



ASSESS THE PHYSICAL GROWTH AND NUTRITIONAL STATUS OF SCHOOL GOING CHILDREN

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ABSTRACT Physical growth of children is widely recognized as one of the most sensitive and reliable indicator of health and nutritional status in the human population. Childhood and adolescence are stages of great interest in the study of diet and assessment of nutrition, because it is a period during which the dietary habits of the future adult are consolidated. One of the major health problems in many developing countries is malnutrition (under nutrition and over nutrition) which creates a lasting effect on the growth, development, and physical fitness of a person. Non experimental method was considered. Observational method is used. A sample size of 100 of 4th to 7th standard students of 9-12yrs of age was selected and observational profile was developed by investigator for data collection. Finding of the study indicates that most of the children are suffering from mild nutritional deficiencies and physical growth is not up to that standard.

KEYWORDS : Physical Growth, Nutritional Status, Assess, School Going Children

INTRODUCTION

The growth of children in a population reflects their nutritional status and indirectly determines their standard of living. Growth is influenced by diet intake and expenditure and general health condition of an individual. The child's growth status depends upon the health of the family and the parent's socio economic, educational, cultural and emotional background. It is found that the present changes in social and family structure that is industrialization, urbanization nuclear family system, working mothers etc. affects the growth status of toddlers. Healthy marriage is an important element of support because it supports both the mother and the mother child relationship. Mothers' poor knowledge especially regarding growth of the child and poverty may results in low growth for the entire growth period resulting in stunted stature.

A comparison study on the nutritional status by Haboubi GJ and Shaikh RB. (2009) "A comparison of the nutritional status of adolescents from selected schools of South India and UAE". A total 2459 adolescent boys and girls between the age of 10 to 16 years old were selected as samples. The result showed, regardless of gender, the rate of stunting was higher in Indian adolescents from India (25.5%-51%) compared with Indian adolescents in UAE (3.1%-21%). The thinness was also more in India (42%-75.4%) when compared to adolescents living in UAE (4.5%-14.4%). The study concluded improved economic conditions favors better expression of genetic potential for physical growth.

OBJECTIVE

- Assess the physical growth of school going children.
- Assess the nutritional status of school going children.
- Associate physical growth and nutritional status of school going children with the socio demographic variables.

HYPOTHESES

- H1- There will be significant relationship between physical growth and nutritional status of school going children with the demographic variables.

METHODOLOGY

Non experimental research design was carried out to observe the physical growth and nutritional status and its relationship. The investigator selected the middle and primary school of Johnsons Hindi medium school, Narmada road, Jabalpur, M.P. Sample size for this study was 100 school going children aged 9-12yrs, male and female. Purposive sampling techniques were used. The tools used to assess the physical growth and nutritional status of school going children and another one is to assess the demographic variables of parents. Tool consists of 3 parts.

01. Observational profile for physical growth

Weight of child, Height of child, Head circumference, Chest circumference

02. Observational profile for nutritional status

A ppearance of child, Posture, Gait, Body odor, Mid arm circumference, conditions of nail, deformity, Good cap refill, Condition of hair, Teething Number, Texture, Caries, Gum color, Tongue color, Eyes acuity, Eye lids, Conjunctiva, Sclera color, Pupils reaction to light, Lips color, Symmetry, Skin color, Temperature, Turgor, Intake of meal.

03. Demographic status of parents

Age, Sex, Type of family, Occupation of father, Occupation of mother, Total income, Education of father, Education of Mother, During illness treatment, Place of delivery, detail of vaccination, Tendency to go to school, Diet of children, Number of children.

RESULTS

Table no. 1

Association of physical variables with demography

S. no	Variables	Total	df	Chi value	P value	Infer-ence
1	Weight of child					
	15kg-22kg	74	1	100	0	MS
	23kg-30kg	26				
	31kg-38kg	0				
	>38 kg	0				
2.	Height of child					
	112-122cm	56	2	2.998	0.223	NS
	122-132cm	30				
	133-142cm	14				
	>142cm	0				
3.	Head circumference					
	46-48cm	15	3	13.51	0.003	S
	49-51cm	68				
	52-54cm	14				
	55-57cm	3				
4.	Chest circumference					
	57-62cm	78	3	4.752	0.19	NS
	63-68cm	13				
	69-74cm	5				
	>74cm	4				

Table No. 2

Association of Nutritional Status with Demographic Variables

S.no	Variables	Total	df	Chi value	P value	Inference
1	Appearance of child					
	Body type		2	200	0	NS
0	Ectomorph	23				
	Mesomorph	61				
	Endomorph	16				

2.	Posture					
	Erect	100	1			NP
	Kyphosis	0				
	Scoliosis	0				
	Lordosis	0				
3.	Gait					
	Spastic	0	1			NP
	Steppage	0				
	Wadding	0				
	Coordinated	100				
4.	Body Odor					
	Foul odor	1	3	4.615	0.594	NS
	Stinky	2				
	Unhygienic	17				
	Hygiene	80				
5.	Mid arm circumference					
	Male					
	14.5-15.5cm	0				
	15.5-16.5cm	0				
	16.5-17.5cm	4				
	>17.5cm	31				
	Female					
	<16 cm	0	2	2.539	0.28	NS
	16.5-17.5cm	0				
	17.5-18.5cm	9				
>15.5cm	56					
6.	Conditions of nail					
	Normal	0	1			NP
	Anemic	0				
	Terry nails	0				
	Dirty nails	100				
7.	Deformities					
	Ingrowing nails	0	1			NP
	Green Nails	0				
	Black nails	0				
	Nil	100				
8.	Good cap refill					
	< 2 sec	94	2	7.143	0.128	NS
	3 min	0				
	2 sec	6				
	>2sec	0				
9.	Condition of hair scalp					
	Clean	62	3	14.05	0.029	NS
	Dandruff	24				
	Lice	14				
	Injury	0				
10.	Texture					
	Silky	21	3	4.228	0.645	NS
	Wooly	28				
	Dry	22				
	Coarse	9				
11.	Teething number					
	Less than 16	1	3	9.568	0.144	NS
	15-20	8				
	20-24	79				
	>24	12				
12.	Caries					
	2-4 teeth	91	3	3.808	0.702	NS
	4-6 teeth	6				
	6-8 teeth	1				
	8 & above	2				
13.	Gums Color					
	Coated white	12	3	300	0	NS
	Pink	59				
	Pale	25				
	Blue	4				

14.	Tongue Color					
	Coated white	22	2	12.20	0.015	S
	Pink	61				
	Pale	170				
	Blue					
15.	Eyes acuity Visual loss					
	Nil	99	1	0.645	0.724	NS
	Short sight	1				
	Long sight	0				
	Vision loss	0				
16.	Eyes lids					
	Swelling	3	1	1.977	0.372	NS
	Normal	97				
	Thinning of skin	0				
	dehydrated	0				
17.	Conjunctiva color					
	Red	19				
	Pale	49				
	Yellow					
	White					
18.	Sclera					
	Pale	39	3	5.977	0.425	NS
	Yellow	3				
	White	55				
	Red	3				
19.	Pupils					
	Reaction to light					
	Constrict	100	1			NP
	Dilate	0				
	No reaction	0				
20.	Lips color					
	Pink	52	2	12.40	0.014	S
	Black	37				
	Pale	11				
	Blue	0				
21.	Symmetry					
	Cleft lip	0	1	15.64	0	S
	Cleft palate	0				
	Normal	74				
	Cracked	26				
22.	Skin color					
	Wheatish	49	3	5.966	0.427	NS
	Black	39				
	White	11				
	pink	1				
23.	Temperature					
	Cool	4	3	18.60	0.004	5
	Warm	42				
	Feverish	9				
	Normal	45				
24.	Turgor					
	Mild dehydration	0	1	0.645	0.724	NS
	Moderate dehydration	1				
	Severe dehydration	0				
	Normal	99				
25.	Intake of meal					
	700-1000kcl	46	2	13.26	0.03	S
	1100-1400kcl	47				
	1500-1800kcl	7				
	1900-2100kcl	0				

DISCUSSION

Findings related to the physical status of school going children Among 100 school going children,74 (74%) were 15kg-22kg of weight, 56 (56%) were in the height of 112cms-122cms, 68 (68%) of their head circumference were 49cms-51cms, 78 (78%) of their chest circumference were 57cms-62cms.

Findings related to the nutritional status of the school going children

Among 100 school going children, Appearance of the child 61(61%) were under the body type of mesomorph, 100(100%) were having erect posture, 100(100%) were coordinated, 80(80%) were hygienic, Mid are circumference(Male) 87(87%) were having greater than 17.5cms, Mid arm circumference Female,100 (100%) were having greater than 18.5cms, 100(100%) were having dirty nails, 94(94%) were having in growing nails, 62(62 %) capillary refill was less than 2sec, 29(29%) had injury on the scalp, 79(79%) had dry hair, 91(91%) were having less than 16teeth , 59 (59%) were having 4-6 caries teeth, 59(59 %) had pink gums, 61(61 %) had pink tongue, 99(99 %) had normal vision , 97(97 %) had normal eyelids, 49(49 %) had pale conjunctiva , 55 (55 %) had white sclera, 88(88 %) pupils constricted, 52 (52 %) had pink lips, 74 (74 %) had normal symmetry of lips, 49(49 %) had Wheatish color skin, 45(45 %) had normal temperature, 99 (99 %) had normal turgor , 47(47 %) were having the intake of meal as 1100-1400kcal of meal.

Findings related to the demographic variables of the school going children

Among 100 school going children 32(32 %)were under the age group of 9yrs, 65(65 %) were female children , 75(75 %)were belonging to nuclear family ,36(36%) were business men, 51(51%) were having the occupation of agriculture , 65(65%) were having the income of Rs. 05000/-, 45(45%) education of father till high school, 39(39%) education of mother was till high school, 75(75%) treat their children with private doctors, 62(62%) had delivery at hospital, 95(95%) had vaccinated, 96(96%) are satisfied by coming to school, 55(55%)were non vegetarians, 55(55%)were non-vegetarians, 94(94%) mother take food decisions, 66(66%) takes food by themselves, 58(58%)do exercise alternatively, 78(78%) have 4-8members indwelling in homes, 44(44%)of mother are 31-35years , 55(55%)of father are 35 and above years.

CONCLUSION

After the detailed analysis the study leads to the following conclusions. Physical growth of school going children is directly affects the nutritional status of school going children. The observational profile of the child reveals that most of the children were under weight and nutrition is not adequate .It was found effective when verbal information was given the mother responded well. The associations were done between the physical growth and nutritional status with the demographic variables by statistical methods.

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