The Pharma Innovation Journal 2020; 9(12): 358-361

www.ThePharmaJournal.com

The Pharma Innovation

ISSN (E): 2277- 7695
ISSN (P): 2349-8242
NAAS Rating: 5.03
TPI 2020; 9(12): 358-361

www.thepharmajournal.com
Received: 24-08-2020
Accepted: 06-10-2020

Dr. Daneshwari Onkari
Assistant Professor,
Department of Home Science,
Shri Dharmasthala
Manjunatheshwara College,
Ujire, Dakshina Kannada,
Karnataka, India

Babitha
Students, Department of Home
Science, Shri Dharmasthala
Manjunatheshwara College,
Ujire, Dakshina Kannada,
Karnataka, India

Gayathri N
Students, Department of Home
Science, Shri Dharmasthala
Manjunatheshwara College,
Ujire, Dakshina Kannada,
Karnataka, India

Kavitha
Students, Department of Home
Science, Shri Dharmasthala
Manjunatheshwara College,
Ujire, Dakshina Kannada,
Karnataka, India

Corresponding Author:
Dr. Daneshwari Onkari
Assistant Professor,
Department of Home Science,
Shri Dharmasthala
Manjunatheshwara College,
Ujire, Dakshina Kannada,
Karnataka, India

Nutritional status of school children

Dr. Daneshwari Onkari, Babitha, Gayathri N and Kavitha

Abstract
Nutritional status is the condition of health of an individual, influenced by nutrient intake and its utilization in the body. Nutrition of primary school children is of paramount importance because the foundation for their life time health, strength and intellectual vitality is laid during this period. With this view the study on "Nutritional status of school children" was conducted during the year 2019-2020 in rural and urban area of Beltangadi Taluka. 120 samples were randomly selected. Among these 60 samples were from urban area and 60 samples were from rural area. The correlation design was used with the aim to know the relationship between nutritional status and selected independent variables. The differential design was used to know the difference between nutritional status of rural and urban areas children. Variables assessed were, personal characteristics and familial characteristics. Structured Personal Schedule, Socio-Economic Status Scale Developed by *Agrawal et al.,* (2005) and Nutritional status by Anthropometric Measurements were used to collect different information of the sample for the study. Frequency, correlation, t test and regression analysis were used for analyzing the data. The results revealed that, 55.0 per cent, 50.0 per cent and 52.5 per cent of the rural, urban and total children belonged to underweight category of nutritional status respectively and 45.0 per cent, 50.0 per cent and 47.5 per cent of rural, urban and total children belonged to normal weight category of nutritional status respectively. There was significant relation and difference between nutritional status and locality. Age of the child found to be significantly predicting the nutritional status of children in Belthangadi taluk. It explained 5.3 per cent of variance in nutritional status of children. Even locality has found to be predicting nutritional status.

Keywords: Nutritional status, anthropometry, height, weight

Introduction
Nutritional status is the condition of health of an individual, influenced by nutrient intake and its utilization in the body. Nutrition of primary school children is of paramount importance because the foundation for their life time health, strength and intellectual vitality is laid during this period. It is a dynamic period of their physical growth as well as of their mental development.

In developing countries like India, various forms of malnutrition affect a large segment of population. Both macro and micro nutrient deficiencies are of important concern. Inadequate nutrition among primary school children may lead to improper development of their body and mind resulting in growth retardation, iron deficiency anemia, poor academic performance and development of psychosocial deficiencies and poor health in them are among the major causes of low school involvement high absenteeism, early dropout and poor classroom performance.

According to UNICEF data, 90 per cent of developing world's undernourished children lives in Asia and Africa while 40 per cent of the worlds malnourished live in India. The search for 2015, in developing world, approximately 146 million children underweight, out these 57 million children live in India. According to national family health survey (2005-2006), in India the prevalence of wasted, status and underweight children was 19.8 per cent, 48 per cent and 42.5 per cent respectively and Uttar Pradesh the prevalence of wasted, status and underweight children was 14.8 per cent, 56.8 per cent and 42.4 per cent respectively.

Primary school age is the period of dynamic physical growth and mental development. Research has shown that poor nutritional status result in low school enrolment, high absenteeism, early dropout and unsatisfactory classrooms performance. Well-nourished children are proved perform better in school and are able to achieve their full physical and mental potential. Several studies have been conducted worldwide on nutritional status of children of all ages, in Nigeria, a good number of studies have shown a high prevalence of undernutrition among children. However, over nutrition is also an emerging health challenge in the country with this background the study is undertaken with objectives, to study the

nutritional status of school children, to know the relationship between nutritional status and selected independent variable and to assess the impact of selected variables on nutritional status

Materials and Methods

The study on "Nutritional status of school children" was conducted during the year 2019-2020 in rural and urban area of Beltangadi Taluka. Beltangadi city was considered as urban population and Ujire was considered as rural area. In Beltangadi, there are 11 schools and 7 schools found in Ujire. From these schools, 120 samples were randomly selected. Among these 60 samples were from urban area and 60 samples were from rural area. The correlation design was used with the aim to know the relationship between nutritional status and selected independent variables. The differential design was used to know the difference between nutritional status of rural and urban areas children.

Variables assessed were, personal characteristics included gender, age, birth order, number of siblings. Familial characteristics included family type, family size, caste, locality and socio economic status. Structured Personal Schedule, Socio-Economic Status Scale Developed by *Agrawal et al*., (2005) and Nutritional status by Anthropometric Measurements were used to collect different information of the sample for the study. Frequency, correlation, t test and regression analysis were used for analyzing the data. Operational definition of nutritional status is "it is the condition of health of a person that is influenced by the intake and utilization of nutrients. It was assessed though BMI (weight in kgs divided by height in square meters), WHO classification (2007)".

Results and Discussion

The demographic information of rural and urban children is presented in Table 1. The total numbers of samples were 120. Among these 60 (50%) were from rural area and 60 were from urban area. In rural area, 55.0 per cent were boys. In urban area, 33.3 per cent were boys. Totally, 44.2 per cent were boys and 55.8 per cent girls. Age was categorized as, 8-10 years and 11-13 years. Totally, 35.8 per cent were found in the age range of 8-10 years and 64.2 per cent in 11-13 years of age. As per birth order, 43.3 per cent, 46.7 per cent and 45.0 per cent, were first born in rural area, urban area and total sample respectively. Similarly 56.7 per cent, 53.3 per cent, and 55.0 per cent were last born rural area, urban area and total sample. About 5.0 per cent, 25.0 per cent and 15.0 per cent of the sample of children were single children in rural area, urban area and total sample respectively, 63.3 per cent in rural area, 51.7 per cent in urban area and 57.5 per cent at total had one sibling. But 31.7 per cent, 23.3 per cent and 27.5 per cent had 2 or more number of siblings in Belthangady taluk. It was observed that majority of the households were nuclear in both rural and urban area is 73.3 per cent and 86.7 per cent (totally 80.0%).

Majority of the children were from small size family. (*i.e.* 58.3% in rural area, 68.3% in urban area and 63.3% total) followed by medium sized family and large size families in rural, urban and total of Belthangady taluk). About 70.8 per cent of the children were from lower middle socio-economic status and only 29.2 per cent were from upper middle socio-economic status. In rural and urban 63.3 per cent and 78.3 per cent were from lower socio-economic status, 36.7 per cent and 21.7 per cent were from upper socio-economic status respectively.

Table 1: Demographic information of rural and urban children

N=120

S. No.	Variables	Rural (n=60)		Urban (n=60)		Total (N=120)	
		F	%	F	%	F	%
1.	**Gender**						
	Male	33	55.0	20	33.3	53	44.2
	Female	27	45.0	40	66.7	67	55.8
2.	**Age (years)**						
	8-10	20	33.3	23	38.3	43	35.8
	11-13	40	66.7	37	61.7	77	64.2
3.	**Birth order**						
	First born	26	43.3	28	46.7	54	45.0
	Later born	34	56.7	32	53.3	66	55.0
4.	**No of siblings**						
	Nil	3	5.0	15	25.0	18	15.0
	One	38	63.3	31	51.7	69	57.5
	2 and more	19	31.7	14	23.3	33	27.5
5.	**Family type**						
	Nuclear	44	73.3	52	86.7	96	80.0
	Joint	16	26.7	08	13.3	24	20.0
6.	**Family size**						
	Small	35	58.3	41	68.3	76	63.3
	Medium	16	26.7	12	20.0	28	23.3
	Large	09	15.0	07	11.2	16	13.3
7.	**Socio-economic status**						
	Upper high	-	-	-	-	-	-
	High	-	-	-	-	-	-
	Upper middle SES	22	36.7	13	21.7	35	29.2
	Lowe middle SES	38	63.3	47	78.3	85	70.8
	Poor middle	-	-	-	-	-	-
	Poor	-	-	-	-	-	-

Percentage distribution of areas of nutritional status of children is presented in table 2. 55.0 per cent, 50.0 per cent and 52.5 per cent of the rural, urban and total children belonged to underweight category of nutritional status respectively and 45.0 per cent, 50.0 per cent and 47.5 per cent of rural, urban and total children belonged to normal weight category of nutritional status respectively. None of the children found in overweight and obese category of nutritional status. The similar results were found by Prakash *et al*., (2016) [4], revealed that all most all children were found in underweight and normal weight and no incidence of overweight was observed in government schools. Asmare *et al.*, (2018) [18] revealed that under nutrition was more prevalent among school age children.

Table 3 indicates percentage distribution and comparison of nutritional status of children by locality. 55.0 per cent of rural children found in underweight category followed by normal weight (45.0%) category of nutritional status. In case of urban area, 50.0 per cent each were found in underweight as well as normal weight category of nutritional status. There was significant relation and difference between nutritional status and locality. As per the mean values, children from urban area found to have better nutritional status than rural children. The results are on par with the study conducted by Karak *et al.*, (2018) [3]. They found as the rural school going children were suffering from malnutrition than their counterparts.

Table 2: Percentage distribution of nutritional status of school children

Nutritional Status/Locality	Rural		Urban		Total	
	F	%	F	%	F	%
Under weight	33	55.0	30	50.0	63	52.5
Normal weight	27	45.0	30	50.0	57	47.5
Over weight	0.0	0.0	0.0	0.0	0.0	0.0
Obese	0.0	0.0	0.0	0.0	0.0	0.0

Table 3: Percentage distribution and comparison of nutritional status of children by locality

Variables		Nutritional status			X2	R	M±SD	t value
		Under weight	Normal Weight	Total				
Locality	Rural	33(55.0)	27(45.0)	60(100.0)	0.301	0.209*	14.13±1.63	2.319*
	Urban	30(50.0)	30(50.0)	60(100.0)			14.97±2.27	

Percentage distribution and comparison of nutritional status of children by gender is presented in table 4. About 60.4 per cent and 46.3 per cent of boys and girls were in underweight category of nutritional status. 39.6 per cent and 53.7 per cent of boys and girls respectively found in normal weight category of nutritional status. Aminga *et al.*, (2015) [1] found that male and female children were equally malnourished. However higher rate of stunting was reported among male children. Mushonga *et al.*, (2014) showed that more males among primary school children were both wasted and stunted than female.

Table 4: Percentage distribution and comparison of nutritional status of children by gender

Variables		Nutritional status			r	M±SD	t value
		Under weight	Normal Weight	Total			
Gender	Male	32(60.4)	21(39.6)	53(100.0)	0.099	14.33±1.79	1.082
	Female	31(46.3)	36(53.7)	67(100.0)		14.73±2.17	

Figures in parenthesis indicate percentages

Table 5 indicates percentage distribution and comparison of nutritional status of children by age. Among 8-10 years, about 53.5 per cent of them were found in underweight category of nutritional status followed by normal weight category (46.5%). Among 11-13 years, about 46.5 per cent of them were found in underweight category of nutritional status followed by normal weight category (48.1%). There was significant relation as well as difference was observed. As per mean values, children from 11-13 years of age were having better nutritional status than 8-10 years old children. Siddique (2013) [5] revealed a direct correlation between height and weight of children with their age.

Table 5: Percentage distribution and comparison of nutritional status of children by age

Variables		Nutritional status			X2	r	M±SD	F value
		Under weight	Normal Weight	Total				
Age (years)	8-10	23(53.5)	20(46.5)	43(100.0)	0.026	0.231*	14.08±1.81	3.709*
	11-13	40(51.9)	37(48.1)	77(100.0)			14.81±2.08	

Figures in parenthesis indicate percentages

The predictor variables of nutritional status of children are presented in table 6. Among all the independent variables age of the child found to be significantly predicting the nutritional status of children in Belthangadi taluk. It explained 5.3 per cent of variance in nutritional status of children. Even locality has found to be predicting nutritional status.

Table 6: Predictor variables (step wise regression) of nutritional status of children

Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.735	1	25.735	6.630	.011[a]
	Residual	458.032	118	3.882		
	Total	483.767	119			

a. Predictors: (Constant), AGE

b. Dependent Variable: BMI

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.231[a]	.053	.045	1.97018	.053	6.630	1	118	.011

Excluded Variables[b]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	SES	-.139[a]	-1.546	.125	-.141	.976
	Gender	.086[a]	.963	.337	.089	.997
	Birth order	-.006[a]	-.065	.948	-.006	.995
	Family size	-.030[a]	-.328	.743	-.030	.996
	Family type	.026[a]	.290	.772	.027	.998
	No. of siblings	-.070[a]	-.767	.445	-.071	.961
	Locality	.173[a]	1.922	.057	.175	.968

Conclusion

About 55.0 per cent, 50.0 per cent and 52.5 per cent of the rural, urban and total children belonged to underweight category of nutritional status respectively and 45.0 per cent, 50.0 per cent and 47.5 per cent of rural, urban and total children belonged to normal weight category of nutritional

status respectively. None of the children found in overweight and obese category of nutritional status. There was significant relation and difference between nutritional status and locality. As per the mean values, children from urban area found to have better nutritional status than rural children. Age of the child found to be significantly predicting the nutritional status of children in Belthangadi taluk. It explained 5.3 per cent of variance in nutritional status of children. Even locality has found to be predicting nutritional status.

References

1. Aminga RM, Serrem CA, Mbagaya M. Determination of Nutritional Status of Pre-School Children in Urban and Rural Households using Anthropometric Measurements: A Case Study of Kabarnet Division, Kenya. IOSR Journal of Research & Method in Education 2015;5(5):46-52.
2. Asmare B, Taddele M, Berihun S, Wagnew F. Nutritional status and correlation with academic performance among primary school children, northwest Ethiopia. BMC Res Notes 2018;11:805-1-6.
3. Karak P, Maiti R, Das P, Karmakar A. Assessment of nutritional status of school children in rural and urban areas of Bankura, West Bengal. International Journal of Pharmaceutical Sciences and Research 2018;9(1):338-345.
4. Prakash PS, Kiranmayi Y, Parvathi R. A Comparative Study of Nutritional Status in Government *vs.* Private School Children. J Community Med Health Educ. 2016;6:5-1-4.
5. Siddique S, Ayub M, Shore N, Usman T, Shakila Z. Nutritional status of primary school children in Abbottabad. J Ayub Med Coll Abbottabad 2013, 25(1-2).