A Study on the Nutritional Status of Children in ICDS below five years in Kalvarayan Hills.

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ABSTRACT *Good nutrition is very important for normal growth, development and maintenance of health throughout the life of the children. In early stage of life, the children body requires quality and quantity of food to meet nutrient value for physical growth and development of children. Most of the children are affected by malnutrition due to low socio economic background. Consequently, India ranks low in health indicator and also it affects the next generation through long tern chronic malnutrition. Therefore, Government of India has introduced the ICDS scheme to provide food to needy children. A cross-sectional study has been conducted by using chi-square to determine the dependent variable and independent variables. The paper studies the utilization of supplementary on the nutritional status of children and also to determine household factors affecting the nutritional status of children.*

Keywords: *Mal-nutrition, ICDS, Children, Low Socio Economic, Physical growth*

INTRODUCTION:

Adequate nutrition is a basic right, but globally it remains unmet for many under-five-year old children. A majority of children are raised in families living in extreme condition of poverty. Nutrition status of children is the reflection the nations' economic development and health sector. According WHO (2011), about 178 million children under five years worldwide are too short for their age group; while 115 million are underweight. Protein Energy Malnutrition has been identified as a major health and nutrition problem in India as well. It not only leads to childhood mortality and morbidity but also leads to permanent impairment of physical and possibly mental growth of those who survive.[1] Frequent episodes of diarrhea are also often responsible for malnutrition among children.

The Governments of India has several large scale supplementary feeding programmes and it's aimed at overcoming specific deficiency diseases through various ministries. Supplementary Nutrition is one of the Integrated Child Development Service Scheme of Anganwadi Worker, which directly linked with the prevention and control of malnutrition in children and also this is an independent activity carried out by the anganwadi worker in relation to the promotion of children's health. A package of services are provided to the beneficiaries includes supplementary nutrition, vitamin A dose, immunization, referral service, preschool education and nutrition health education to women under the scheme.

OBJECTIVES:

1. To study the utilization of supplementary nutritional on the nutritional status of children under ICDS.
2. To assess the household factors affecting the nutritional status of children in study area.
3. To study about the relationship between the nutritional status and incidence of morbidity like fever and diarrhea observed in the sample.

MATERIAL AND METHODS:

The cross-sectional study was conducted in the month of November 2017 to find out the prevalence of under-nutrition among tribe children in Kalvarayan Hills area of Villupuram district in Tamil Nadu. Kalvarayan Hills region has been selected for the study, because the researcher has observed that the region has highest number of mal-nutritional children among ST population. The ICDS of Kalvarayan Hills block is spread out to 90 Anganwadi Centre in all villages. Total two villages were selected randomly and the total sample consists of 50 samples from the study area. The primary data was collected through well-structured

[1] Khokar, A., Singh, S,. Talwar, R., et al (2003). A study of malnutrition among children aged 6 months to 2 years from a resettlement colony of Delhi. Indian Journal Medicines Science, 57 (7), 286-289.

questionnaire and simple random sampling has been adopted to collect the samples who are attending the anganwadi centre for the study. Almost all the children belong to Hindu and ST caste.

DATA ANALYSIS:

Anthropometric measurements were taken by using standard procedure. Data was coded and entered into a computer SPSS software 20 version, and Z-scores were calculated for weight-for-age (WAZ) using WHO software. The table therefore represents normal and underweight for each category. Relationships among dependent and independent were analyzed using Chi square test using SPSS software.

RESULT: The cross sectional investigation was carried out on 50 preschool age group children (28 Male and 22 Female) of Kalvarayan Hill and carried out in two different AWC tribal The obtained and analyzed data present in this tables. Out of 50 children, 31 children of them were undernourished, while 19 children were normal.

Table 1: Association of underweight with Socio-demographic

Variables		Underweight		Association
		Present (31)	Absent (19)	
Gender	Female	14 (63.6)	8 (36.4)	.833
	Male	17 (60.7)	11(39.3)	
Age	24-36	19 (67.9)	9 (32.1)	.471
	37-48	10 (58.8)	7 (41.2)	
	49-60	2 (40)	3 (60)	
Regular AWC	Yes	7 (70)	3 (30)	.560
	No	24 (60)	16 (40)	
Income	Rs.<5,000	19 (86.4)	3 (13.6)	
	Rs.5,000-10,000	9 (60)	6 (40)	.001
	>10,000	3 (23.1)	10 (76.9)	
Family size	1-4	10 (62.5)	6 (37.5)	.360
	5-8	18 (58.1)	13 (41.9)	
	Above 8	3 (100)	0 (0.0)	
Birth order	1	12 (63.2)	7 (36.8)	.879
	2	11 (57.9)	8 (42.1)	
	3 and above	8 (66.7)	4 (33.3)	

Source: Primary Data

Table 1.1 presented the frequency and percentage of socio demographic factors. In our study, there is no significant or consistent association between the nutritional status and gender. Although the proportional of malnutrition was found to be slightly more in females (63.4%) than in males (60.7%), it might be due to the prevailing cultural beliefs and practices of the community which favor the male child over females. Maximum numbers of children were underweight (67.9) were between 24 and 36 months, followed by 37-48 months (58.8), and 49-60 months(40). Regarding the income, 86 per cent of children's parent gets below 5000 per month and it is significant ($p<0.05$). Majority of children (66.7 per cent) was more than third child of the family, 57.9 per cent was the second child and 63.8 per cent was first born child. 10 children were attending Anganwadi regularly and taking supplementary nutrition, while 40 were not attending the Anganwadi regularly. The major reason was not attending AWC regular is that the mother goes to forest for collecting wood and there is no significant association was found between the nutritional status of children and attending anganwadi regular.

Table 2: Association of underweight with household factors

Variable		Underweight		Association
		Present (31)	Absent (19)	
Electricity	Yes	26 (57.8)	19 (42.2)	.065
	No	5 (100)	0 (0.0)	
Cooking Fuel	LPG	9 (50)	9 (50)	.190
	Wood	22 (68.8)	10 (31.2)	
Separate Kitchen	Yes	24 (63.2)	14 (36.8)	.764
	No	7 (58.3)	5 (41.7)	
Water source	Public pipe	11 (36.7)	19 (63.3)	.000
	Well	20 (100)	0 (0.0)	

Water purify	Boiling	0 (0.0)	11(100)	.000
	Cloth	6 (54.5)	5 (45.5)	
	Nothing	25 (89.3)	3 (10.7)	
Toilet	Yes	1 (6.2)	15 (93.8)	.000
	No	30 (88.2)	4 (11.8)	
Waste	Dust-bin	1 (100)	0 (0.0)	.000
	Burning	0 (0.0)	15 (100)	
	Throw away	30 (88.2)	4 (11.8)	

Source: Primary Data

Out of 50 samples, 45 household have the electricity facilities and remaining 5 household do not have access to electricity. 68.8 per cent of children are stunted, who were using wood as cooking fuel. It was noticed that 38 respondents' household have a separate kitchen and remaining 12 respondents do not. Nearly 89.3 per cent of children are stunted who were not adopting any purification process than the children whose households used water after boiling (0.0, almost nil). It was seen that almost 54.5 percent of children, whose households used to filter the water with a cloth were stunted. Stunting (100) was higher among children whose households use well water for drinking. Water source and purification are significant at 5 per cent of level ($p<0.05$). Almost 88.2 of children are stunted who don't have the access to toilet facilities and who throw always the waste in backyard. Both dependent variable are significant at 5 per cent of level ($p<0.05$).

Table 3: Association of underweight with Morbidity

Variables		Underweight		Association
		Present (31)	Absent (19)	Association
Fever	Yes	10 (90.9)	1 (9.1)	.082
	No	21 (53.8)	18 (46.2)	
Diarrhea	Yes	10 (90.9)	1 (9.1)	.025
	No	21 (53.8)	18 (46.2)	

Source: Primary Data

The incidence of morbidity was relative low for fever (n=11) and diarrhea (n=11). Regarding the proportion of nutritional status, it was found that 90.9 per cent of children are stunted who had fever and 90 percent of children are stunted who had diarrhea in the previous 90 days of the survey. There is a no significant relationship between the fever and underweight of the children, it means fever does not affect on the weight of the children at 5 percentage of level whereas there diarrhea, there is significance relationship between the episode of diarrhea and underweight of children in the study area.

CONCLUSION:

This study was concluded to determine nutritional status and related factor among preschool children in Kalvarayan Hills. The prevalence of under nutrition was higher among the study area. In spite of implementing the ICDS, the tribals are not sending their children regular to anganwadi due to workload; the underweight is reported to be higher. In this study, a higher income shows a good nutritional status of the children. When looking at the association of impact with source of water, purification of water and toilet facilities with nutritional status, statistical significant was found in this study. So, more focused programme should be implemented to provide safe drinking water and sanitation in the backward areas.

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