

# KNOWLEDGE AMONGST ADOLESCENT GIRLS ABOUT NUTRITIVE VALUE OF FOODS AND DIET DURING DISEASES, PREGNANCY AND LACTATION

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U. Kapil  
S. Bhasin  
S. Manocha

## ABSTRACT

*Knowledge about nutritive value of food, diet during diseases and antenatal and postnatal period was assessed amongst 152 adolescent school girls. A total of 23.69 and 55.93% students had incorrect knowledge that pulses and non-vegetarian foods should be avoided during later half of the pregnancy. A total of 63.82, 66.45 and 71.72% of subjects had incorrect knowledge that almonds have more nutritive value than groundnuts, fruits are rich sources of calories and desi ghee has more nutritive value than vanaspathi, respectively.*

*Majority (90.78%) had correct knowledge that obesity is caused due to excess intake of calories than required by an individual and low iron content and poor availability of iron from food is a major cause of anemia in mothers and children.*

**Key words:** Diet in diseases, Nutritive value, Adolescent girls, Nutrition knowledge.

Adolescent girls are future mothers. The dietary concepts held by them during adolescence are usually carried to the adulthood and play an important role in feeding and rearing of children.

A pilot study was conducted, before launching a nutrition education campaign for adolescent school girls studying in Public School of Delhi. The aim of the investigation was to identify gaps in the knowledge of 'would be' mothers so that a realistic and action oriented nutrition education training with more emphasis on areas of inadequate knowledge, may be organized for them.

## Material and Methods

This study was conducted in Delhi Public School, Delhi, which catered to urban elite population. The monthly tuition fees was about Rs. 400 per child. The school was selected by using purposive sampling, keeping in view of operational feasibility. All girl students in tenth, eleventh and twelfth classes constituted the study population.

All subjects were collected in class rooms and briefed about the objectives of the study. A pretested structured schedule with close ended questions (43 questions in all) was administered to each of the 152 students who attended the school on the

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*From the Human Nutrition Unit, All India Institute of Medical Sciences, New Delhi 110 029 and Department of Preventive and Social Medicine, Maulana Azad Medical College, New Delhi 110 002.*

*Reprint requests: Dr. Umesh Kapil, Assistant Professor, Human Nutrition Unit, All India Institute of Medical Sciences, New Delhi 110 029.*

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day of survey. Each statement was read out and explained to them by investigators for better comprehension. The queries raised were clarified. Steps were taken to minimize consultation amongst them.

The school had a qualified medical doctor in its staff, who conducted medical examination of all children every six months and also delivered lectures to students on topics of common health interest.

## Results

Almost all (96%) girls had urban background. Many (69%) were non-vegetarian; only 15 and 16% had vegetarian and eggitarian dietary habits, respectively. The mean age of subjects was 15.8 years (age 15-17 years).

One hundred and thirty eight girls (90.78%) had correct knowledge that low iron content and poor availability of iron from food is a major cause of anemia in mothers and children, and obesity is caused due to excess intake of calories than required (*Table I*). Only 35.52% had correct knowledge that a sick child requires more food than a healthy one. Nearly half (45.39%) of subjects had incorrect know-

ledge that non-vegetarian foods provide more strength as compared to vegetarian.

*Table II* shows that 82.24% of subjects had wrong knowledge that commercial weaning foods like lactogen and amul are more nutritive than simple multimix of cereals, pulses and oil made at home. A total 63.82, 66.45 and 71.72% of girls had wrong knowledge that almonds have more nutritive value than groundnuts, fruits are rich source of calories, and desi ghee has more nutritive value than vanaspathi, respectively. A total of 40.78% had correct knowledge that green leafy vegetables are poor sources of calories while only 23.68% reported that soyabean is more nutritious than meat.

A total of 86.18% of girls had correct knowledge about diet during the antenatal period. Only 13.82% of subjects had wrong knowledge that pregnant mothers should eat less so that the child she will deliver be small for easy delivery. The percentage of subjects who had incorrect knowledge that oil and ghee helps in faster recovery during post-natal period and non-vegetarian foods should be avoided during later part of pregnancy was 29.61 and 55.93%, respectively (*Table III*). Almost half (52.63%)

TABLE I—Knowledge About General Dietary Beliefs

Dietary beliefs	Expected correct response	Correct response	
		No.	%
1. Sick child requires less food than healthy	(No)	54	35.5
2. Cooking in iron vessels increases the iron contents	(Yes)	64	42.1
3. Non-vegetarian foods provide more strength as compared to vegetarian	(No)	69	45.4
4. Oil and ghee, should be avoided by obese individuals	(Yes)	132	86.8
5. Obesity is due to excess intake of calories than required	(Yes)	138	90.8
6. Low iron content and poor availability of iron from food is a major cause of anemia in mothers and children	(Yes)	138	90.8

TABLE II—Knowledge About Nutritive Value of Common Foods

Dietary beliefs	Expected correct response	Correct response	
		No.	%
1. Commercial weaning foods are more nutritive than simple multimix of cereals, pulses and oil made at home	(No)	27	17.8
2. Soyabean is less nutritious than meat	(No)	36	23.7
3. Desi ghee has more nutritive value than vanaspati	(No)	43	28.3
4. Apple, pomegranate and grapes have special nutritive values	(No)	45	29.6
5. Fruits are rich sources of calories and proteins	(No)	51	33.5
6. Almonds have more nutritive value than groundnuts	(No)	55	36.2
7. Green leafy vegetables are poor source of calories	(Yes)	62	40.8
8. Cow's milk is more nutritive than buffalo's	(No)	65	42.8
9. 100 g of meat is more nutritive than 100 g of pulses	(No)	79	52.0

TABLE III—Dietary Beliefs During Pregnancy and Lactation

Dietary beliefs	Expected correct response	Correct response	
		No.	%
1. Non-vegetarian food should be avoided during later part of pregnancy	(No)	67	44.1
2. Lactating mother require more food than the pregnant	(Yes)	80	52.6
3. Oil and ghee help in faster recovery during post delivery period	(No)	107	70.4
4. Pulses should be avoided during later part of pregnancy	(No)	116	76.3
5. Pregnant mother during third trimester should eat less so that the child she delivers will be small for easy delivery	(No)	131	86.2

subjects had correct knowledge that a lactating mother requires more food than pregnant mother during the second and third trimester.

Table IV depicts that 59.86% girls had a correct knowledge that acute diarrhea is an important factor in precipitating severe malnutrition in a moderately malnourished child. A total of 21.72, 56.48 and 35.53% of subjects had incorrect knowledge that a child with diarrhea requires antibiotics

more than oral rehydration solution; during the eruption of teeth in early childhood, diarrhea occurs physiologically; and foods should not be given during episodes of diarrhea, respectively.

### Discussion

In the present study, 90.78% of girls had correct knowledge about dietary aspects of obesity. This may be due to their increased awareness through channels of

TABLE IV—Dietary Beliefs During Childhood Illnesses

Dietary beliefs	Expected correct response	Correct response	
		No.	%
1. During eruption of teeth, diarrhea occurs physiologically	(No)	66	43.2
2. Acute diarrhea is an important factor in precipitating severe malnutrition in a moderately malnourished child	(Yes)	91	59.9
3. Food should not be given during diarrhea	(No)	98	64.5
4. Child should be given less food when suffering from respiratory diseases	(No)	98	64.5
5. Child with diarrhea requires antibiotics more than oral rehydration solution	(No)	119	78.3
6. Night blindness is due to Vitamin A deficiency	(Yes)	138	90.8

mass media like women's magazines, newspapers, television and radio about causes and prevention of obesity. Also, the students in this age are more 'figure' conscious and discussions with peer group may be the other source. A total of 64.28 and 54.61% of students had incorrect knowledge that a sick child requires less food than the healthy and non-vegetarian foods provide more strength than vegetarian, respectively. This may be due to dominance and continuation of wrong dietary beliefs prevalent in India. Similar findings have been reported by other workers(1-4).

Some foods have been given special social status in dietary practices and are known as prestigious foods(5,6). Almonds, cashewnuts, desi ghee, apple are some of them. In the present study, 63.82% of students had incorrect knowledge that almonds are more nutritive than groundnuts, fruits are rich sources of calories and apple has higher nutritive value than rice. This may be again due to continuation of dominance of traditional dietary beliefs present in our culture.

Majority (86.18%) of girls had correct knowledge about dietary practices relating to lactation period. This may be due to

recent thrust on health education on these aspects through channels of mass media like television and women's magazine. A total of 23.82 and 55.93%, respectively of students had knowledge that pulses and non-vegetarian foods should be avoided during the later part of pregnancy. Restriction of these food items have been reported by other workers(7-11). Avoidance of pulses during pregnancy may be detrimental particularly amongst poor families where pulses are the major source of protein(12).

The belief that less food should be given when the child is suffering from respiratory infections was reported by 35.53% of subjects. Food restriction during course of an illness is no more advised, although it is commonly practiced(13-17). Scientifically, child's nutrition needs are more during illness episodes due to increase in metabolic activities. The practice of restriction of food further deteriorates child's health and nutritional status(18).

The present study revealed some very interesting findings. The wrong knowledge that pulses and non-vegetarian foods should not be eaten during pregnancy, restriction of food during illnesses, high

nutritive value of prestigious foods, were some of the important detrimental dietary beliefs prevalent among them. To make a Health Education Campaign more meaningful and action oriented, it is essential that incorrect dietary beliefs amongst participants should be initially identified. Each incorrect belief should be explained in more detail for success of Health Education Campaign. Also, the useful dietary practices prevalent should be encouraged and reinforced to achieve maximum impact and harmful ones should be discouraged.

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