

Impact of nutrition education on knowledge and attitude of women health volunteers in Southern Khorasan Province

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Abstract

Background: A healthy nutritional diet is part of a healthy lifestyle. According to the US Department of Agriculture, proper nutrition can reduce mortality from heart disease by 25 percent, death from cancer, respiratory and infectious diseases by 20 percent, and from diabetes by 50 percent. The aim of this study was to evaluate the impact of nutrition education on knowledge and attitude of women health volunteers in Southern Khorasan Province.

Methods: This quasi-experimental study was performed on 101 women health volunteers in Southern Khorasan Province. Knowledge and attitudes of the women health volunteers were assessed before and 2 months after the intervention by a standard questionnaire whose validity and reliability were confirmed. The intervention consisted of a 2-day workshop held in the health center of Birjand. The data were analyzed in SPSS software (version 16) using paired t test. The significance level was set at $p < 0.05$.

Results: The mean score of knowledge was 17.47 ± 2.67 before the intervention, which increased to 18.47 ± 2.04 after intervention with the difference being statistically significant ($p = 0.02$). Attitude scores were 40.39 ± 2.62 and 40.41 ± 3.18 before and after intervention respectively, where the increase was not statistically significant ($p > 0.05$).

Conclusions: This study shows that nutrition education, even in the form of a short-term training workshop, can enhance the knowledge of women health volunteers. Recommendation is to perform the education by nutrition experts periodically and through continued education programs.

Keywords: Women health volunteers; Nutrition; Knowledge; Attitude

1. Introduction

Today, proper nutrition is a key component of a healthy lifestyle, and it plays a fundamental role in creating, maintaining and promoting health (1). According to the US Department of Agriculture, proper nutrition can reduce mortality from heart disease by 25 percent, death from cancer, respiratory and infectious diseases by 20 percent, and from diabetes by 50 percent (2). On the other hand, improper nutrition is a major contributor to unhealthy lifestyle (3) and a risk factor for a wide range of chronic diseases such as cardiovascular disease, cancer, diabetes and other obesity-related diseases (4).

Recent studies suggest that North African and Middle Eastern countries, including Iran, are in the nutritional transition. There is an alarming increase in overweight and obesity in these regions with an increased risk of cardiovascular disease, type 2 diabetes, ischemic heart

disease, hypertension and certain cancers. The results of these studies show that in the recent decades, eating behaviors and access to food in these countries have changed with a similar pattern in these countries where there is an increased consumption of carbohydrates, fats and animal products as well as a reduced consumption of vegetable products (5).

Studies have shown that nutrition education plays an important role in modifying dietary behaviors. In this regard, the results of 220 studies from 1980 to 1995 show that nutrition education is an important contributor to improved nutritional behavior (6). The first step in nutrition education is to raise awareness on the importance and manner of proper nutrition. Studies show that in many cases, malnutrition is caused by lack of nutritional

knowledge. A study in Brazil found that obesity among children was associated with limited nutritional knowledge and unhealthy eating habits (7).

Given the significant role of proper nutrition in physical and mental health, it is urging to develop and implement comprehensive programs in order to promote public awareness on proper nutritional strategies. Among groups that can play a vital role in raising knowledge about this issue are women health volunteers. Women health volunteers are the pioneers of public assistance and play a very significant role in communicating health concepts into society (8). They are in the heart of society and in constant contact with family members. Therefore, they can easily transfer health messages to the public. No doubt the first step to promote nutritional strategies by women health volunteers is that they stand as proper models with appropriate nutritional behaviors. For this reason, it seems that any kind of investment in order to raise knowledge and correct attitude of women health volunteers can be beneficial. Accordingly, this study aimed to determine the effect of nutrition education on knowledge about and attitude towards healthy nutrition of women health volunteers in Southern Khorasan Province.

2. Methods

In this quasi-experimental study, 110 women health volunteers were incorporated by census. They worked in Birjand, Qaen, Nehbandan and Sarayan health centers affiliated with Birjand University of Medical Sciences. The data collection instrument consisted of a standard questionnaire that assessed the knowledge about and attitudes towards nutrition. It was comprised of three sections. The first section covered demographic characteristics of the participants including their age and education. The second section assessed knowledge (25

items with multiple-choice responses). An incorrect response scored 0, while a correct response scored 1. The third section of the questionnaire contained 9 items related to attitude and was designed based on the five-point Likert scale (strongly agree to strongly disagree). The questionnaire was evaluated and approved in terms of content validity by a team of dietitian nutritionists and health educators. To test reliability, test-retest method was used whereby the questionnaire was completed by 20 women health volunteers and recompleted two weeks later. The correlation between the mean scores in the two administrations was good ($r=0.06$) and showed a satisfactory reliability of the instrument. After the initial pre-test, the interventional workshop was held by health and nutrition experts for two days. Contents included 1) Food groups and micronutrients, 2) the importance of complementary nutrition in pediatric developmental disorders and growth, 3) prevention of micronutrient deficiencies, and 4) complications of diseases caused by poor nutrition. Two months after the intervention, the questionnaire was completed again. Thereafter, the questionnaires were coded and the data were analyzed in SPSS software (version 16) using paired t test. The significance level was set at $p<0.05$.

3. Results

The mean age of the participants was 31.28 ± 7.72 years with a minimum of 17 and maximum age of 60 years. The majority had a high school diploma or below (87.6%). According to the results, the intervention had a significant effect on raising knowledge of women health volunteers in terms of healthy nutrition ($P=0.01$). Attitude scores were 40.39 ± 2.62 and 40.41 ± 3.18 before and after intervention respectively, where the increase was not statistically significant ($p> 0.05$) (Table 1).

Table 1: Comparison of mean scores of knowledge and attitude of women health volunteers terms of nutrition before and after intervention

Variable		Mean	Standard deviation	Paired t test
Knowledge	Before intervention	17.47	2.67	T=2.60
	After intervention	18.48	2.04	P=0.01
Attitude	Before intervention	40.39	2.61	T=3.108
	After intervention	40.41	3.18	P=0.823

4. Discussion

The aim of this study was to evaluate the effect of nutrition education on knowledge and attitude of women health volunteers in Southern Khorasan Province concerning healthy nutrition. The results of this study showed that the educational program significantly improved knowledge of women health volunteers but had no effect on their attitude.

Ineffectiveness of this educational intervention on attitude seems logical as the present intervention was a two-day workshop performed within a short period of time. Thus, due to the short length of the training as well as the large number of participants per training session, the influence on the attitude as an attitudinal and belief construct has been a difficult task. Results of other studies have demonstrated the effectiveness of education on improvement of knowledge, attitude and performance of women health volunteers (9,10). For example, Shojaezadehetal. studied the effect of education based on Health Belief Model on empowerment of women health volunteers in Khorramabad in terms of osteoporosis prevention. The results of their study demonstrated the effectiveness of the educational intervention in promotion of knowledge and attitude scores (9).

Improved nutritional knowledge and change in nutritional attitude will lead to behavior change of women health volunteers. This means that correct nutritional behavior replaces inappropriate nutritional behaviors (11). On the other hand, results from other studies indicate a need to hold regular educational and health courses for women health volunteers (12).

Thus, it is recommended that in educational programs designed for women health volunteers, specific training be considered on nutrition and taught by nutritionists. Moreover, as culture plays a key role in nutrition education and since eating habits and behaviors differ in different societies, further research on nutrition principles and nutrition in vulnerable groups can be suggested for the target group of women health volunteers because they act as a significant element that can influence urban families and improve urban health.

5. Conclusion

Comparison of the mean scores of knowledge on nutrition among women health volunteers before and after intervention showed that the intervention was fruitful,

suggesting the need for different educational programs for women health volunteers. Recommendation is to perform the education by dietitian nutritionists periodically and through continued education programs.

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7. Contributors

Mrs Motamed Rezaei designed the study and wrote the first draft of the manuscript. Dr Miri was responsible for data analysis. All authors reviewed and approved the final manuscript.

Conflict of Interest

The authors declare that they have no conflict of interest.

References

1. Khazaie Pool M, Ebadi Azar F, Solhi M, Asadi Lari M, Abdi N. A Study in the effect of Education Through Health Belief Model on the Perceptions of Girl Students in Primary School about Breakfast and Snack in Noshahr-2007. *Toloo-E-Behdasht*. 2008;7(1-2):51-63. [Persian]
2. Davari S, Dolatian M, Maracy MR, Sharifirad G, Safavi SM. The Effect of A Health Belief Model (HBM)- based Educational Program on the Nutritional Behavior of Menopausal Women in Isfahan. *Iran J Med Educ*. 2011;10(5):1263-72. [Persian]
3. Keshavarz Z, Simbar V, Ramezankhani A. Effective Factors on Nutritional Behavior of Female Workers Based On "Integrated Model of Planned Behavior and Self-efficacy": A Qualitative Approach. *Hakim Res J*. 2010;13(3):199-209. [Persian]
4. Bahadori-Monfared A, Keramati AA, Moazzami-Sahzabi J, Mohamadi F, Farsar AR. The Impact of Education on Nutritional Behavior Change among Clients of Sardar-Jangal Health Center in 2012. *Community Health*. 2014;1(1):62-8. [Persian]
5. Jessri M, Mirmiran P, Golzarand M, Rashidkhani B, Hosseini-Esfahani F, Azizi F. Comparison of trends in dietary pattern in Iran, Middle Eastern and North African countries from 1961 to 2005. *Pajoohandeh*. 2011;16(1):1-10. [Persian]
6. Contento IR, RandellJS, Basch CE. Review and analysis of evaluation: measures used in nutrition education intervention research. *J Nutr Educ Behav*. 2002;34(1):2-25.

7. Triches R M, Giugliani ERJ. Obesity, eating habit and nutritional knowledge among school children. *Rev saudi publica* 2005, 39(4):1-7.
8. Moumeni E, Malekzadeh JM. Comparing the effect of pamphlet versus lecture on the nutritional knowledge of health communicators. 2000-2001; 5(19-20): 49-54.
9. Shojaezadeh D, Sadeghi R, Tarrahi MJ, Asadi M, Lashgarara B. Application of Health Belief Model in Prevention of Osteoporosis in Volunteers of Khorramabad City Health Centers, Iran. *J Health Syst Res*. 2012;8(2):183-92. [Persian]
10. Taghdisi M. H., Abolkheirian S., Hosseini F. Effectiveness of education and its influential factors on empowerment of the health volunteers in the West of Tehran Health Center. *Iran Occupational Health Journal*. 2011;8(2):24-30. [Persian, English]
11. Taslimi Taleghani M, Djazayeri A, Keshavarz SA, Sadrzadeh Yeganeh H, Rahimi A. A Comparison of the effectiveness of two nutrition education methods on the nutritional knowledge, attitude and practice of first-grade schoolgirl students in Tehran. *J Sch Public Health Inst Public Health Res*. 2004;2(4):69-78. [Persian]
12. Ramazani A, Miri M, Shayegan F. Effect of health education on health coordinating volunteers of Birjand health center to promote the community healthy life styles. *J Birjand Univ Med Sci*. 2008;14(4):27-33. [Persian]