

NUTRITIONAL BELIEFS AMONGST ANGANWADI WORKERS

U. Kapil
A.K. Sood
D.R. Gaur

ABSTRACT

Knowledge about nutritive value of common foods, dietary beliefs during antenatal period, lactation, and during a few common diseases was assessed amongst 92 Anganwadi workers (AWW). All the workers were aware of the fact that during pregnancy, mothers require extra calories in order to meet the demand of fetus and 79.3% believed that simple multimix of cereals, pulses and oil prepared at home is much more nutritive than commercial weaning foods besides being cheaper. Nearly one fourth of the workers believed that both non-vegetarian foods as well as pulses should be avoided during the later half of pregnancy. Only 14.2% of AWW were not in favour of giving any food during episode of diarrhea while 27.2% believed that less food should be given to children suffering from pneumonia. It is suggested that there is need for updating the knowledge of AWW by continued in service health training.

Key words: Nutrition knowledge, Diet during diseases, Dietary beliefs.

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

Reprint requests: Dr. Umesh Kapil, Assistant Professor, Human Nutrition Unit, AIIMS, New Delhi 110 029.

Received for publication February 14, 1990;

Accepted March 8, 1991

In India, Anganwadi Workers (AWWs) are the most peripheral functionaries of the Integrated Child Development Services (ICDS) Scheme. An AWW is a local village voluntary worker who undergoes three months pre-placement training and delivers MCH and nutrition services at the village level under the technical guidance and leadership of auxiliary nurse midwife (ANM)(1).

In recent years, increased emphasis has been laid on inservice training and education of health functionaries and women in Maternal and Child Health (MCH) and Nutrition, to ensure better survival and nutritional status amongst children.

The present study was undertaken before launching a inservice training course in MCH and Nutrition for AWWs in an ICDS project, to identify areas of weakness in their nutritional knowledge so that a realistic training may be imparted to them.

Material and Methods

The study was conducted in a rural ICDS project in Haryana state (about 40 km from Delhi) during October, 1989. The project was selected by using purposive sampling keeping in view the operational feasibility. Out of 105, ninety two AWWs who attended monthly review meeting constituted the study population. Majority (85%) of AWWs were matriculate, 8% graduate and 7% were non-matriculate.

All AWWs were collected in a classroom and briefed about the aims of the investigation. Each worker was administered a pretested, structured schedule in vernacular language. Every question (40 questions in all) was read out and explained to ensure complete comprehension. Any queries raised by subjects were clarified by the investigators. Due steps were taken to minimize consultation amongst them.

Results

A vast majority (94.6%) AWWs had belief that apple, pomegranate and grapes do not have any special nutritive values (*Table I*). While 84.6% of subjects were well informed that green leafy vegetables are poor sources of calories, 21.7% had incorrect belief that commercial weaning foods are more nutritive than home made simple multimix of cereals, pulses and oil. The misconceptions such as apple has higher nutritive value than rice, meat has more nutritive value than pulses, egg had more calories than wheat was reported by 57.7, 82.7, 84.8% of the subjects, respectively.

The general dietary beliefs are enumerated in *Table II*. Amongst AWWs 97.8, 92.3 and 88.0% opined correctly that cooking in iron vessels increases iron contents of

foods cooked in them, low iron content and poor availability from foods is a major cause of anemia in mothers as well as children, and green leafy vegetables are rich source of vitamin A, respectively. Many (83.7%) of the subjects had wrong belief that non-vegetarian foods are more nutritive as compared to vegetarian.

A vast majority (92.3%) AWWs had correct belief that acute diarrhea is an important factor in precipitating severe protein energy malnutrition in a moderately malnourished child and consumption of insufficient quantity of food is a major cause of undernutrition in children (*Table III*). Only 14.2 and 27.2% of subjects had wrong belief that foods should not be given during episodes of diarrhea and less food should be given when the child is suffering from respiratory infections, respectively.

All the AWWs had correct belief that

TABLE I—Knowledge About Nutritive Value of Common Foods

Food items		Correct response	
		No.	%
1. Apple, pomegranate and grapes have special nutritive values	(No)	87	94.6
2. Green leafy vegetables are poor source of calories	(Yes)	78	84.7
3. Commercial weaning foods are more nutritive than home made multimix (of cereals, pulses and oil)	(No)	73	79.3
4. 100 g of wheat flour provides approx. 500 Kcal	(No)	48	52.1
5. 100 g of apple has higher nutritive value than 100 g of rice	(No)	39	42.3
6. Soyabean is less nutritious than meat	(No)	39	42.3
7. Cow's milk has more nutritive value than buffalow's milk	(No)	32	34.7
8. Almonds have more nutritive value than groundnuts	(Yes)	32	34.7
9. 100 g of cashewnuts have more caloric value than 100 g of Rajmah	(Yes)	19	20.6
10. 100 g of meat has more nutritive value than 100 g of pulses	(No)	16	17.3
11. 100 g of egg provides more calories than 100 g of wheat	(No)	14	15.2
12. Desi ghee has more nutritive value than vanaspati	(No)	12	13.0
13. Fruits are rich source of calories and proteins	(No)	7	7.6

Words Yes/No in parentheses indicate the expected correct answers.

TABLE II—*Knowledge About General Dietary Beliefs*

Dietary beliefs		Correct response	
		No.	%
1. Cooking in iron vessels increases iron contents of foods cooked in them	(Yes)	90	97.8
2. Low iron content and poor availability from foods is a major cause of anemia in mothers and children	(Yes)	85	92.3
3. Green leafy vegetables are rich sources of Vitamin A	(Yes)	81	88.0
4. Oil and ghee should be avoided by obese individuals	(Yes)	60	65.2
5. A sick child requires less food than a healthy one	(No)	56	60.8
6. Concept of 'hot and cold' foods is true	(No)	32	34.7
7. Obesity is caused due to excess intake of calories than required by an individual	(Yes)	26	28.2
8. Non-vegetarian food is more nutritive as compared to vegetarian	(No)	15	16.3

Words Yes/No in parentheses indicate the expected correct answers.

TABLE III—*Dietary Beliefs About Common Childhood Illnesses*

Beliefs		Correct response	
		No.	%
1. Acute diarrhea is an important factor in precipitating severe PEM in a moderately malnourished child	(Yes)	85	92.3
2. Consumption of insufficient food is a major cause of undernutrition in children	(Yes)	85	92.3
3. The food should not be given during episodes of diarrhea	(No)	79	85.8
4. Less food should be given to a child suffering from respiratory infections	(No)	67	72.8
5. A child with diarrhea requires antibiotics more than oral rehydration solution	(No)	43	46.7
6. During the eruption of teeth in early childhood, diarrhea occurs physiologically	(No)	31	33.6

Words Yes/No in parentheses indicate the expected correct answers.

during pregnancy mothers require extra calories to meet the demand of fetus. A total of 25.0 and 26.1% subjects had wrong belief that pulses and non-vegetarian foods should be avoided during the later half of

pregnancy, respectively (*Table IV*). Only 14.2% of workers had wrong belief that pregnant mothers during third trimester should eat less so that the child she will deliver be small for smooth delivery.

TABLE IV—Dietary Beliefs for Antenatal and Postnatal Period

Beliefs		Correct response	
		No.	%
1. During pregnancy, mothers require extra calories (food) to meet the demand of fetus	(Yes)	92	100.0
2. Pregnant mothers during last trimester should consume less so that the child she will deliver is small for smooth delivery	(No)	79	85.5
3. Pulses should be avoided during the later half of pregnancy	(No)	69	75.0
4. Non-vegetarian food should be avoided during the later half of pregnancy	(No)	68	73.9
5. Oil and ghee aid in faster recovery during post-delivery period	(No)	19	20.6

Words Yes/No in parentheses indicate the expected correct answers.

Discussion

Earlier studies have reported that when MCH workers were highly motivated and had correct knowledge there was a favorable influence on the health and nutrition practices in the community(2,3).

The present study clearly demonstrated that most of AWWs had incorrect belief about nutritive value of common food. Majority of the workers believed that prestigious foods (like cashewnut, almond, meat) had higher nutritive value than cereals and pulses. The 'prestigious foods' are in general uneconomical sources of calories and protein.

Majority of the workers had correct beliefs that home made simple multimix of cereals, pulses and oil have more nutritive value than commercial weaning foods. This may be due to recent thrust given by the Government for promotion of breast feeding and appropriate weaning foods through nutrition education messages in different channels of mass media like television, radio, newspapers, etc. and during in-service training courses in MCH.

In the present study, 60.8% of the workers believed that a sick child requires

less food than a healthy child. Similar observations have been made by earlier workers(4-8). Only 14.2% and 27.2% reported that food should be avoided during diarrhea and less amount of food should be given during respiratory infections, respectively. Scientifically speaking, a child needs more energy during diseases due to increase in metabolic activities. The advice of restriction of foods only tends to deteriorate the child's nutritional status further(5,8,9). The wrong belief may perhaps be due to less emphasis being given on this aspect during training of workers and continued domination of deep seated traditional cultural dietary beliefs. The failure of percolation of recent advances in child health and nutrition among AWWs may be another reason.

Only 26.1 and 25.0% AWWs reported that non-vegetarian foods and pulses should be avoided during the later part of pregnancy, respectively. Similar findings have been reported by other workers(10-12). Advice of avoidance of pulses in antenatal period may be detrimental particularly in poor families where pulses constitute the major source of protein(13). About 14% workers had belief that preg-

nant mothers during third trimester should eat less so that the child who will deliver be small for easy delivery. Similar observations have been reported amongst traditional birth attendants(2).

Some of the findings in the present study were quite encouraging. All workers had correct belief that during pregnancy mothers require extra food to meet the demand of fetus and majority believed that simple multimix of cereals, pulses and oil is more nutritive than commercial weaning foods. However, the restriction of pulses and non-vegetarian foods during antenatal period, restriction or avoidance of foods during illnesses, were important wrong dietary beliefs prevalent among them.

The present study revealed that there is a need of inservice continued education of AWWs for periodically updating their beliefs according to the recent advances made in the field of nutrition as well as child health.

REFERENCES

1. Tandon BN, Ramachandran K, Bhatnagar S. Integrated Child Development Services Scheme in India: Objectives Organization and baseline surveys of the project population. *Indian J Med Res* 1981, 73: 374-384.
2. Krishna TP, Naidu AN, Rao NP. Traditional birth attendants and rural women, their concept and attitude towards nutrition and child health. *Indian J Pediatr* 1984, 21: 29-33.
3. Maheshwari RK, Gupta BD, Arora AK, Kerunakaran M, Bhandari SR. Knowledge and attitude towards infant feeding among rural health personnel. *Indian J Pediatr* 1987, 54: 930-934.
4. Kumar V, Taneja S, Real M, Nanda M, Vanaja K. Beliefs and practices of rural mothers regarding 'hot' and 'cold' foods during childhood illnesses. *Indian Pediatr* 1981, 18: 871-877.
5. Dattal MS, Behl L, Kaushal RK, Sharma SL. Beliefs of Himachal women regarding feeding of marasmic or otherwise sick children. *Indian Pediatr* 1988, 25: 966-971.
6. Gupta ML, Dave DS, Thavrani YP, Mathur P. A review of child rearing practices prevalent in the families of hospitalized children at Gwalior. *Indian Pediatr* 1980, 17: 261-265.
7. Gupta S, Saxena AS. Maternal beliefs and attitude concerning diarrheal diseases. *J Diar Dis Res* 1983, 1: 109-110.
8. Karan S, Mathur YC, Qureshi S, Aggarwal M. Customs and beliefs relating to the mothers and infant in an area of rural Andhra Pradesh. *J Trop Pediatr* 1983, 29: 81-84.
9. Kumar V, Clements C, Marwaha RK, Diwedi P. Maternal beliefs regarding diet during acute diarrhea. *Indian J Pediatr* 1981, 48: 599-603.
10. Gupta R, Sharma I. An overview of the dietary consumption pattern of pregnant and lactating mothers of Haryana region, Hissar. *Indian Nutr Dietet* 1980, 17: 13-19.
11. Khanum MP, Umaphathy P. A survey of food habits and beliefs of pregnant and lactating mothers in Mysore city. *Ind J Nutr Dietet* 1976, 13: 208-217.
12. Sood AK, Kapil U. Traditional advice not always good. *World Health Forum* 1984, 5: 149-150.
13. Rao NP, Shastri JG. Monitoring nutrient intakes in India. *Indian J Pediatr* 1987, 54: 495-501.