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Research Article

**EVALUATING THE EFFECT OF AN EDUCATIONAL  
INTERVENTION ON PARENTS' NUTRITIONAL SOCIAL  
SUPPORT****Fatemeh Mokhtari<sup>1</sup>, Soheila Ehsanpour<sup>2</sup> and Ashraf Kazemi<sup>3\*</sup>**<sup>1</sup> MSc, Reproductive Health Department, School of Nursing and Midwifery, Isfahan University of Medical Science, Isfahan, Iran. Tel: 09131761070<sup>2</sup> Department of Medical Education, Medical Education Research Center, Isfahan University of Medical ScieC.E.S. College of Pharmacy, Chinnatekur, Kurnool, A.P,nces, Isfahan, Iran.Tel:09133189456<sup>3</sup> Department of Reproductive Health, women's health Research Center, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran. Tel: 09132693105**This article was adopted from a research that was approved by Isfahan University of Medical Sciences by No. 394645.****Abstract:**

**Background:** Social support is one of the important effective factors on health-related behaviors in different groups. The present study has evaluated the effect of an educational intervention on parents' nutritional social support for having a healthy diet by teenagers.

**Methods:** This field trial was conducted in two groups on the parents of 63 female early adolescent. The level of parents' nutritional social support for having a healthy diet were measured using a questionnaire. One month after performing the educational intervention for parents, parents' nutritional social support for having a healthy diet were measured again. The level of significance was set at 0.05 for all the statistical tests.

**Results:** The study results showed that after intervention means of the level of emotional [ $p=0.009$ ], informational [ $p=0.03$ ] and total social support [ $p=0.03$ ] in the intervention group were significantly more than the control group. The mean of instrumental social support between the intervention and control groups showed no significant difference.

**Conclusions:** Educational intervention on parents increases the nutritional level of parents' nutritional social support in the emotional, informational and total dimensions.

**Keywords:** field trial, Social Support, Parents, Nutrition.

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**INTRODUCTION:**

Epidemiologic transition along with rapid changes in food pattern and tendency toward energetic junk foods will expose developing countries to the epidemic of non-communicable diseases in the coming years [1]. This condition, besides increasing the load of the diseases and their complications, would impose a huge economic load on the society and confront the people with lack of nutrients, especially micronutrients, on the one side and chronic diseases on the other side.

Considering the nutrition of the youth with another approach will reveal the importance of consumption expenditures in this regard; while developing countries are not ready yet for encountering the high costs of obesity and its related diseases [2]. In comparison to the costs of obesity-related treatments, educational programs have lower costs and longer-term effects [3].

The Research Center of the US Department of Education in their studies have mentioned that although nutritional educations are provided at schools using different methods, techniques and training materials, they do not have sufficient effects on changing the nutritional behaviors of the student. They mentioned that family's participation is an important element in effective nutritional education especially for students. However, studies have shown that the level of using family participation strategies for nutritional education has been low [3].

Family's context is the first and most important effective factor on the mental and physical health of the children and adolescents [4]. Parents are considered the main members of the nutritional behaviors' modification or correction program for adolescents. They have a key role in improvement and recognition of healthy eating habits throughout the lifetime of their children [5, 6]. Adolescents' relation with their family, as much as social and cultural factors, would affect their nutritional pattern. Because food selection and accessibility to foodstuff in the family is usually determined by the parents and studies have shown that the interactions between parents and children while eating have an important role in formation of children's nutritional preferences and behaviors [7]. Ineffective conflicting relation between the parents and the adolescents would lead to lack of sufficient perceived emotional support and threaten the general health of the adolescent. Therefore, probably, educating healthy diet to the parents might be effective on adolescents' nutritional patterns [8]. It seems that educating the parents for

increasing children's perceived social support has a significant role in the success of the education [9].

Parents' participation in modification or formation of healthy nutritional behaviors among adolescents could be programmed as providing appropriate social support for children from parents. Studies have shown that social and family support in material and spiritual dimensions are necessary for individual's empowerment and perceived social support from family members or the healthcare personnel is associated with increased prevention and self-care [10].

So, considering the importance of nutrition during adolescence and the role of parents' support as the most accessible and important source of nutritional knowledge and also effective on nutritional behaviors of young girls [11], evaluating the role of interventions in nutritional social support from parents for the adolescents seems necessary. Therefore the aim of the present study was to evaluate the effect of an interventional program on improving nutritional social support from the parents to provide the background for appropriate nutritional behaviors among teenage girls.

**METHODS:**

The present study was semi-experimental field trial that was conducted from January 2016 to May 2016 after approval from the ethics committee of the Isfahan University of Medical Sciences. Participants, who were selected randomly, were 63 parents of teenage girls that were aged from 12 to 15 years old and studying at schools of Isfahan, Iran. The inclusion criterion for the adolescent was not having any psychological diseases or behavioral disorders and for the parents was having the custody of the adolescent. The exclusion criteria were immigration during the study and not participating in the educational sessions by parents. For sampling, 4 schools were randomly selected from the schools of Isfahan and through random allocation; two were selected as the control environment and two as the intervention environment. Samples from each schools were randomly selected from the list of students of different grades using the table of random number. Data were gathered using nutritional social support researcher-made questionnaire. The design of this questionnaire was inspired from Diet-Specific Social Support for Adolescents [DSSA] [12], Multidimensional Scale of Perceived Social Support [MSPSS] by Zimet et al [13] and the Social Support questionnaire by Williams et al [14] and it was based on 5-point Likert scale [1-5]. This questionnaire measures provided social support in three

dimensions of instrumental [3 questions], informational [3 questions] and emotional [4 questions]. For scoring the answer of “never” was equal to 1 and “always” was equal to 5.

The designed questionnaire was given to 10 experts in the field of health and nutrition development and after applying their opinions, the validity of the questionnaire was approved. The reliability of the questionnaire was approved with a Cronbach's  $\alpha$  of 0.78 and a repeatability coefficient of 0.79 through a pilot study that was conducted on 20 teenagers and repeated after 3 weeks.

Educating social support was performed for the parents in the intervention group. For this purpose, parents of the intervention group were invited through phone calls and after taking informed consent from one of the parents, group educational session was conducted. Before the first sessions, nutritional social support questionnaire was filled by the parents. The intervention included three 2-hour in-person educational sessions within a one week interval and only the presence of one of the parents was necessary. During the intervention an educational message was sent to the parent as a reminder every three day.

The educational content was prepared and developed by literature review, taking part in counseling courses about adolescence issues, consulting the professors of counseling and psychology department of Isfahan University and midwifery and nutrition departments of Isfahan University of Medical Sciences, and by considering the stages of adolescence and its specific needs and problems. Some parts of the educational content were educating parents about the manner of making appropriate communication with their teenage child, the method of presenting the training to the children and the manner of providing social support in three dimensions of informational, emotional and availability based on a documented

educational guide. Education was provided through slides, speech, pamphlets, group discussions and expressing experiences by the parents.

The parents of the control group also received education about nutritional knowledge. One month after the last educational session, the nutritional social support questionnaire was again filled by the parents.

Data were analyzed using SPSS 19 and independent t test, paired t test, Chi square and Mann-Whitney test. The level of error for all the statistical tests was set at 0.05.

## RESULTS:

In the present study, from 70 invited parents, 63 accepted to participate in the study and continued their participation to the end. Demographic characteristics of the parents and the adolescents are shown in table 1. Comparing the demographic characteristics between both groups showed no significant difference [table1].

Paired t-test in the intervention group showed that the score of social support in emotional dimension [ $p=0.03$ ] was increased after the intervention compared to before the intervention. But no significant difference was observed in the instrumental [ $p=0.93$ ] and information [ $p=0.12$ ] dimensions and the total social support [ $p=0.10$ ] scores. Also in the control group the score of social support and its different dimensions had no significant difference after the intervention compared to before the information [ $p>0.05$ ] [table2].

Independent t-test showed that, after the intervention, the mean scores of total social support[t test=2.12, $p=0.03$ ] and its emotional[t test=2.80, $p=0.009$ ]and informational[t test=2.24, $p=0.03$ ]dimensions were significantly higher in the intervention group than the control group. No significant difference was observed between both groups regarding the score of the instrumental dimension of social support [t test=-0.04, $p=0.96$ ].

**Table1: Compare demographic characteristics in the intervention and control groups**

		Mean [SD] or number[%]		Statistic Result	
		experiment	control	Statistic value	p-value
age		13.39[0.93]	13.60[1.16]	0.78	0.13
father age		43.24[8.53]	46.90[6.02]	1.95	0.89
Mother age		38.15[7.52]	41.47[6.49]	1.86	0.36
Family size		4.24[0.66]	4.20[0.92]	0.21	0.38
Number of children		2.24[0.66]	2.20[0.92]	0.21	0.38
BMI		20.91[4.13]	20.45[4.74]	0.41	0.95
Father education [%]	Under diploma	0[0]	16[53.3%]	3.66	0.0001>
	Diploma	20[60.6%]	6[20%]		
	Academic	13[39.4%]	8[26.7%]		
Mother education [%]	Elementary	2[6.1%]	4[13.3%]	0.75	0.08
	ninth	6[18.2%]	7[23.3%]		
	Twelfth	17[51.5%]	11[36.7%]		
	Academic	8[24.2%]	8[26.7%]		
Economic status[%]	Weak	20[60.6%]	19[63.3%]	0.66	0.22
	Good	13[39.4%]	11[36.7%]		
Father's job [%]	Unemployed	1[3%]	2[6.7%]	0.46	0.50
	employed	32[97%]	28[93.3%]		
Mother's job [%]	Unemployed	28[84.8%]	27[90.0%]	0.38	0.54
	employed	5[15.2%]	3[10.0%]		

**Table2: Comparing of the mean of different dimensions of social support In groups before and after educational intervention**

social support	intervention				p-value	control				p-value
	Before intervention		After intervention			Before intervention		After intervention		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Instrumental social support	12.21	1.63	12.24	1.93	0.93	11.97	1.77	12.27	2.14	0.32
Informational social support	11.12	1.85	11.70	1.92	0.12	10.53	2.43	10.40	2.60	0.80
Emotional social support	15.79	1.81	16.55	2.00	0.03	15.33	2.79	14.80	2.93	0.30
Total Social support	39.12	4.31	40.48	4.63	0.10	37.83	5.76	37.46	6.43	0.76

**DISCUSSION:**

The aim of the present study was to evaluate the effect of an educational intervention on nutritional social support of young girls' parents. Results of the present study showed that educating the parents was not able to increase the level perceived social support from parents but, after the intervention, the level of total social support and its emotional informational dimensions were increased in the intervention group compared to the control group.

Therefore, making an effective communication especially with the family and receiving social support from the parents have essential importance in adolescents' nutritional behaviors and failure to meet these needs would affect individual's general health. Since in the present study, after reviewing the literature and consulting related professors, the educational content was prepared in way that it emphasized on the manner of making appropriate and effective parent-child communication and by using

parents' experiences and role playing, the effort was to institutionalize it, the present intervention was successful in increasing emotional social support. Therefore the interventional program was able to significantly increase the mean level of social support in its emotional dimension in the intervention group compared to the control group. The study of Shen also revealed that the intervention was able to make the adolescents perceive social support from their parents and following the increase in their level of social support, the score of health behaviors was increased among them too. Shen believed that parents' behaviors had a positive effect on adolescents' health behaviors. More supportive parents would administer more reasoning; monitoring and help in their interactions with their children and consequently, it would be more possible that the adolescents would accept their parents' reasoning [15].

Chiu believed that from all the dimensions of social support, emotional social support from family is the supporting core for growth and advancement in any activity [16]. Lundberg mentioned that most of the students are seeking emotional support [17]. So it could be concluded that family, compared to friends and relatives, is prioritized as the most important source of receiving social support from family members. In the present study also, from all the dimensions of social support, the emotional social support was significantly improved after the intervention [ $p=0.009$ ]. Although in this study the effect of the intervention on nutritional behaviors has not been assessed, but considering the effect of the intervention parents' social support it could be predicted that the intervention might also improve the nutritional behaviors. The study of Rich showed that educating the parents is the required tool for creating healthy meals in the family and providing a successful positive environment for educating healthy eating habits to the children; if eating at home and preparing the food at home would remain as the constant priority at home and students perceive support from their parents [3].

The study of Jinan revealed that parents' instrumental support, including financial support, is one of the effective factors in the type of consumed foods by the adolescents. Also informational support was mentioned as one of the effective factors on adolescents' nutritional behaviors. A part of adolescents' nutritional behaviors would form based on the accessible foodstuff for them. So, by providing foodstuff with high nutritional value, parents could unconsciously increase the consumption of these foods among the adolescents. Results showed that increasing the level of knowledge and improving the manner of presenting the information that was

educated to parents during the intervention was able to affect parents' nutritional social support [18]. Studies have mentioned that providing foodstuff, which is known as functional social support, is one of the important predictive structures in nutritional behaviors of children and adolescents [4], but no significant difference was observed between both groups regarding the level of instrumental social support; because about 60% of the participants in both the intervention and the control groups had a poor economic condition. Results showed that instrumental social support is a concept which is closely related to the socioeconomic condition of the family [19]. Hence, educating social support to the parents could not have a significant effect on it. Also parents' concerns about securing the health of their children has probably made the parents to make all of their effort in providing healthy food for their children already. This result also was in line with the results of James who reported that high costs of fresh healthy foods were one of the obstacles to follow a healthy diet [19].

It must be noted that adolescence is the period of declaring independence and proving individual identity. So during adolescence, more than any other period of life, people would act differently for expressing their need for their parents' support in securing their requirements; and this might affect the expression of supportive behaviors from the parents.

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