruitage
z=2/54 P-value=0/01	1/89±4/2	2/44±5/57	After the intervention	
z=2/46 P-value=0/01	1/72±4/17	2/11±5/37	Before intervention	the vegetables
z=2/92 P-value=0/003	1/87±5	1/91±6/25	After the intervention	
z=0/38 P-value=0/69	1/47±8/31	1/24±8/48	Before intervention	Proteins
z=0/2 P-value=0/83	1/43±8/37	6/98±8/45	After the intervention	

Among other studies in the field of habits of nutritional behaviors, Alidousti et al. (2012) and his colleagues (2012) have a significant positive correlation between knowledge and attitudes and nutritional performance of domestic women before and after intervention [15].

In the study of Mirkari and his colleagues in 1394 with the aim of comparing the motivational interviewer with standard weight loss education on the promotion of a commitment to weight loss program in obese or overweight women, the results showed that there was a significant difference in weight loss between the two control groups And there is control. In general, it was determined that integrating motivational interviews with the standard weight loss training program could produce more appropriate outcomes [16].

In a study conducted by Judge Askar in 2010, with the aim of determining the effect of proper nutrition education for housewives living

in Tehran, the results indicated that the effect of education was positive and awareness and nutritional function of women increased [17].

In a study by Tavassoli and his colleagues in 2010 on 68 housewives, in order to determine the effect of a health education model based on health belief model on knowledge, attitude and practice of home-based women in Isfahan, results showed that there was a significant difference after intervention Mean knowledge and practice scores were observed between control and test groups. According to the findings of this study, it has been concluded that this intervention has had a positive effect on the nutritional pattern of domestic women, and intervention has been effective in increasing and improving the level of knowledge, attitude and practice of women [18].

A study by Rahimi in 2010 also showed that educating the right style of life to overweight

students can improve lifestyle and reduce their weight [19].

The contribution of the present study to these studies was to improve the nutritional and nutritional habits of the participants, but the differentiation of these studies has been done with an intervention method, which has been used more than theoretical motivation methods in the studies, but in the study We have used the Healthy Coaching Method based on Motivational Interviews to calculate the Health Index, in which all food indices are measured through the FFQ questionnaire, and it can be clearly seen who participates in which nutritional structures are in trouble and This leads to better conclusions and problem solving.

Conclusions

Having a healthy and balanced diet is a health footing. Considering the central role of

women in the home and in the family, especially in our country, Islamic Republic of Iran, also considering that women and girls are the most vulnerable groups of society in relation to nutritional problems and their attention to the health of the kidney Family members are affected by the need to pay attention and, if needed, to educate and improve the nutrition of women. In this study, a coaching approach based on motivational interviewing on the undesirable nutritional status of domesticated women has been used as a hypothesis and suggestion to modify undesirable nutrition for domesticated women. The nutritional index in domestic women is in intervention. Based on the motivational interview based on the mentoring approach, the score of the test group relative to the control group increased after intervention.

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