

## ASSESSMENT OF NUTRITIONAL KNOWLEDGE OF SCHOOL TEACHERS REGARDING DIET IN DISEASES

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### ABSTRACT

*Teachers are one of the most influential groups in elevating social health, and their teaching nutritional points to the students can both affect students' awareness and the transferring of such nutritional education to the families. The study was conducted to assess the existing knowledge of school teachers along with some background characteristics. One hundred school teachers from eight Government schools from Dholka taluka of Ahmedabad district were administered by pre tested Gujarati version questionnaire comprising questions related to nutrition. The results revealed that half of the total respondents belonged to young age group (20-40 years) and 38 per cent had PTC degree. Vast majority (81.45 per cent) of the teachers had medium to higher level of nutritional knowledge before training. The knowledge level among the teachers was increased due to intervention of training programme up to 99.43 per cent. Thus the interventional impact was observed very effective among the teachers and knowledge was increased by 17.98 per cent among the teachers. So it can be said that training programme is much more helpful for enhancing knowledge about nutritional aspects among the teachers.*

**Keywords:** awareness, education, nutrition, teachers

### INTRODUCTION

Nutrition is involved in the taking in and utilization of food substances by which growth, repair and maintenance of the body are accomplished. A well-nourished person is more likely to be well developed both mentally and physically, and better able to resist various diseases. Nutritional literacy and culture are important issues in the proper physical growth and prevention of the generation of many diseases related to them. In recent years, the status of good nutrition has been considered as an acceptable development indicator for social, economic, and health planners in developing countries. (Musgrove P., 1993)

Children and teenagers are the future of society, and to underpin an active and healthy society, it is necessary for them to know how healthy and good food leads to the maintenance of their health. Research has shown that children's nutritional patterns are mostly affected by social and physical environments. Social environment impacts children's nutritional patterns through a set of socioeconomic and socio-cultural factors, such as, parents' level of education, time limitation, and race. (Patrick and Nicklas, 2005, Patel, *et al.*, 2016) The nutritional pattern directly affects children's

mental and physical growth. (Turin et al., 2007) Evaluation of the nutritional status of elementary school children in some parts of the world and Iran indicates the presence of malnutrition, such as, short stature, underweight, weight loss, weight gain, or obesity, in these regions. (Fatuga et al., 2011, Zimmermann et al., 2004, Delvarianzadeh and Sadeghian, 2006) Malnutrition is a problem that needs a comprehensive study due to its multi-dimensional nature. Most cultural components of a society are printed on the minds of children by educating parents and children. In this regard, teachers are one of the principle components. Teachers are communication rings between schools and health centers and transfer health knowledge to their students, and consequently, to their families; thus, they improve the health of students and families. Teachers are one of the most influential groups that improve the health level of society. Undoubtedly, presenting nutritional education to students by teachers leads to the transfer of this education to their families, in addition to the influence of the knowledge on students. (Montazeri et al., 2006, Darvishi et al., 2009) To this end, improving the knowledge of teachers and health teachers is of significance and studies have demonstrated that this education can be one of the methods for increasing knowledge, especially in

teachers and health teachers, who spend most of their time with students, in order to transfer educational materials to them.(Montazeri et al., 2006, Maharat and Tabriz, 2006) As food is one of the most fundamental requirements for human beings, nutrition and food hygiene should be considered as one of the health educational aspects.(Pirsahab et al., 2010)

In a study in Qazvin, about the effect of health education on the change in nutritional behaviors and knowledge of elementary school students, it was seen that the students' knowledge of  $22.79 \pm 5.4$  before the education increased to  $51.06 \pm 4.75$  after training.(Khalaj and Mohammadizeidi, 2006) Moreover, in the investigation of the effect of nutritional education on the nutritional attitude and knowledge of 60 health teachers in the Ahwaz elementary schools, the difference between the attitude and knowledge scores of the intervention group significantly increased after education (Sobhani et al., 2006) this indicated that one stage of targeted nutritional education in a short run, could help in making considerable changes in the level of nutritional attitudes and knowledge among health teachers in elementary schools.

Studies have shown that proper nutritional education of teachers and their information and knowledge improvement can lead to the presentation of positive, constructive transformations in correcting food intake patterns and decreasing the risk of malnutrition in children.(Ohrig et al., 2001, Choobineh et al., 2009) As no nutrition and food hygiene educational program has been held for the teachers of the Dholka Taluka thus far, this study was performed to determine the effect of nutrition and food hygiene education on the knowledge level of school teachers in this taluka.

**OBJECTIVE**

To know the nutritional knowledge of school teachers regarding diet in diseases

**METHODOLOGY**

Dholka Taluka of Ahmedabad district was selected purposively for the study. Teachers of eight different schools resides in different villages of Dholka taluka were selected. Total 100 teachers were selected as respondents for assessing nutritional knowledge.

The respondents were administered a questionnaire comprising questions associated with the background characteristics of the respondent and with four sections of nutrition such as basics of food and nutrition.

It includes the basic nutritional information including nutrients and conservation of nutrients, nutrition for mother, nutrition related to woman and mother in special condition (pregnancy and lactation), nutrition for children and knowledge on diet in diseases which can be controlled by diet like Diabetes, Cardiovascular disease (CVD), Gastric ulcer and Uric acid.

Frequency and percentage were calculated to find out the background information of the respondents. Standard deviation was used to find out the respondents nutritional knowledge level. Correlation co-efficient was computed to find out the relationship between the knowledge of teachers with the selected independent variables.

**RESULTS AND DISCUSSION**

The results of the study showed that 50 percent of the respondents belonged to younger age group (<40 years) (Table 1). Data revealed that 30 percent of total respondents had post graduate degree. Table 1 also indicated that 46 % of the respondents were female and 54% were male teachers.

**Table 1. : Distribution of respondents according to their background characteristics**

**n=100**

Sr. No.	Background characteristics	Male No.	Female No.	Total
1	<b>Gender</b>	54	46	100
2	<b>Family Type</b>			
	Joint	38	32	70
	Nuclear	16	14	30
3	<b>Family Member</b>			
	3-4	19	15	34
	5-6	24	21	45
	7 and more	11	10	21
4	<b>Education</b>			
	Higher Secondary	00	04	04
	PTC	18	20	38
	Graduation	20	08	28
	Post Graduation	16	14	30
5	<b>Age (years)</b>			
	<30	10	09	19
	31-40	14	17	31
	41-50	12	11	23
	>50	18	09	27

Good nutrition plays an essential role in maintaining health. Foods are grouped together when they share similar nutritional properties, by understanding the basic food groups and by following the good practices of food preparation, one

can be able to plan a healthy daily diet. From the Table 2 it was evident that 95 to 97 percent of the respondents knew that the vegetables should be cut just before cooking and that cut should be a small one. Majority of respondents (97%) knew that one should drink at least 8-9 glasses of water in a day.

**Table 2 : Knowledge of the respondents on basics of Food and Nutrition**

**n=100**

Sr. No.	Statements	Male (n=54)	Female (n=46)	Total (n=100)
1	Vegetables are to be washed before cutting in small pieces	87	93	90
2	Vegetables are to be cut just before cooking	98	96	97
3	Vegetables are not to be kept in warm place	68	76	72
4	Green leafy vegetables do not make harm to our body	92	98	95
5	Vegetables to be used for cooking are to be peeled thin	88	98	93
6	Little oil to be used in cooking	94	100	97
7	The major nutrients contained in rice, wheat, potatoes is carbohydrate	94	98	96
8	Carbohydrate is the nutrient that gives energy in the body	98	96	97
9	Food gives energy to the body	85	78	82
10	Only one type of food is not sufficient for our body	94	96	95
11	Dal is to be cooked in the water where it was soaked after washing	43	76	58
12	One should drink 8-9 glasses of water in a day	94	100	97

A large part of the World Food Programme's nutritional work is directed at mothers as they are usually the most vulnerable from a nutritional point of view. When a woman is pregnant her body has special nutritional needs. After she has given birth, she has a greater need for energy and also for the nutrients that make her breast milk nourishing to her baby. This is critical in situations where women are

already malnourished before pregnancy and don't receive certain vitamins or minerals. From Table 3 it was observed to 97 percent of the respondents knew that a pregnant mother's diet must include all the food stuff. 98 percent of the respondent also knew that the child is to be breast fed as soon as he is born.

**Table 3 : Knowledge of the respondents on nutrition for mother**

**n=100**

Sr. No.	Statements	Percent		
		Male (n=54)	Female (n=46)	Total (n=100)
1	All the food stuff is to be included in the diet of a pregnant and lactating mother	94	100	97
2	The child is to be breast fed as soon as he is born	96	100	98
3	Colostrum, the first secretion of mother's milk thick and yellow in colour, protects the child from diseases	98	100	99
4	A lactating mother is to drink more water than normal women	94	94	94
5	The foetus will not grow properly if a women does not eat nutritious food during her pregnancy	96	94	95
6	Milk is essential during pregnancy because calcium contain in milk will help to build bone of foetus	96	98	97
7	During pregnancy, a women will get more iron from green leafy vegetables	93	96	96
8	Amla is the rich source of vitamin C	96	98	98

A healthy diet helps children grow and learn. It also helps prevent obesity and weight- related diseases, such as diabetes. The Table 4 showed that majority of the respondent knew that the absence of mother's milk, a new born baby

should be fed cow's milk with mixing water and a child should be breast fed if he suffers from diarrhoea. More than 77 percent of the respondents also knew that a child's health may get deteriorated if he is not weaned before one year.

**Table 4: Knowledge of the respondents on nutrition for children**

**n=100**

Sr. No.	Statements	Percent		
		Male (n=54)	Female (n=46)	Total (n=100)
1	In the absence of mother's milk, a new born baby should be fed cow's milk with mixing water	100	98	99
2	A child should be breast fed if he suffers from diarrhoea	80	87	83
3	A child's health may get deteriorated if he is not weaned before one year	72	83	77
4	The child is to be given the juice of vegetables or fruits when he is 7-9 months old	91	83	87
5	The mixture of rice and dal preparation is to be given to a child when he is of 7-8 months old	83	85	84
6	A child is to be fed yellow fruits such as ripe papaya, ripe mango etc., to protect him from Vitamin A deficiency	28	54	40
7	The child is to be fed the family food without spice, when he is 1 year old	69	91	79

Diet plays a crucial role in promoting or preventing a disease. As adults grow older, they have a greater chance of developing certain diet-related diseases, such as diabetes, cardiovascular disease, gastritis or uric acid. So providing an appropriate diet can be healing and even life saving. The data in Table 5 showed that 60 percent of the respondents knew that sugar, honey, jaggery and sweets are not good

for diabetic patients, curd is good for diabetic patients, and through diet C.V.D. can be controlled. About 69 percent of the respondents knew that gastric ulcerate patients cannot take spicy and oily food and 37 percent of the respondents knew that protein containing food is not good for the patients suffering from uric acid.

**Table 5 Knowledge of the respondents on diet in diseases**

**n=100**

Sr. No.	Statements	Percent		
		Male (n=54)	Female (n=46)	Total (n=100)
1	Sugar, honey, jaggery and sweets are not good for diabetic	65	54	60
2	Diabetic patients are to be restrict alcohol consumption	93	89	91
3	Diabetic patients cannot take ripe fruits like jackfruit, papaya etc	59	50	55
4	Curd is good for diabetic patients	82	70	76
5	Cardio Vascular Diseases can be controlled by diet	74	78	76
6	Vegetable oil like sunflower oil, soyabean oil rtc. is good for cardio vascular disease patients	44	61	52
7	Gastric ulcerate patients cannot take spicy and oily food	65	74	69
8	Caffein containing food is not to be taken by uric acid patients	82	78	80
9	Protein containing food is not to be taken by uric acid patients	33	41	37
10	Vegetables like spinach, cabbage, tomato etc. is advised to avoid by uric acid patients	20	44	31

Eating right is vital for a person to prevent or control diabetes. A diabetes diet is simply a healthy eating plan that is high in nutrients, low in fat, and moderate in calories. Table 6 revealed that highest percentage of respondents had highest level of nutritional knowledge on each section such as, basics of food and nutrition, nutrition for mothers, nutrition for children and knowledge on diet in diseases. The data showed that large majority of the respondents had sufficient nutritional knowledge (99%) on nutrition for mother followed by basics of food and nutrition (88%), nutrition for children (53%) and diet in diseases (37%). However, it

was observed that teacher's nutritional knowledge was not adequate in all sections. Respondents diet in diseases and nutrition for children knowledge was improved by giving proper intervention.

The data presented in table 6 indicated that majority of the respondents (61%) had very high level of nutritional knowledge. The 37 percentage of respondents had highe level of nutritional knowledge. In comparison to male and female respondents the higher nutritional knowledge was found in female in all aspects of nutritional knowledge.

**Table 6: Distribution of respondents according to their nutritional knowledge level on different sections of nutrition**

n=100

Sr. No.	Knowledge level	Basics of Food and Nutrition	Nutrition for mother	Nutrition for children	Diet in Diseases	Overall
1	Very Low (<20)	00	00	01	03	00
2	Low (20-40)	00	00	01	12	00
3	Medium (41-60)	05	00	18	37	02
4	High (61-80)	07	01	27	41	37
5	Very High (>80)	88	99	53	07	61

The research in the city of Amlash on 1665 female students, the knowledge level on nutrition and food hygiene increased from 61.5 to 77.15%. In the present study, the knowledge level of the teachers who studied food hygiene (food spoilage factors, factors of food spoilage) was low before the intervention; however, it increased considerably after the intervention.(Aminian *et al.*, 2006 and Vinaya *et al.*, 2017). These results were consistent with the findings of the educational intervention in 2003-2004, which was done on teachers and students in the schools of Tabriz. That study was performed in a lecturing and educational workshop format and resulted in an increased percentage in the knowledge of teachers and students.(Abdollahi *et al.*, 2005)

**CONCLUSION**

Due to the specific socio-cultural responsibilities, school teachers have better opportunities to interact with children and other family members with regard to proper educational performance in schools. The findings showed that the most of the school teachers had very high level of nutritional knowledge. After intervention almost all teachers had increase their nutritional knowledge from medium and high level to very high level. So that the effective intervention impact was observed. Considering the findings of the present study, based on the weakness of knowledge among school teachers in terms of nutrition and food hygiene, the Education Ministry, as a most influential institution, can provide the required fields for the increase of knowledge among teachers, students, and consequently, the society.

On the basis of findings following recommendations can be made. More emphasis should be given by intervention programme to the teachers who had less knowledge and to plan a constant education on nutrition and food hygiene, using educational aids and other educational facilities in the Teacher Training Centers, with the cooperation of Health

Centers and Education Organizations, as appropriate facilities should be presented to schools.

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