



Original Research Article

An exploratory study on knowledge of tribal school going adolescents regarding basics of foods and nutrition

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ABSTRACT

Background: About 635 tribal groups and subgroups including 75 primitive tribes live in India. Various nutritional deficiency diseases, proportion of malnourished children, anemia are high among tribal children. The wide spread illiteracy and lack of awareness regarding foods and Nutrition in tribal communities are one of the important contributing factors for dismal health in tribal communities. Investing in education and training for adolescents and young people is perhaps the single most promising action to improve quality of life of tribal children. Documentation of the tribal school going adolescent's knowledge on foods and nutrition is scanty. There is a need to assess the scope for reinforcing knowledge of basics of foods and nutrition through school curriculum.

Objective: The present study was planned to know whether the tribal school going adolescents have a basic idea of foods and nutrition or not.

Materials and Methods: All the tribal adolescent children (n= 158) studying in 8th to 12th standards from a Government Ashramshala were enrolled for the study. Knowledge regarding basics of Foods and nutrition was assessed using pretested questionnaire. Data on health and nutrition topics in their curriculum was also assessed.

Findings: The study revealed that less than half of the boys and girls could correctly define food, importance of balanced diet and consequences of an inadequate diet. Knowledge regarding definition of balanced diet, concept of healthy food, anemia and dietary sources of Iron was poor.

Conclusion: Thus strategies need to be developed for promoting awareness regarding basics of foods and nutrition through integrating it in school curriculum

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1. Introduction

As per WHO, Adolescence is defined as the second decade of life, between the ages of 10 and 19 years. Adolescence is a phase during which tremendous physical and psychological changes occur, along with changes in social perceptions and expectations. Adolescents are distinct from children or adults. Although all adolescents pass through a transition phase, their experiences are diverse as they constitute a heterogeneous group. They differ in terms of age, sex, marital status, schooling levels, residence and socio-economic status which consequently determine their

behavior. The familial environments in which adolescents grow also have a tremendous impact on them and their diverse needs.

Adolescence is an age of opportunity for children, and a pivotal time for us to build on their development and help them navigate risks and vulnerabilities, and to set them on the path to fulfilling their potential.¹

The world is home to 1.2 billion individuals aged 10–19 years. These adolescents have lived most or all of their lives under the Millennium Declaration, the unprecedented global compact that since 2000 has sought a better world for all.²

Adolescent numbers have more than doubled since 1950. The vast majority of adolescents – 88 per cent – live in developing countries. Adolescents today are confronted

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with a rapidly changing world, and face a range of health, social and economic challenges. Some adolescents have greater access to education and information and a growing ability to make well informed choices about their lives. On the other hand social and economic deprivation for many other adolescents means malnourishment, lack of education, unemployment, underemployment and the inability to develop and live to its full potential.

Developing adolescents' capacities and values through education can enable an entire generation to become economically independent, positive contributors to society. Investing in education and training for adolescents and young people is perhaps the single most promising action is to end extreme poverty during this decade.

Education can also have a strong impact on promoting gender equality and improving maternal health. Data for 24 sub-Saharan African countries show that adolescent girls with secondary education are six times less likely to be married than girls with little or no education. They are also three times less likely to get pregnant than their peers with only primary education.⁵ In developing countries, women who have completed secondary education or higher are more likely to have a skilled attendant present at delivery than their counterparts, thereby improving their children's chances of survival.² Adolescent girls form an important vulnerable and neglected sector of the Indian population. Imparting nutrition education can have positive effect on increasing knowledge scores of adolescent girls.³

The tribal belt in Gujarat consists of the district of Dang, Surat, Bharuch, Vadodara, Panchmahals, Sabarkantha and Banaskantha. Approximately 8 million persons comprising 15% of Gujarat population is tribal. Tribes of Gujarat includes Bhil, Rathwa, Vasawa, Gamit and Koli. Health of the scheduled tribes in Gujarat is significantly worse than other population groups. They are economically and socially backward and they have their own way of living and different socio- cultural and eco-geographically settings.⁴ Investment in adolescents has many advantages as it helps them first, makes them healthy citizens and also contributes for healthy future generation.⁵

Documentation of the tribal adolescent's knowledge on nutrition is scanty. Hence, there is a need to impart NHE to the tribal adolescent towards healthy aging for improving the quality of life.

Thus, tribal adolescents need to be educated about healthy living which would in long run help to maintain and expand their quality of life and also to indirectly benefit the adolescents to lead healthy life.

It is along these lines the present study was desired. The aim was to assess the training needs of tribal school going adolescents and integration of basic aspects of Foods and Nutrition in the school curriculum,

2. Material and Methods

The study was approved by the Department Medical Ethics Committee (No. F. C. Sc /FND/ME/62) (30/9/10) as a part of the study "Tackling the challenges in the Child health and Nutrition: Behavior change communication models in different settings."

2.1. Study site

Government Ashramshala, situated in a village Gamdi in Sankheda Taluka of Vadodara, Gujarat was selected for the study. An Ashramshala is a place where students study and also reside. The Ashramshala run by Mangalbharti is for tribal children of Vadodara district and which has secondary and Higher secondary divisions under Uttarbuniyadi (Vocational stream).

2.2. Sample size

All the tribal adolescent children (n= 158) studying in 8th to 12th standards.

2.3. Sampling technique

2.3.1. Purposive sampling

Information on the socio-demographic profile of the subjects was collected using a pre-tested structured questionnaire. Information regarding age, sex, religion, family composition, parent's education and occupation, housing condition, per capita income, etc. was collected. Data on health and nutrition topics in their curriculum was assessed. The students were given a set of questions regarding various aspects related to foods and nutrition and then they were asked to fill this questionnaire. This activity was done to know the level of their awareness regarding basics of foods and nutrition.

2.4. Statistical Analysis

The data collected, checked and cleaned was entered in PC and was analyzed using Microsoft Excel. Frequency distribution and percentage were calculated for all parameters

3. Results

Data on health and nutrition topics in their curriculum was assessed. The Table 1 states the health and nutrition topics studied by the tribal adolescents as a part of their school curriculum. This detailing was done to know whether the tribal adolescents have a basic idea of foods and nutrition or not. It can be seen that at least 1-2 topics on health and nutrition were present in the text books of 5th -9th standard.

Table 1: Integration of Health and Nutrition topics in School curriculum

Standard	Subject	Topic
5 th	Svasthya ane Sharirik Shikshan	Bhojan
6 th	Yog ane Svasthya	Svasthyaprad Aahar
6 th	Vigyan Technology	Aaharna ghatko ane tenu mahatva
7 th	Vigyan Technology	Aahar ane Aarogy
7 th	Svasthya ane Sharirik Shikshan	Bhojan na rasa ne tayeeear khorak
8 th	Krushivigyan	Vanaspati Poshak Tatvo
9 th	Physical Training	Aahar ane Poshan
9 th	Vigyan Technology	Khorak, Poshan ane Svasthya

Table 2: Information on the knowledge assessment of the tribal adolescents about the basics of Food and Nutrition

Particulars	8th-10th Standard				11th-12th Standard				Total			
	Boys(58)		Girls(35)		Boys(42)		Girls(23)		Boys(100)		Girls(58)	
	n	%	n	%	n	%	n	%	n	%	n	%
Definition of food												
Correct	22	38	18	52	22	52	11	48	44	44	29	50
Partially correct	12	21	6	17	11	26	3	13	23	23	9	16
Wrong	4	7	5	14	2	5	1	4	6	6	6	10
Not aware	20	34	6	17	7	17	8	35	27	27	14	24
Functions of food												
Correct	4	7	2	6	4	9	1	4	8	8	3	5
Partially correct	17	29	9	26	31	74	7	31	48	48	16	28
Wrong	8	14	1	3	0	-	1	4	8	8	2	3
Not aware	29	50	23	65	7	17	14	61	36	36	37	64
Name of Basic nutrients												
Correct	4	7	1	3	1	2	-	-	5	5	1	2
Partially correct	23	40	11	32	30	71	15	65	53	53	26	45
Wrong	4	7	4	11	3	7	2	9	7	7	6	10
Not aware	27	46	19	54	8	20	6	26	35	35	25	43
Correct	4	7	1	3	1	2	-	-	5	5	1	2
Explain balanced diet												
Correct	18	31	2	6	12	29	3	13	30	30	5	8
Partially correct	6	10	8	23	11	26	4	17	17	17	12	21
Wrong	7	12	4	11	8	20	5	22	15	15	9	16
Not aware	27	47	21	60	11	26	11	48	38	38	32	55
Consequences of consumption of inadequate diet												
Correct	26	45	11	31	24	57	12	52	50	50	23	40
Partially correct	6	10	6	17	11	26	5	22	17	17	11	18
Wrong	1	2	1	3	1	3	-	-	2	2	1	2
Not aware	25	43	17	49	6	14	6	26	31	31	23	40

Concept of Healthy foods												
Correct	2	3	-	-	1	2	-	-	3	3	-	-
Partially correct	15	26	13	37	16	38	16	70	31	31	29	50
Wrong	7	12	5	14	14	34	-	-	21	21	5	9
Not aware	34	59	17	49	11	26	7	30	45	45	24	41
Awareness of Anemia												
Correct	4	7	-	-	-	-	-	-	4	4	-	-
Partially correct	4	7	-	-	10	23	2	9	14	14	2	4
Wrong	9	16	1	3	4	10	3	13	13	13	4	7
Not aware	41	70	34	97	28	67	18	78	69	69	52	89
Iron rich foods												
Correct	7	12	4	11	8	19	3	13	15	15	7	12
Partially correct	9	15	1	3	19	45	8	35	28	28	9	15
Wrong	19	33	15	43	12	29	2	9	31	31	17	29
Not aware	23	40	15	43	3	7	10	43	26	26	25	44
Importance of balanced diet												
Correct	22	38	12	34	18	43	17	74	40	40	29	50
Partially correct	10	17	3	9	18	43	1	4	28	28	4	7
Wrong	3	5	1	3	2	5	-	-	5	5	1	2
Not aware	23	40	19	54	4	9	5	22	27	27	24	41

3.1. Knowledge on basics of foods and nutrition

The students were given a set of questions regarding various aspects related to foods and nutrition and then they were asked to fill this questionnaire. This activity was done to know the level of their awareness regarding basics of foods and nutrition.

As per the data shown in Table ??, majorities of the boys (44%) and girls (50%) were able to correctly define food, mention the importance of a balanced diet (boy 40% and girls 50%) and also were able to identify consequences of an inadequate diet (boys 50% and girls 40%).

More than half of them had a partial knowledge regarding No. of meals to be consumed/day. Less than half of the boys (48%) gave partially correct answers regarding functions of food where as more than (60%) of the girls were not aware. About basic nutrients, boys (53%) had a higher knowledge as compared to the girls (45%).

Knowledge regarding definition of a balanced diet, concept of healthy foods and knowledge regarding anemia and sources of iron was very poor.

From the Table ??, it is clear that majority of the boys and girls had a poor knowledge regarding the basics of foods and nutrition.

4. Discussion

Present study has focused on knowledge aspects of basics of foods and nutrition among tribal school going adolescents. It was found that knowledge level on basics of foods and nutrition requires improvement. A Study was conducted by

Das & Bisai to assess the prevalence of under nutrition among Telaga adolescents in Orissa reported the mean BMI of children had shown a consistently increasing trend in both sexes from age of 13 years onwards. Moreover, there is a gender bias in favor of girls in higher mean BMI at all ages except 10 and 13 years. The overall prevalence of under nutrition was 28.60%. The rates were significantly higher among boys (37.59%) compared with girls (19.43%). In conclusion, nutritional status of the studied children is not impressive especially among early adolescent and boys, respectively. There is urgent need intervention strategy through community based nutrition awareness.⁶

ICRISAT after following established protocols revealed that both boys and girls lack basic awareness about food, nutrition health and overall well-being. When asked which foods contained energy, vitamins or proteins, none of the adolescents who participated in the focus group discussions (FGDs) were able to properly categorize the different foods according to their nutrients.⁷

Similar study was done by Gupta and Kochar et al, who concluded that nutrition education is an important measure to improve dietary habits and food choices of adolescents mainly girls as poor dietary habits and ignorance are the main reason for poor nutritional status of adolescent girls. It would not only improve health but the future generation would also be influenced as they are the future mothers.⁸ National data from NFHS 4 and CNNS data also depicts poor nutritional status of adolescent boys and girls.^{9,10}

One of the determinants of poor nutritional status is lack of correct knowledge about foods and nutrition, hence

sensitizing youth for the same is very crucial.

5. Conclusions

Knowledge of tribal school going adolescents regarding basics of foods and nutrition topics needs improvement though some of the topics appeared in school curriculum.. To increase the awareness regarding the same, more topics on foods and nutrition should be integrated in school curriculum of secondary and higher secondary divisions.

6. Source of Funding

None.

7. Conflict of Interest

None.

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