

The Investigation of Relationship between Nutrition Pattern and Health Conditions of Children Referred to Health Centers

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ABSTRACT

Introduction: Healthy nutrition plays an important role in normal growth of children. Growth disorders caused by nutritional deficiency are prevalent in Iran. Parents as food suppliers and food consumption pattern, have a vital role in child nutrition. This study aimed to determine the association between nutritional patterns and physical conditions of children referred to health centers in Semnan.

Methods: In this descriptive- analytical study which was conducted in Semnan in 1393, 200 children 3 to 6 years who referred to health centers in the city were selected and studied through stratified and random sampling in two groups of healthy group and group with growth failure. Mothers completed two questionnaires containing demographic and comprehensive information on the child feeding methods by mothers (CFPQ) . By using CFPQ, child feeding method was evaluated from 12 aspects . SPSS software, Kaskuler test and T test were used for statistical analysis.

Findings: Considering age, marital status, employment status, and birth weight there was no significant difference between case and control groups.($p>0.05$). Considering physical conditions (weight and height), there was significant difference between two groups ($p<0.05$). The use of patterning (86.2%), participation(85.1%), and promoting balance and diversity (84.3%) were prevalent among mothers in control group. the coercion method(84%), environment (82.3), and food as reward(81.5%) were prevalent about mothers in case group.

Conclusion: The results showed that there is a direct relationship between the nutritional methods used by the mothers and their children's physical conditions. Considering the importance of nutrition in child growth, by developing educational programs and training mothers about proper feeding methods, community health nurses can play a vital role in child growth.

KEY WORDS: Child, Health Conditions, Nutrition Pattern, nurse.

1. INTRODUCTION

In each country, health has a different concept. The first definition of health is "not being sick". Health was defined as a fundamental human right that requires legal protection. According to The World Health Organization, "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." In recent years, the ability to have a beneficial economic and social life has been included in health definition [1]. On one hand, health refers to individual responsibility and on the other hand it is a major public health issue which involves the joint efforts of individuals, communities, and government to preserve and promote performance. Undoubtedly, one of the most important factors in promoting health is nutritional status. Good nutrition is essential for the health throughout life before birth to old age [2]. Children need to foods with higher nutritional value than adults. Therefore, assessment of nutritional status and identification of nutritional needs are of most important measures in organizing health care personnel. Health is the most important indicator of development; it ensures the survival of the community. Thereby, providing proper nutrition is regarded as most important aspect of good health [3]. If children don't have access to enough nutrients to meet their nutritional needs, they are most likely to suffer from malnutrition. Child malnutrition is a prevalent problem in the area of health. [4] The prevalence of malnutrition is relatively high in Iran which lead to nutritional stunting in 16.8% of males and 13.9% of girls, underweight in 11.9% of boys and 9.7%of girls based on BMI, and slimming in 5.1% of boys and 4.7% of girls [5]. Due to the fact that during childhood, nutritional habits may probably continue into adult life therefore, Malnutrition in childhood is associated with risks to health throughout life. Parents as nutrition providers and dietary pattern play a cardinal role in child nutrition. Moreover, the identification of children nutritional pattern to determine their health status is one of the main tasks of community health nurses. Nurses also assess the health status of children to detect their pattern of growth .They take specific measures to eliminate causes of growth disorders in vulnerable children. As few studies have been

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conducted in Iran and considering importance of children nutrition and high prevalence of malnutrition in Iran, this study was conducted to investigate the relationship between nutrition pattern and health status of children referred to Semnan health centers in 2014.

I. GOALS HAIR

The overall objectives:

The Investigation of Relationship Between Nutrition Pattern and Health Conditions of Children Referred to Health Centers

2. MATERIALS AND METHOD

This is descriptive –analytical (case- control) study which was performed on 100 children affected with growth disorder and 100 children as control group in 2014. According to Semnan health center statistics in the second half of 2013, the percent of growth disorder was achieved separately. Among 8 health centers, children aged between 3 to 6 years who referred to Semnan health centers were selected and studied through stratified and random sampling. The criteria for inclusion in the case group were as follow:

1. Children with the growth disorders
2. Children who had health records in health centers
3. Considering control group, mothers of affected children should participate in study.
4. The children should not affected with Congenital or incurable diseases
5. Children should have desirable health curve.

To collect data, a two-part questionnaire was used. In the first part of questionnaire demographic information in seven items were investigated which included child sex, age, birth weight and height, the present weight and height, MBI, disease record and birth rank. The parent's demographic information was investigated in eleven aspects which included mother weight and age, mother marital status, parent's level of education, parents drug abuse and parents income. In the second part of Comprehensive Feeding Practices Questionnaire (CFPQ), the mother's child feeding methods were evaluated from 12 aspects. This questionnaire consisted of 46 questions such as information about the child, freedom of action, emotional adjustment of children by using foods, encouraging children to observe the balance and diversity in eating, monitoring child available foods, using food as a reward, child participation in food planning, food consumption patterning, monitoring snacks, forcing to eating, limiting child with the aim of health and controlling weight and educating proper nutrition to child. All of these subtests were measured by using Likert scale of 5 scores ranged from never (1) to always (5) or strongly disagree (1) to strongly agree (5). For each subtest, scores below 3 were regarded as low use, the 3 score as average use and scores above 3 were used as high use of related method.

II. FINDINGS

The demographic characteristics of the participants indicated that the age of the participants was between 3 to 6 years. Most of children (78%) were female. considering birth rank, 48.5% of children were of first birth, Majority of mothers (78.2%) were housewives, 95% of mothers were married, the level of education of 70% of mothers was higher than diploma, and 50.5% of mothers aged between 26 to 33. None of mothers were taking drugs. Also, the majority of participants (58%) were from middle-class. Table 1 shows the characteristics of studied mothers and children .The average scores of mothers for each subtest of comprehensive questionnaire regarding feeding methods were determined. The scores below 3 were regarded as low use, the 3 score as average use and scores above 3 were used as mothers' high use of related methods. As Table 2 shows. The most common methods used by mothers of children with growth disorder are monitoring environment, (82.3%), force (84%), and food as reward (81.5%). In groups including mothers with healthy children, the most used methods were participation (85.1%), modelling (86.2%), and encouraging to balance and diversity (84.3%). The relationship between feeding methods and children health status summarized in Table 3. The children height, weight and BMI were associated with some feeding methods.

Table 1. Demographic characteristics of participants

variable	health		Growth disorder	
	Percentage	Number	percentage	Number
Gender				
Boy	50.5	51	47.1	48
Girl	49.5	50	52.9	54
Mother age				
16-26	39	40	39	40
26-33	57	58	58	60
33-46	4	3	3	2
Birth rank				
1	48	48	45	46
2	39	39	44	45
3	12	12	9	10
4	1	2	2	1
Family income				
Below 6000000 Rials	4	4	33.7	34
6000000-10000000 Rials	56.8	58	32.7	33
More than 10000000 Rials	32.35	33	18.7	19
Mothers job				
House wife	62	60	53.5	54
Occupied	38	40	45.5	46
Mothers level of education				
Lower than diploma	1.9	4	2	5
diploma	40	86	40	95
Higher than diploma	58	100	58	100
Mothers marital status				
Single	98	97	96	95
Married	2	3	4	5

Table 2. The relationship between feeding methods and children's health

Khvransh methods		Encouraging to balance and diversity	participation	Modeling	Reward as food	environment	force
Healthy children	Child's weight	0.718	0.562	0.777	0.915	0.569	0.498
		0.068	0.002	0.049	0.078	0.066	0.058
	Child's height	0.587	0.253	0.219	0.147	0.576	0.314
		0.028	0.070	0.085	0.006	0.088	0.044
	Child's BMI	0.798	0.259	0.027	0.483	0.517	0.493
Growth disorder children	Child's weight	0.046	0.097	0.001	0.084	0.067	0.027
		0.340	0.291	0.504	0.233	0.662	0.127
	Child's height	0.065	0.023	0.004	0.080	0.025	0.014
		0.530	0.311	0.179	0.357	0.412	0.951
	Child's BMI	0.039	0.017	0.048	0.044	0.003	0.057
		0.307	0.369	0.894	0.748	0.503	0.358
		0.040	0.001	0.037	0.064	0.095	0.099

* p-Value

* Significance level

3. DISCUSSION

The results showed that there is a direct relationship between the nutritional methods used by the mothers and their children's physical status. In the present study majority of mothers (50.5%) aged between 26 to 33. This finding is in consistent with the findings of Khoshnevis- Asl and et al that aimed to assess the level of mothers' knowledge about children nutrition status and the factors affecting it. According to Gholam Ali-Zadeh and et al., 96.5% and 3.5% of mothers were respectively married and divorced which is in consistent with the present study [7]. In study conducted by Doae and et al, which aimed to investigate the relationship between social factors and feeding methods with nutritional intakes of children aged 3 to 6, they concluded that 65.5% of mothers had above diploma education levels [5]. The findings of this study indicated that the majority of studied mothers (78.2 percent) in the study were housewives. In study conducted by Gohari and et al., 86% of mothers were housewives which are in consistent with the present study [8]. Also the present study indicates that the majority of children (78%) were female which is in consistent with the findings of Shadkam [4] and Karimi [8].

Based on the findings of the present study, there is a significant relationship between birth rank and children growth disorder which is in consistent with Holakouee research [10], Pour Asl [8], Brock [12] and Hazavehei [13]. Three items of height, weight and BMI were compared in case and control groups and results indicated that there is a significant difference in the physical status between healthy children and children with growth disorders which is in consistent with the results of Nassiri and et al [14], Hezavehahi [13] and Pour Asl [11]. Considering feeding methods, the most common methods used by mothers in case group are respectively force to eating and patterning methods. In the study conducted by Moor and et al, which aimed to investigate the common methods of feeding children aged between 3 to 5 years, they concluded that the most common methods used by mothers are patterning, trying to influence the norms of feeding in family and force to eating which is in consistent with the present study[15];The findings of this study showed that women with similar socio-demographic characteristics use similar methods to feed their children which is in consistent with the previous studies. Results showed that women, who had higher levels of education, used significantly patterning method more than others. The results of Brown study also showed that mothers with higher level of education prefer intangible and non-deterministic method [16]. In a study conducted by Crouch and et al., The results showed that there is no association between mother level of education and force to eating method [16]. Overall, the findings of the present study indicate that there is a relationship between some of the growth disorder elements and some of the methods used by mothers in feeding children aged 3 to 6 years (including patterning, participation, force to eating, environment, encouraging balance and diversity and food as a reward).

4. CONCLUSION

In pre-school ages, parents are the major cause of their children nutritional choices. They use different methods to feed their children and therefore affect their nutritional habits. The results showed that there is a direct relationship between the nutritional methods used by the mothers and their children physical status. Considering the importance of nutrition in child growth, by developing educational programs and training mothers about proper feeding methods, community health nurses can play a vital role in child growth.

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