Research Article

ASSESSMENT OF THE DIETARY HABITS AND ANTHROPOMETRIC MEASUREMENTS AMONG PRESCHOOL CHILDREN

Deelip S. Natekar*[1]., Shriharsha C[2] and Ninganagouda G. Patil[3]

[1]BVVS Sajjalashree Institute of Nursing Sciences, Bagalkot
[2]Department of Psychiatric Nursing, BVVS Sajjalashree Institute of Nursing Sciences, Bagalkot
[3]BLDEA's Shri B.M. Patil Institute of Nursing Sciences, Vijayapura

A R T I C L E   I N F O

A B S T R A C T

Background: Under nutrition contributes to nearly half of all deaths in under five children and is widespread in Asia and Africa. This translates into the unnecessary loss of about 3 million young lives a year. Under nutrition puts children at greater risk of dying from common infections, increases the frequency and severity of such infections, and contributes to delayed recovery. Hence it is very important to assess the dietary habits and anthropometric measurements of Preschool Children to screen for malnutrition.

Aims and Objectives: The study aims at assessing the dietary habits and anthropometric measurements of preschool children to find the association between the dietary habits and nutritional status of preschool children.

Materials and methods: Dietary habits of preschool children were assessed by a structured rating scale in an interview of parents of preschool children. Anthropometric measurements like weight, height and mid-arm circumference were taken to determine the nutritional status of preschool children with help of Z score obtained by entering the data into WHO Anthro software.

Results: Results show that, 63% of preschool children had average dietary habits and 37% of them had poor dietary. Assessment of Nutritional Status according to anthropometric measurements reveal that, 43% of preschool children fell under normal nutritional status according their weight for age ($\leq$ -2 to +2 Score), 46% of preschool children had normal nutritional status according their height for age ($\leq$ -2 to +2 Score), 66% of preschool children had normal nutritional status are to their m mid arm circumference for age ($\leq$-2 to +2 Score), 66% of preschool children had normal nutritional status according to BMI for age ($\leq$-2 to +2 Score), and 64% of preschool children had normal nutritional status according to their Weight for height ($\leq$-2 to +2 z score). Significant association was found between Dietary habits and Weight for age (χ^2 =6.84, P<0.05), Mid arm circumference for age (χ^2 =4.36, P<0.05), BMI for age (χ^2 =7.83, P<0.05), Weight for height (χ^2 =6.9, P<0.05). Significant association was found between dietary habits and Father Education (x^2=7.9, P<0.05) and Type of house (x^2=8.24, P<0.05).

Conclusion: Dietary habits of preschool children are strongly associated with their nutritional status. Hence the dietary habits should be improved to enhance their nutritional status.

INTRODUCTION

Children are vital to the nation's present and its future. Mounting evidence that health during childhood sets the stage for adult health not only reinforces this perspective, but also creates an important ethical, social, and economic imperative to ensure that all children are as healthy as they can be. Healthy children are more likely to become healthy adults.[1] Under nutrition contributes to nearly half of all deaths in under five children and is widespread in Asia and Africa. A nationwide survey called the RSOC conducted by the ministry of women and child development in 2013-14 in league with UNICEF showed that the proportion of underweight children in India was 29.4%, and that of stunted children 38.7%.[3] Malnutrition has been one of the enduring enigmas of contemporary India. Despite years of rapid economic growth, child malnutrition rates remained unchanged for years. The World Bank estimates that India is ranked 2nd in the world of the number of children suffering from malnutrition. The UN estimates that 2.1 million Indian children die before reaching the age of 5 every year - four every minute mostly from preventable illnesses such as diarrhea, typhoid, malaria, measles and pneumonia. Every day, 1,000 Indian children die because of diarrhea alone.[4]

Corresponding author: **Deelip S. Natekar**
BVVS Sajjalashree Institute of Nursing Sciences, Bagalkot

Anthropometry is the most frequently used method to assess the nutritional status of individuals or population groups. Measurements of nutritional anthropometry are based on growth in children and body weight changes in adults.[5]

Statement of the Problem: "A Study to Assess the Dietary Habits and Anthropometric Measurements among Preschool Children in a selected rural area at Bagalkot District".

Objectives

1. To assess the dietary habits of preschool children.
2. To assess the anthropometric measurements of preschool children.
3. To find out the association between dietary habits and nutritional status of preschool children according to their anthropometric measurements.
4. To find out the association between dietary habits and selected socio-demographic variables of preschool children.

Hypothesis

Hypothesis will be tested at 0.05 level of significance

H_1: There will be a significant association between the dietary habits and nutrition status of preschool children according to their anthropometric measurements.

H_2: There will be a significant association between dietary habits and selected socio-demographic variables of preschool children.

MATERIALS AND METHODS

Source of data: In this study the data will be collected from mothers of preschool children and preschool children in a selected rural area of Bagalkot District.

Research design: Descriptive associative survey design was used for this study

Setting: The study is conducted at Kamatagi Village of Bagalkot District.

Population: Population includes preschool children

Method of data collection: Structured rating scale was used to assess the dietary habits and nutritional status was assessed by measuring anthropometric parameters like height, weight and mid arm circumference.

Sampling method: Sample for the study was selected by convenient sampling technique.

Sample size: Sample size comprise of 100 preschool children.

Inclusion criteria for sampling

- Preschool children residing at selected rural area
- Children with the age group of 3-5 years

Exclusion criteria for sampling

- Preschool children suffering long term diseases.
- Preschool children suffering with acute illness

RESULTS

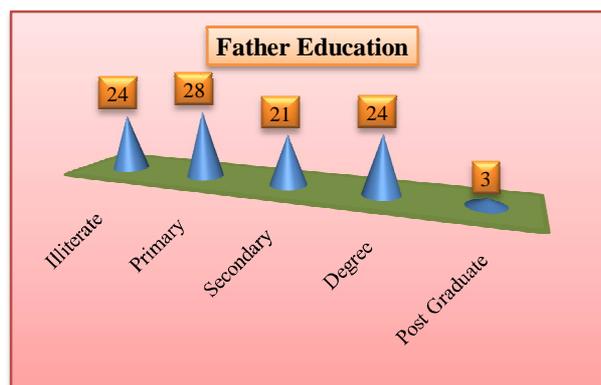**Part 1: Description of socio demographic characteristics of sample.**

Fig 1 Percentage wise distribution of preschool children according to their Father's Education
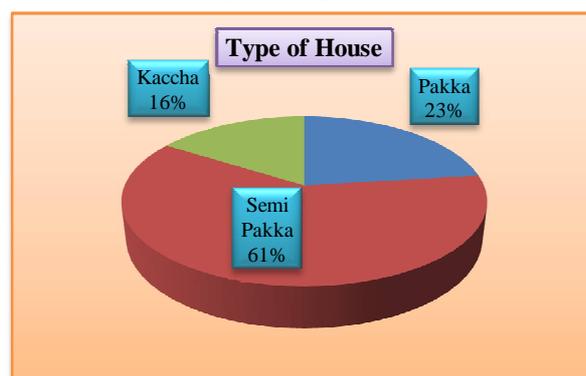

Fig 2 Percentage wise distribution of preschool children according to their Type of House

Part-2 Assessment of levels dietary habits of preschool children

Table No.1 Levels of dietary habits of preschool children

N=100

Levels of dietary habits	Range of score	No. of respondents	Percentage
Poor dietary habits	0-60	37	37%
Average dietary habits	61-90	63	63%
Good dietary habits	91-115	0	0

Assessment of levels of dietary habits of preschool habits shows that majority (63%) of preschool children had average dietary habits and 37% of them had poor dietary habits there were no preschool children with good dietary habits. (Table No.1)

Part 3: Assessment of anthropometric measurements of preschool children

Table No. 2 Nutritional status of preschool children according to Z score of Weight for Age

N=100

Sl. No.	Levels of nutritional status	No. of respondents	Percentage
1.	Above normal (≥+2 Z Score)	01	1%
2.	Normal (≤-2 to +2 Z Score)	43	43%
3.	Moderate (-2 to -3 Z Score)	22	22%
4.	Severe (>-3 Z Score)	34	34%

The above stated facts related to nutritional status of preschool children according to their weight for age clearly depicts that majority (43%) of preschool children fell under normal nutritional status according their weight for age(≤ -2 to +2 Z Score). (Table No. 2).

Table No. 3 Nutritional status of preschool children according to Z score of Height for Age

N=100

Sl. No	Level of Nutritional status	No. of responds	Percentage
1.	Above normal (≥+2 Z Score)	01	1%
2.	Normal (≤-2 to +2 Z Score)	46	46%
3.	Moderate (-2 to -3 Z Score)	23	23%
4.	Severe (>-3 Z Score)	30	30%

The above table regarding nutritional status of preschool children according to Height for age clearly depicts that, most (46%) of preschool children had normal nutritional status according their height for age ($\leq$ -2 to +2 Z score (Table No.3)

Table No. 4 Nutritional status of preschool children according to Z score of Mid arm circumference

N=100

Sl. No.	Level of nutritional status	No. of respondents	Percentage
1.	Above normal (≥+2 Z Score)	00	0%
2.	Normal (≤-2 to +2 Z Score)	66	66%
3.	Moderate (-2 to -3 Z Score)	31	31%
4.	Severe (>-3 Z Score)	3	3%

Finding related to nutritional status of preschool children according to their mid arm circumference for age shows that, majority (66%) of preschool children had normal nutritional status are to their m mid arm circumference for age ($\leq$-2 to +2 Z score). (Table No.4)

Table No. 5 Nutritional status of preschool children according to Z score of BMI for age

N=100

Sl. No.	Level of nutritional status	No. of respondents	Percentage
1.	Above normal (≥+2 Z score)	00	0%
2.	Normal (≤-2 to +2 Z score)	66	66%
3.	Moderate (-2 to -2 z score)	22	22%
4.	Severe (>-3 Z score)	12	12%

Assessment of nutritional status of preschool children according to BMI for age reveals that, majority (66%) of preschool children had normal nutritional status according to BMI for age ($\leq$-2 to +2 Z score). (Table No. 5)

Table No. 6 Nutritional status of preschool children according to Z score of Weight for height

N=100

Sl. No	Level of nutritional status	No .of respondents	Percentage
1.	Above normal (≥+2 Z score)	00	00%
2.	Normal (≤-2 to +2 Z score)	64	64%
3.	Moderate (-2 to -3 Z score)	20	20%
4.	Severe (>-3 Z score)	16	16%

Above table clearly depicts that, majority (64%) of preschool children had normal nutritional status according to their Weight for height ($\leq$-2 to +2 Z score). (Table No.6).

Part 4: Association between dietary habits and nutritional status according to anthropometric measurements.

Findings related to association between dietary habits & nutritional status of preschool children shows that significant association was found between dietary habits Weight for age, Mid arm circumference for age, BMI for age and Weight for height. (Table No.7)

Table No. 7 Association between dietary habits and nutritional status according to anthropometric measurements N=100

Sl. No.	Nutritional status as per anthropometric measurements	Degree of freedom	Chi-square value	Table value	Significance
1.	Weight for age	2	6.84	5.99	S P<0.05
2.	Height for age	2	1.8	5.99	NS P>0.05
3.	Mid arm circumference for age	1	4.36	3.84	S P<0.05
4.	BMI for age	2	7.83	5.99	S P<0.05
5.	Weight for height	1	6.9	3.84	S P<0.05

Df= Degree of freedom,
S=Significant,
NS=Non significant

Part 5: Association between the dietary habits of preschool children and their selected socio-demographic variables

Table No. 8 Association between dietary habits of preschool children & their selected socio-demographic variables.

N=100

Sl. No	Socio demographic variable	DF	Chi square value	Table value	Significance
1.	Age	2	2.38	5.99	NS P>0.05
2.	Gender	1	2.59	3.84	NS P>0.05
3.	Religion	1	0.21	3.84	NS P>0.05
4.	No. of siblings	2	3.21	5.99	NS P>0.05
5.	Father education	3	7.9	7.81	S P<0.05
6.	Mother education	2	5.47	5.99	NS P>0.05
7.	Father occupation	3	6.03	7.81	NS P>0.05
8.	Mother occupation	1	0.06	3.84	NS P>0.05
9.	Type of family	1	0.52	3.84	NS P>0.05
10.	Income	2	3.31	5.99	NS P>0.05
11.	Type of house	2	8.24	5.99	S P<0.05

Df= Degree of freedom,
S=Significant,
NS=Non significant

Findings related to association between dietary habits and selected socio demographic variables of preschool children reveals that, significant association was found between dietary habits and Father education and Type of house . (Table No. 8)

Recommendations

- A similar study can be conducted for a large sample to generalize the findings for a larger population
- A similar study can be done in different settings
- A similar study can be done in different age group of children.

CONCLUSION

The present study shows with majority of preschool children had poor and average dietary habits. The study recommends that children need proper assessment for nutritional status regularly and maintain the normal nutrition status.

References

1. George K.A., Kumar, N.S., Lal, J.J. et al. Anaemia and nutritional status of preschool children in Kerala. *Indian J Pediatr* (2000) 67: 575. doi:10. 1007/BF02758483.
2. Sankeshwari RM, Ankola AV, Tangade PS, Hebbal MI. Association of socio-economic status and dietary habits with early childhood. *Eur Arch Paediatr Dent.* 2013 Jun; 14(3):147-53. doi: 10.1007/s40368-013-0035-6. Epub 2013 May 17.

3. Veena SR, Krishnaveni GV, Srinivasan K, Wills AK, Hill JC, et al. Infant feeding practice and childhood cognitive performance in South India. *Arch Dis Child.* 2010 May; 95(5):347-54. doi: 10.1136/adc. 2009.165159. Epub 2009 Nov 27.

4. Ghosh S, Sengupta PG, Mandal SK, Manna B, Sikder SN, Sirkar BK. Feeding practices. *Indian J Public Health.* 1994 Apr-Jun; 38(2):77-80.

5. Awasthi, N.N., Kaushik, A. & Mathur, B.D. Feeding and rearing practices. *Indian J Pediatr* (1983) 50: 33. doi:10.1007/BF02753437.

How to cite this article:

Deelip S. Natekar (2017) 'Assessment of the Dietary Habits and Anthropometric Measurements among Preschool Children ', *International Journal of Current Advanced Research,* 06(08), pp. 5310-5313.
DOI: http://dx.doi.org/10.24327/ijcar.2017.5313.0696

****