

## **Analysis of Nature and Extent of Nutrition Education Imparted to the Rural School Children**

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### ***Abstract***

*With an emphasis on the responsibilities played by teachers, parents, and Anganwadi workers, this study intends to analyse the existing practises of nutrition teaching in rural schools in Bihar, India. An ex-post facto research design was used for the study, which was carried out in the Bihar district of Arwal. Teachers, parents, and Anganwadi staff made up the 240 participants who were drawn at random. Data collection was done using questionnaires, which were pretested for validity and reliability. As well as identifying any gaps or areas for improvement, the obtained data were analysed to ascertain the common tactics and methodology utilised by educators, parents, and Anganwadi staff in delivering nutrition education. According to the study, parents used a variety of tactics to promote healthy eating habits in their kids, including giving them choices, giving nutritious foods catchy names, and making food appealing to the eye. For nutrition teaching, teachers mostly used lectures, discussions, and visual aids like nutrition charts and posters.*

**Keywords:** Nutrition education, Rural schools, Teaching materials, Teachers, Parents, Anganwadi workers.

## Background

It is impossible to exaggerate the value of nutrition education, particularly for the growth and development of children in rural regions. Understanding the type and scope of nutrition education being given to schoolchildren in Bihar, an Indian state noted for its primarily rural population, is of utmost importance. In this study, nutrition instruction in rural schools will be examined, with an emphasis on the responsibilities that teachers, parents, and Anganwadi workers play in this process. To encourage healthy eating habits, minimise malnutrition, and support general growth and development in children, nutrition education is essential. The need of education is even greater in rural communities when access to adequate healthcare and nutritional resources may be limited. To create effective methods for enhancing nutrition education among rural schoolchildren in Bihar, an evaluation of the current initiatives and the identification of potential gaps are important effective schools with pleasant school environments have made a big effort to connect with the families of their students to create outstanding cooperation. Maintain that for schools to be effective, there must be a strong and cooperative interaction between students, parents, teachers, and the community (Sanders, 2009).

Teachers play a crucial role in determining how children learn in rural schools. They have the capacity to contribute significantly to the dissemination of nutrition information and the encouragement of wholesome eating practises. Designing targeted interventions and support systems requires a thorough understanding of how instructors integrate nutrition education into their curricula and the methods they use. The eating habits and nutritional intake of a child are significantly influenced by parents as well. They are essential in preparing meals and setting up a setting that encourages healthy eating at home. We may learn more about the degree of awareness and engagement in families and pinpoint areas for development by examining the role of parents in nutrition education. A child's eating habits will continue to improve if the family models the improvements in behaviour and shares the same influences. (Epstein et al., 2001).

In terms of nutrition and education, school gardens can assist kids and their families in both rural and urban settings. As a platform for learning, school gardens should be viewed to promote nutrition and education rather than as a way to produce vast amounts of food or money. Students can learn how to grow, care for, harvest, and prepare healthful seasonal vegetables in the classroom, the garden, the kitchen, the school cafeteria, and the home. The experience increases the school community's environmental, social, and physical wellness while fostering a greater understanding

of how the natural world sustains us. The concept is supported by links to backyard gardens, which also provide opportunity for the school and the community to exchange information and expertise. (FAO, 2010 and 2015).

## Method

The present study, with the main aim of determine the of nature and extent of nutrition education being imparted to the rural school children in Arwal district of Bihar was conducted adopting an *ex-post facto* research design. An *ex-post facto* research is a systematic empirical enquiry in which the researcher does not have direct control over the variables because their manifestations have already occurred or because they are inherently not manipulatable (Kerlinger, 1964). Arwal district was purposively selected for the study. There are five blocks in the district. Three blocks will be randomly selected. From each block a cluster of rural schools was randomly selected and from each school cluster 30 children were randomly selected. Besides this, 90 parents of these selected children will be randomly selected. In addition, 30 teachers will be selected from these 3 schools clusters. Further 30 Anganwadi workers will be randomly selected. Total sample size of the study was 240.

There were 43 items made in total for the relevance test. A knowledgeable panel of judges reviewed the item statements to determine their applicability and chose those that would be tested in the final exam. The 43 items were presented to a panel of 30 judges who were experts in extension education with the request that they evaluate the application of each item. The judges were asked to react using a five-point scale with ratings of 5, 4, 3, and 1, highly relevant, relevant, undecided, less relevant, and not relevant. The relevancy score for each item was calculated by adding the ratings on the scale for each judge's comments. Two types of tests—relevancy percentage and frequency—were computed from the data for each item. The choices were made from the items that satisfied the minimum parameters (Relevancy% > 70, Relevancy Weightage > 0, and Mean relevancy score > 3.0). There were 17 total items chosen for parents, 16 for Parents and Anganwadi workers. The target population's knowledge, practises, and behaviours about nutrition were to be evaluated using these questions. Each question had two options for answers: "yes" or "no," allowing for a binary response.

A representative sample of teachers, parents, and Anganwadi workers in rural Bihar were given the questionnaire as part of the data collection procedure. The questionnaire was pretested on a small pilot sample before to the actual data collection to improve the reliability and validity of the results. This made it easier to spot any

questions that had questions that were unclear or had problems, which were then fixed to make the questions accurate and clear.

## Result and Discussion

### Nature and Extent of Nutrition Education Provided by the Parents

Table1 showing a significant portion of parents (93.33%) admitted to using red cherries, nuts, butter, and cream on food to make it more aesthetically pleasing. This finding suggests that attempts have been made to increase the appeal of nutritious food. According to 83.33% of parents, the strategy of promising a trip to fair if the child finishes their milk each day may encourage milk consumption.

The eating habits and nutritional awareness of children are greatly influenced by parents. The findings show that parents use a variety of methods to teach their children about nutrition. Parents frequently use techniques like letting kids make choices, giving nutritious food intriguing names, and making food look appealing. These procedures show a sincere effort to involve kids and make eating well interesting to them. The less frequent use of storytelling and persuading kids to keep fasts on festival eves, however, raises the possibility that these strategies may not be generally acknowledged or prioritised by parents. Similar studies from the FAO (2010, 2015) imply that the home, kitchen, cafeteria at school, and garden are all educational settings where children can learn how to domesticate, care for, harvest, and prepare healthful seasonal vegetables.

**Table 1. Nature and Extent of Nutrition Education Provided by the Parents**

Sl.no	Statement	f	%	Mean score	Rank
1	Do you allow your children to make choice between the healthy food?	54	60	0.60	VII
2	Do you use interesting names (word-play) for healthy food?	57	63.33	0.63	VI
3	Do you use red cherry, nuts, butter and cream on the food to make it very attractive?	84	93.33	0.93	I
4	Do you ever give the opportunity to children to help you in the kitchen?	69	76.66	0.76	III
5	Do you keep more healthy nutritious food rather than junk food in the almirah or fridge?	60	66.66	0.66	V

6	Do you give any rewards/ bait for eating healthy food?	63	70	0.70	IV
7	Do you tell the story of your children to encourage them to consume Bitter gourd, Bottle gourd, Pumpkin and other vegetables which don't look good but very nutritious?	33	36.66	0.36	XII
8	Do you take the help of Tv programme (cartoon), Tv advertisement to aware your children about healthy food?	63	70	0.70	IV
9	Do you convince your children to keep fast on the eve of festivals?	24	26.66	0.26	XIV
10	When you go for trip with your children do you brings home made food with you?	36	40	0.40	XI
11	Does your children have breakfast, lunch and dinner with you?	27	30	0.30	XIII
12	Does your children watching Tv while eating food?	48	53.33	0.53	IX
13	Do you pray for God before eating food?	42	46.66	0.46	X
14	Do you give junk food in few quantities in order to force your children to eat more fruits, vegetables and dry products?	51	56.66	0.56	VIII
15	Do you stop your children when they eating more than enough?	51	56.66	0.56	VIII
16	While you making the healthy food do you pay attention on colour, appearance and taste of food?	60	66.66	0.66	V
17	Do you apply the tactic that if you finish your milk daily then we will go for fair?	75	83.33	0.83	II

### **Nature and Extent of Nutrition Education Provided by the Teachers**

Table 2 demonstrates the prevalence of lectures as a teaching strategy, with 93.33% of instructors using lectures to instruct students about nutrition. Similarly, 93.33% of teachers organised discussions among the students on issues related to healthy eating. 90% of educators said they instruct children about nutrition using charts, posters, or other visual aids. 86.66% of teachers who addressed the topic indicated using books as a resource for nutrition instruction. 86.66% of teachers said they offered incentives or rewards to entice kids to eat healthy.

The results also provide insight into the practises now used by teachers, who are also very important in nutrition instruction. The findings demonstrate how nutrition education is delivered through a variety of resources, including visual aids, books, games, and programmes. This result is consistent with Kim and Kim's (2014) study that there were differences in the goals, topics, delivery methods, and effective strategies used in nutrition education for kids. In terms of nutrition education, the needs of teachers and parents were very different.

**Table 2. Nature and Extent of Nutrition Education Provided by the Teachers**

Sl.no	Statements	f	%	Mean score	Rank
1	Do you use any Nutrition chart, poster or other visual tools to teach the students?	27	90	0.9	II
2	Do you take the help of books to teach the children about nutrition education?	26	86.66	0.86	III
3	Do you offer the various types of games to enhance the nutritional knowledge of the children?	24	80	0.80	V
4	Do you arrange any nutritional program or nutritional week to provide the nutrition education?	25	83.33	0.83	IV
5	Do you ever bring the students in the garden to aware them about nutritious food?	18	60	0.60	VII
6	Do you take the help of Anganwadi workers to provide the nutrition education of the students?	25	83.33	0.83	IV
7	Do you engage students with cooking projects?	16	53.33	0.53	IX
8	Do you ever arrange the meeting with parents of students to aware them about nutritious food?	17	56.66	0.56	VIII
9	Do you deliver lecture to teach the students?	28	93.33	0.93	I
10	Do you arrange any debates on the topic of healthy food among the children?	28	93.33	0.93	I

11	Do you provide any type of rewards/ Bait of children to consume the healthy food?	26	86.66	0.86	III
12	Do you give any type of punishment / threat, If student consume unhealthy food?	19	63.33	0.63	VI
13	Do you send the learning materials (related from nutrition) to parents to teach the children?	18	60	0.60	VII
14	Do you bring local chefs to your school to teach student about healthy eating practice and local foods?	25	83.33	0.83	IV
15	Do you teach the students that how to read food label so they have the skills to make healthy choices at the grocery store or home?	15	50	0.50	X
16	Do you apply taste-test method on the students to aware them about various nutritious food?	12	40	0.40	XI

### **Nature and Extent of Nutrition Education Provided by the Anganwadi Workers**

Table 3 reveals that (100%) of the Anganwadi staff members claimed to have taught the pupils about nutrition using charts, posters, or other visual aids. Similarly, 100% of the employees said they used books to teach kids about nutrition education. All of the employees (100%) stated that they gave lectures to pupils about nutrition. Ninety-six percent (96%) of the staff reported using different games to improve the kids' dietary awareness. This result is in line with Murlidharan's (1984) assertion that most parents are unable to provide their children with much stimulation due to their own limitations. Therefore, if we want these kids to succeed in adulthood, compensating schooling for them seems to be crucial.

**Table 3. Nature and Extent of Nutrition Education Provided by the Anganwadi Workers**

S.no	Statements	f	%	Mean score	Rank
1	Do you use any Nutrition chart, poster or other visual tools to teach the students?	30	100	1	I
2	Do you take the help of books to teach the children about nutrition education?	30	100	1	I
3	Do you offer the various types of games to enhance the nutritional knowledge of the children?	29	96.66	0.96	II
4	Do you arrange any nutritional program or nutritional week to provide the nutrition education?	17	56.66	0.56	VII
5	Do you ever bring the students in the garden to aware them about nutritious food?	12	40	0.40	X
6	Do you take the help of Anganwadi workers to provide the nutrition education of the students?	24	80	0.80	V
7	Do you engage students with cooking projects?	13	43.33	0.43	IX
8	Do you ever arrange the meeting with parents of students to aware them about nutritious food?	29	96.66	0.96	II
9	Do you deliver lecture to teach the students?	30	100	1	I
10	Do you arrange any debates on the topic of healthy food among the children?	25	83.33	0.83	IV
11	Do you provide any type of rewards/ Bait of children to consume the healthy food?	24	80	0.80	V
12	Do you give any type of punishment / threat, if student consume unhealthy food?	15	50	0.50	VIII
13	Do you send the learning materials (related from nutrition) to parents to teach the children?	19	63.33	0.63	VI
14	Do you bring local chefs to your school to teach student about healthy eating practice and local foods?	27	90	0.90	III

<b>15</b>	Do you teach the students that how to read food label so they have the skills to make healthy choices at the grocery store or home?	12	40	0.40	X
<b>16</b>	Do you apply taste-test method on the students to aware them about various nutritious food?	12	40	0.40	X

## Conclusion

With a focus on the responsibilities played by teachers, parents, and Anganwadi workers, this research study sought to analyse the existing practises of nutrition teaching in rural Bihar schools. The findings showed that parents use a variety of tactics to encourage their kids to eat well. However, certain customs were less widespread, such as fasting on the eves of festivals or promoting the eating of healthy vegetables through storytelling. These results underline the necessity of focused initiatives to improve parental nutrition education procedures. It was discovered that teachers use a variety of teaching techniques to impart nutrition knowledge, including the use of visual aids, books, games, and debates. By offering fundamental nutrition and health services, Anganwadi workers have a big impact in rural communities. It is important to highlight that while this study was carried out in the Bihar district of Arwal, it is possible that the conclusions cannot be applied to other areas. Gaining a more thorough grasp of nutrition education practises in rural India might benefit from additional research in various districts and states.

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