International Journal of Home Science 2023; 9(1): 231-234

International Journal of Home Science

ISSN: 2395-7476
IJHS 2023; 9(1): 231-234

www.homesciencejournal.com
Received: 09-01-2023
Accepted: 14-02-2023

Aparajita Kishore
Research Scholar, Department of Home Science, B.R.A. Bihar University, Muzaffarpur, Bihar, India

Dr. Sushila Singh
Associate Professor, Department of Home Science, M.D.D.M. College Muzaffarpur, B.R.A. Bihar University, Muzaffarpur, Bihar, India

Corresponding Author:
Aparajita Kishore
Research Scholar, Department of Home Science, B.R.A. Bihar University, Muzaffarpur, Bihar, India

Impact of nutritional knowledge of parents on nutritional value of packed lunch (With special reference to school going children of Muzaffarpur District)

Aparajita Kishore and Dr. Sushila Singh

Abstract
Adequate, proper and balanced diet along with regular physical activities is the keys of good health. Children's lunch box provides one-third of the nutritional requirement of their body, while packing their lunch box, parents have to pay full attention that all the essential nutrients can be obtained by the child's body. A nutritionally balanced lunch box can be packed only when the parents have good nutritional knowledge. A total of 200 children (Age group – 6 -14 years) were selected for study through systematically random sampling. Study finding revealed that majority (72 percent) of the parents had satisfactory nutritional knowledge; while 28 percent of the parent's nutritional knowledge was not satisfactory. In present study Significant relationship was not found between parent's nutritional knowledge and protein, Calcium, Iron and vitamin 'D' consumption of the school going children of Muzaffarpur district.

Keywords: Packed lunch, nutrition, nutritional knowledge

Introduction
Background: Children need proper and adequate nutrients for a healthy and active life. Proper and appropriate dietary intake is important for nutrients under the dietary requirements of the children's body. Adequate, proper and balanced diet along with regular physical activities is the keys of good health. Due to rapid urbanization/globalization, insufficient knowledge about nutrition consumption of processed foods are Significant change the food behavior of children. Parents are increasing the amount of foods in children's lunch boxes which are high in energy, fat, sugar or salt/sodium and not providing enough fruits and vegetables and fiber-rich foods such as whole grains. Therefore, all these factors contribute to an unbalanced diet of school going children. The main dietary problem in children is the intake of inadequate/imbalanced diet. Low birth weight, protein-calorie (energy) malnutrition in children, and diet-related non-communicable diseases are the most common nutritional problems of public health importance in India. The Government of India launched the National School Meal Program Mid-Day Meal Scheme (MDM) in 1995 to provide healthy food to children during lunch time. This scheme is being run only in government schools; children of private schools are not given the benefit of this scheme, so even today the children of private schools bring their lunch from home. School going children are in growing age, in such condition, it is very important that parents provide them homemade fresh and nutritionally balanced food and always aware about his/her nutrition. It is often seen that in the rush to go school, parents manage to children's lunch by giving cookies, biscuits, Maggie or chips etc. in the lunchbox. Children eat such types of food very fondly, but these types of packed lunch always harm their health. Keeping in view the above said, the present study was carried out in Muzaffarpur district to assess the impact of nutritional knowledge of parents on nutritional value of packed lunch.

Methodology
The respondents of the study were 200 students grade 1-8 in 5 private schools (sunshine prep high school, DAV Public school, St. Joseph, S Senior Secondary school, Prabhat Tara, and

Holy Mission Sr. Sec. school) of Muzaffarpur district of Bihar. Through interview schedule technique information related to their socio-demographic details, personal information, dietary intake and parent's knowledge about nutrition and related factors of respondent were collected. To find out the nutritional knowledge of the parents, parents were asked 50 questions related to nutrition, the parents who answered at least 30 questions correctly were placed in the category of satisfactory nutritional knowledge and the parents who answered correctly less than 30 questions were placed in the category of unsatisfactory nutritional knowledge. Nutrients were calculated through food composition table from the standard of ICMR & NIN (2010). The results were compared with RDA given by ICMR (2020).

Results & Discussion

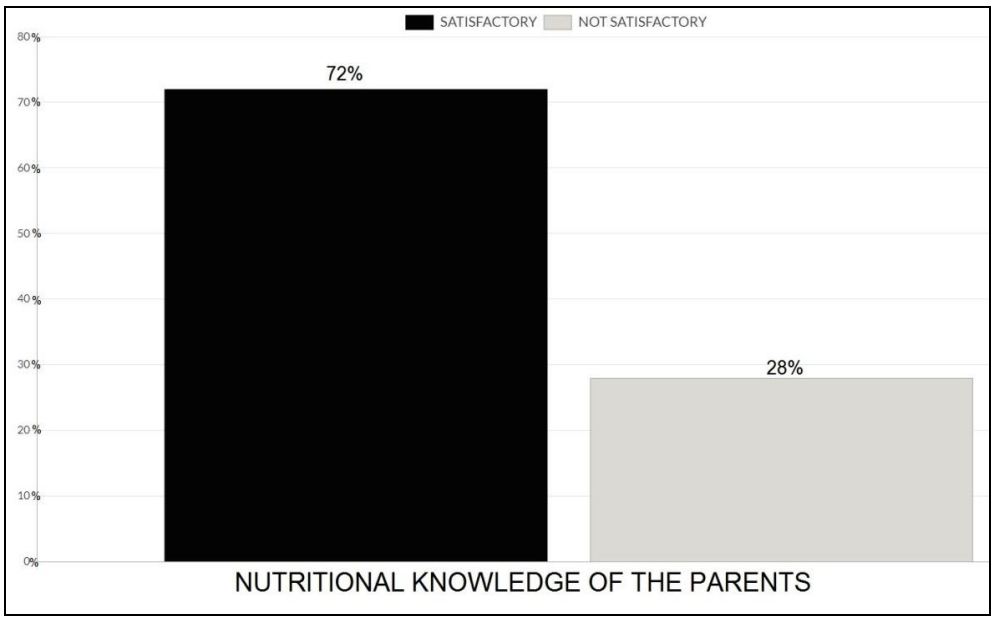

Fig 1: Nutritional knowledge of the parents

Figure-1 revealed the data on nutritional knowledge of parents. According to the table data majority (72 percent) of the parents had satisfactory nutritional knowledge; while 28 percent of the parent's nutritional knowledge was not satisfactory.

Table 1: Distribution of the Children's Intake of Protein according to their Parents Nutritional Knowledge

Protein (in lunch box RDA 8/12 g)							
Sr. No	Protein	Satisfactory nutritional knowledge		Not satisfactory nutritional knowledge		Chi-square	P-value
		F	%	F	%		
1	Below RDA	37	25.69	16	28.57	0.2907	.864709
2	As per RDA	78	54.17	28	50.00		
3	Above RDA	29	20.14	12	21.43		
Total		144	100.00	56	100.00		

Significance Level = 0.05
*Significant at $p < .05$

The table-1 indicates that 25.63 percent of the children whose parents had satisfactory nutritional knowledge were consuming less than RDA and 20.14 percent of children were taking more than that of the recommended allowance, only 54.17 percent of the children consuming as per RDA.
50 percent of the children whose parents had not satisfactory nutritional knowledge consuming protein as per RDA, while 28.57 percent of them were consuming below RDA, rest of them were consuming more than RDA.
Significant relationship was not found between parent's nutritional knowledge and protein consumption of children (The chi-square statistic 0.2907 and the *p*-value is .864709).

Table 2: Distribution of the children's intake of energy according to their parent's nutritional knowledge

Energy (in lunch box RDA 600/800 k.cal)							
Sr. No	Energy	Satisfactory nutritional knowledge		Not satisfactory nutritional knowledge		Chi-square	P-value
		F	%	F	%		
1	Below RDA	08	05.55	16	28.57	25.7763	<0.00001*
2	As per RDA	79	54.86	32	57.14		
3	Above RDA	57	39.58	08	14.29		
Total		144	100.00	56	100.00		

Significance Level = 0.05
*Significant at $p < .05$

Table- 2 revealed the data on energy consumption of the children, according to the data in category of satisfactory nutritional knowledge of parents more than half (54.86 percent) of the children were consuming energy as per RDA, 5.55 percent of them were consuming below RDA, while rest of them were consuming more than RDA. The table-20 also indicates that 28.57 percent of the children whose parents had not satisfactory nutritional knowledge were consuming less than RDA and 14.29 percent of children were taking more than that of the recommended allowance, only 57.14 percent of the children whose parents had not satisfactory nutritional knowledge were consuming as per RDA.

There is significant relationship was found between nutritional knowledge of parents and energy consumption of children (The chi-square statistic 25.7763 and the *p*-value is <0.00001).

Table 3: Distribution of the Children's Intake of Calcium according to their Parents Nutritional Knowledge

Calcium (in lunch box RDA 260/280 mg)							
Sr. No	**Calcium**	**Satisfactory nutritional knowledge**		**Not satisfactory nutritional knowledge**		**Chi-square**	**P-value**
		F	**%**	**F**	**%**		
1	Below RDA	58	40.28	24	42.86	0.5915	.743982
2	As per RDA	77	53.47	30	53.57		
3	Above RDA	09	06.25	02	03.57		
Total		144	100.00	56	100.00		

Significance Level = 0.05
*Significant at *p*< .05

Table- 3 revealed the data on calcium consumption of the children, according to the data in category of satisfactory nutritional knowledge of parents, 40.28 percent among the children in this category were consuming less than the recommended value. 6.25 percent of them were consuming more the recommended value, while rest of them were consuming as per RDA.

In category of not satisfactory nutritional knowledge of parents, 42.86 percent of the children were consuming less than the recommended value. 3.57 were consuming more the recommended value, while rest of them were consuming calcium as per RDA. Significant relationship was not found between parent's nutritional knowledge and protein consumption of children (The chi-square statistic 0.5915 and the *p*-value is .743982).

Table 4: Distribution of the Children's Intake of Vitamin 'A' according to their Parents Nutritional Knowledge

Vitamin A (in lunch box RDA 800/1100 IU)							
Sr. No	**Vitamin A**	**Satisfactory nutritional knowledge**		**Not satisfactory nutritional knowledge**		**Chi-square**	**P-value**
		F	**%**	**F**	**%**		
1	Below RDA	33	22.92	35	62.50	28.2085	<0.00001*
2	As per RDA	98	68.05	19	33.93		
3	Above RDA	13	09.03	02	03.57		
Total		144	100.00	56	100.00		

Significance Level = 0.05
*Significant at *p* < .05

Table-4 indicates the data on Vitamin A consumption of the children, according to the data in category of satisfactory nutritional knowledge of parents, 22.92 percent among the children in this category were consuming less than the recommended value. 9.03 percent of them were consuming more the recommended value, while rest of them (68.05 percent) were consuming as per RDA.

In category of not satisfactory nutritional knowledge of parents, more than half (62.5 percent) of the children were consuming less than the recommended value. 3.57 were consuming more the recommended value, while rest of them (33.93 percent) were consuming Vitamin 'A' as per RDA. (Distribution difference was statistically analyzed with Z value of 28.2085 and P value of <.00001) was highly significant.

Table 5: Distribution of the Children's Intake of Vitamin 'D' according to their Parents Nutritional Knowledge

Vitamin D (in lunch box RDA 120/140 IU)							
Sr. No	**Vitamin D**	**Satisfactory nutritional knowledge**		**Not satisfactory nutritional knowledge**		**Chi-square**	**P-value**
		F	**%**	**F**	**%**		
1	Below RDA	27	18.75	12	21.43	1.0681	.586224
2	As per RDA	103	71.53	41	73.21		
3	Above RDA	14	09.72	03	05.36		
Total		144	100.00	56	100.00		

Significance Level = 0.05
*Significant at *p* < .05

Table- 5 showed the data on vitamin D consumption of the children, according to the data in category of satisfactory nutritional knowledge of parents, near about three fourth 71.53 percent among the children in this category were consuming as per recommended value, while 9.72 percent of them were consuming more the recommended value, rest of them (18.75 percent) were consuming below RDA.

In category of not satisfactory nutritional knowledge of parents, 21.43 percent of the children were consuming less than the recommended value. 5.36 were consuming more the recommended value, while rest of them (73.21 percent) were consuming Vitamin 'D' as per RDA. Significant relationship

was not found between parent's nutritional knowledge and vitamin 'D' consumption of children (The chi-square statistic 1.0681 and the *p*-value is .586224).

Table 6: Distribution of the Children's Intake of Iron according to their Parents Nutritional Knowledge

Iron (in lunch box RDA 3/4 mg)							
Sr. No	**Iron**	**Satisfactory nutritional knowledge**		**Not satisfactory nutritional knowledge**		**Chi-square**	**P-value**
		F	**%**	**F**	**%**		
1	Below RDA	77	53.47	30	53.57	0.0149	.992563
2	As per RDA	56	38.89	22	39.29		
3	Above RDA	11	07.64	04	07.14		
Total		144	100.00	56	100.00		

Significance Level = 0.05
*Significant at $p < .05$

Table- 6 showed the data on iron consumption of the children, according to the data in category of satisfactory nutritional knowledge of parents, more than half (53.47 percent) of the children were consuming iron below recommended value, 7.64 percent of them were consuming more than recommended value, while rest of them (38.89 percent) were consuming iron as per RDA.

Above table also revealed that in category of not satisfactory nutritional knowledge of parents, only 39.29 percent of the children were consuming iron as per the recommended value. 7.14 of them were consuming iron more than the recommended value, while majority of them (53.37 percent) were consuming salt below RDA. Significant relationship was not found between parent's nutritional knowledge and iron consumption of children (The chi-square statistic 0.0149 and the *p*-value is .992563).

Table 7: Distribution of respondents according to consumption of nutritionally balanced lunch box

Consumption of nutritionally balanced lunch box	**Respondents**					
	Satisfactory nutritional knowledge		**Not satisfactory nutritional knowledge**		**Total**	
	F	**%**	**F**	**%**	**F**	**%**
Yes	78	54.17	19	33.93	97	48.50
No	66	45.83	37	66.07	103	51.50
Total	144	100.00	56	100.00	200	100.0

A nutritionally balanced lunch box meets children's nutritional needs without providing too much or too little of any require nutrient for good health. In present study nutritionally balanced lunch box considered as a healthy lunch box. Table-7 reveals the data of consumption of nutritionally balanced diet of the respondents. In children with satisfactory nutritional knowledge of parents more than half (54.17 percent) of them consumed nutritionally balanced lunch, while in children with not satisfactory nutritional knowledge of parents majority of them (66.07 percent) were bringing nutritionally imbalance lunch boxes. Thus the problem of nutritionally imbalanced diet is more in the Muzaffarpur town.

Conclusion

- In present study consumption of energy and vitamin 'A' of the respondents were significantly associated with nutritional knowledge of the parents. Unhealthy lunch boxes of children were found more in children whose parents had not satisfactory nutritional knowledge.

Recommendations

- Sustainable nutrition education and promotion programs should be developed to raise the public knowledge of the importance of good nutrition in children.
- There is a urgent need to aware the problem of malnutrition specially among children. The awareness could focus on areas like making healthy food choice.

References

1. Beard JL. Effectiveness and strategies of iron supplementation during pregnancy. American Journal of Clinical Nutrition. 2000;71 (suppl.):1288-1294.
2. Allen LH. Pregnancy and iron deficiency: unresolved issues. Nutrition Reviews. 1997;55:91-101.
3. Dunn JT. Iodine supplementation and the prevention of cretinism. Annals of New York Academy of Sciences. 1993;678:158-168.
4. Mall, Ranajana. Performance of Mid-Day Meal (MDM) on Nutritional Status of School Going Children in Muzaffarpur Town of Bihar. International Journal of Home Science. 2017;3(3):79-82.
5. Ahmad R, Ahmad A. Zulfiqar S, *et al*. Assessment of waist/hip ratio and its relationship with coronary heart disease in Community Hospital of District Swat. Pakistan Journal of Medical Science. 2007;23(4):585-588.
6. Bains P, Prabha M, Bharti B. Comparative Study of Public Vs Private School Children Regarding their Knowledge about Vitamin A. International Workshop on Micronutrients and Child Health, AIIMS. 2009;105:21.
7. Preetam MB, Anil PJ, Zile S, Johnson C, Murugan N, Sandeep A, *et al*. Study of childhood obesity among school children aged 6 to 12 years in Union Territory of Puducherry. Indian J Community Med. 2011;36:45-50.
8. Suvama, Itagi SK. Nutritional status and level of intelligence of school children. Karnataka J Agri. Sci. 2009;22(4):874-876.