

Nutritional Status of ICDS and Non-ICDS Children

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KEYWORDS Nutrition. Nutritional Status. Anthropometric Measurements. Diet

ABSTRACT The present study was dividing into two groups' i.e 15 preschool children who receiving supplement diet in the ICDS Centres and their mother and preschool children not receiving supplement diet in the ICDS centers and their mothers of Resham Ghar Colony of Jammu city (Jammu and Kashmir State). Purposive sampling technique was used. Interview schedules, check list and recall dietary method was used to collect the data. Result reveals that all the ICDS centres were providing supplementary nutrition to children, pregnant women and nursing mothers who enrolled in the Anganwadi. Most of the mothers had the knowledge about the nutritional status of children and got information from the Anganwadi workers. Data shows that all the Anganwadi workers were assessing the nutritional status of children by taking height and weight in Anganwadi. Majority of the respondents were not aware regarding the maintenance of records in the Anganwadi centres but they had very positive attitude towards ICDS Centres and all the mothers observed some changes in the children after enrolled in the ICDS centres. Result indicates that majority of the mothers whose children did not attend any ICDS centres told that it was not necessary for the children to attend any ICDS centres and did not have any knowledge regarding supplementary foods and nutritional needs of the children. Majority of the mothers were immunized their children from the Primary Health Centres. All the respondents observed some changes in the children. It was found that children who attended Anganwadi centres had good health or appearance as compared to their counterparts. It was also observed that ICDS children had good dietary intake as compared to the children who did not attend ICDS centres.

INTRODUCTION

Human resource is a key factor in development. The foundations of man's physical, mental and social development are laid in early childhood. Whatever the one gets in formative years of life contributes much for the effective adjustment as adult during the later part of life. A child having understanding and encouraging parents, congenial family atmosphere, nutritious food and proper socialization will certainly score better when compared to others who are not having these facilities. But because of poverty, ignorance and other reasons our children are deprived of the basic facilities of good nutrition, health and education.

Nutrition is the process by which living organism receives and utilizes the material necessary for the maintenance of its function as well as renewal of its function. Nutrition plays a key role in physical, mental and emotional development of children and much emphasis has been given to provide good nutrition to growing population especially in formative years of life. Poor and inadequate nutrition leads to malnutrition, which ultimately results into morbidity and mortality.

Even the health status of a person is decided by his/her nutritional status. Nutritional status refers to the state of health of an individual as it is affected by the intake and utilization of nutrients. Once the nutritional status is poor one becomes vulnerable to ill health and he loses resistance and diseases fighting capacity. There are four major methods i.e. Anthropometric measurements, clinical examination, biochemical assessment and dietary survey which are used to assess nutritional status of individuals and population groups.

Measurement techniques need to be standardized so that different studies may become comparable. One of the most important objectives of kinanthropometry is to observe variations in various body measurements among different individuals and among different populations. Assessment of growth and development is an important part of the clinical examination. The common failure to measure weight and more often height, hampers nutritional assessment of growth and change. Anthropometric data are most vulnerable when accurately measured and recorded over a period of time. Measurements such as height, weight, head circumference, and skin fold thickness reflect present nutritional status. Clinical examination, therefore, is one of the simplest methods to assess nutritional status. It involves looking for changes (clinical signs/

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symptoms) in the body, which are indicative of a particular deficiency. For example bitot spots and night blindness in children to suggest the possibility of vitamin –A deficiency, paleness, lethargy in women to suggest the possibility of anemia.

Biochemical assessment deals with measuring the level of essential dietary constituents (nutrient concentration metabolite) in the body fluids (blood and urine normally), which is helpful in evaluating the possibility of malnutrition. For example, a measure of the level of Hb in the blood is helpful in evaluating the possibility of iron deficiency anemia; a measure of the level of thiamine in the urine reflects the intake of thiamine in the diet, and a measure of the level of vitamin A in blood reflects intake and reserve of vitamin A in the body. Biochemical assessment basically works on the principle that any variations in the quantity and composition of the diet is reflected by changes in the concentration of nutrients or their compounds in tissues and body fluids, and/or by appearance or disappearance of specific substance (i.e. metabolites). Biochemical assessment, therefore, is very useful for assessing nutritional status as well as for the purpose of diagnosis. Correlating clinical findings with biochemical tests can surely lead to right diagnosis.

METHODOLOGY

Sample: The sample of the study consists of children who attend the ICDS Centres and their mothers residing from the Resham Ghar colony of Jammu city (Jammu and Kashmir State) and children who not attend any ICDS Centres and their mothers from the same locality of Jammu city.

Sample Size: The sample of the study divided into 2 groups – 1. 15 Children attending ICDS Centre and their mothers and 2. 15 Children not attending ICDS Centre and their mothers.

Criteria of the Sample: 1. *Age group:* Only those children in the age group of 1-3 years were included in the sample. 2. *Residence:* Only those children belonging to Resham Ghar Colony of Jammu City of Jammu and Kashmir State were included. 3. *Socio-economic Status:* Sample was drawn among the low socio economic strata.

Sampling Technique: Purposive sampling technique was used to select the sample.

Tools Used: 1. Interview schedule, 2.

Checklist and 3. Dietary recall method

Procedure of Data Collection: The data was collected by personal visits in the ICDS Centres and in homes for the home based samples. Rapport should be established with the sample and then collect all the information which is required for the study. Interview schedule, Checklist and Dietary recall method were used for the data collection.

Data Analysis: The responses obtained were coded, tabulated and then percentages were drawn and Content analysis was done. Comparative study and mean was also done.

RESULTS AND DISCUSSION

Table 1, reveals that the median age of the mothers was 27 years. The median educational qualification of the mother's whose children attended ICDS Centres were middle pass and the median occupation were laborer whereas the median educational qualification of the mother's whose children not attended ICDS Centres were illiterate and all were housewives. The median types of family of the mother's whose children attended ICDS Centres were nuclear and their median family income were 2,500 whereas the

Table 1: Background information of the mothers

<i>Mothers whose children were enrolled in the ICDS Centres</i>	<i>Median</i>
Age	27 years
Educational qualification	Middle
Occupation	Laborer
Types of family	Nuclear
Family Income	2500
<i>Mothers whose children were not attending any ICDS Centres</i>	
Age	27 years
Educational qualification	Illiterate
Occupation	Housewife
Types of family	Joint
Family Income	Less than 1500

median types of family of the mother's whose children not attended ICDS Centres were belonging to joint family and their median family income were less than 1,500.

Table 2 shows that majority of the respondents (93%) were enrolled their children in the age group of 1-3 years. Most of the mothers (54%) had got information regarding the ICDS

Table 2: Information regarding ICDS Centres from the mothers whose children attending the centre

Information	n=15	%age
<i>Age of Enrolment of the Child</i>		
1 year	10	67
2 year	4	26
3 year	1	7
<i>Time to Get Knowledge About ICDS Centre</i>		
Before 6months	2	13
1 year	5	33
2 years or more	8	54
<i>Source of Getting Knowledge</i>		
Anganwadi workers	10	67
Neighbors	4	26
Doctors	1	7
<i>Have Knowledge About Nutritional Status of the Children</i>		
Yes	11	73
No	4	27
<i>Source of Getting Knowledge About Nutritional Status of the Child</i>		
Anganwadi workers	12	80
Doctors	3	20
<i>Have Knowledge About Assessment of Nutritional Status of the Children</i>		
Yes	10	67
No	5	33
<i>Awareness Regarding Records</i>		
Yes	3	20
No	12	80
<i>Place from Child Consume Food</i>		
At Anganwadi	13	87
At Home	2	13
<i>Mothers Attitude About Nutritional Supplements</i>		
Positive	10	67
Negative	5	33
<i>Mothers Assessment on Nutritional Status of the Child After Attending ICDS Centre</i>		
Height gain	7	47
Weight gain	5	33
Health gain	2	13
All above	1	7

Centres from more than 2 years and 67% got information from the Anganwadi workers.

Results reveal that all the centres were providing supplementary nutrition to children, pregnant women and nursing mothers enrolled in the Anganwadi. All the mothers had knowledge about supplementary nutrition provided to their children at Anganwadi centres.

The table 2 also reveal that 73% of the mothers had the knowledge about the nutritional status of children and (80%) got information from the Anganwadi workers. Data shows that all the Anganwadi workers were assessing the nutritional status of children by taking height and weight in Anganwadi centres and more than half (57%) of the respondents had knowledge

regarding how to assess the nutritional status of the children. 87% of the mothers told that their children had supplementary food at Anganwadi centres. Majority of the respondents (80%) were not aware regarding the maintenance of records in the Anganwadi centres. 67% mothers had very positive attitude towards ICDS Centres and all the mothers observed some changes in the children after enrolled in the ICDS centres.

Table no 3 indicates that majority of the mothers (67%) told that it was not necessary for the children to attended any ICDS centres. 67% of the respondents did not have any knowledge regarding supplementary foods and nutritional needs of the children. It was observed that not even a single mother was given any type of supplements to the children. Majority of the mothers (80%) were immunized their children from the Primary Health Centres. All the respondents observed some changes in the children and according to their views it was natural that child grow and gain their height and weight.

Table 4 reveals that the height of the majority of the children who attended ICDS centres (80%) and 67% children who not attended ICDS centres was 2'-3' feet. The weight of the children attending ICDS centres (60%) and the children who did not attend any ICDS centres (67%) was 10-15 kg. 46% of the ICDS children had lustrous hair whereas non ICDS children (33%) had lack

Table 3: Information of the mothers about not sending the child in the ICDS Centres

Information	N=15	%age
<i>Reasons Behind not Sending the Child in the ICDS Centres</i>		
Restriction at home	2	13
Not necessary	10	67
Child reluctant to attend ICDS	3	20
<i>Knowledge Regarding Supplement Foods and Nutritional Needs of the Child</i>		
Yes	5	33
No	10	67
<i>If Yes, Source of Knowledge</i>		
Doctors	1	20
Neighbors	1	20
Anganwadi workers	3	60
<i>Views About Some Changes in the Child</i>		
Height gain	5	33
Weight gain	7	47
Health gain	1	7
All above	2	13
<i>Place of Immunization</i>		
Anganwadi Centre	2	13
Primary Health Centre	12	80
Hospital	1	7

Table 4: Clinical examination of the children

<i>Clinical examination</i>	<i>Children attended ICDS Centres</i>		<i>Children not attended ICDS Centres</i>		χ^2
	<i>n=15</i>	<i>%age</i>	<i>N=15</i>	<i>%age</i>	
<i>Height (in feet)</i>					
1-2	-	-	4	26	5.2*
2-3	12	80	10	67	
3-4	3	20	1	7	
<i>Weight (in kg)</i>					
5-10	1	7	5	33	77**
10-15	9	60	10	67	
15-20	5	33	-	-	
<i>Appearance of the Hair</i>					
Lack of luster	1	7	5	33	5.4
Dull and dry	1	7	3	20	
Lustrous	7	46	4	27	
Soft hair	6	40	3	20	
<i>Appearance of the Face</i>					
Dry and dull	1	7	3	20	3.6
Wrinkled	1	7	1	7	
Rashes	2	13	5	33	
Normal and soft	11	73	6	40	
<i>Appearance of the Eyes</i>					
Inability to see in dim light	1	7	3	20	2.8
Not face bright light	0	0	0	0	
Without any spot	2	13	2	13	
Lustrous	11	73	7	47	
<i>Appearance of the Lips</i>					
Cracked	7	47	3	20	0.8
Swollen	2	13	4	27	
Lesion and rough	3	20	3	20	
Pink and Soft	2	13	2	13	
<i>Appearance of the Tongue</i>					
Bright red	8	64	6	40	0.28
Cracked	2	13	2	13	
Inflammation	4	27	4	27	
Pink	2	13	3	20	
<i>Appearance of the Teeth</i>					
Discoloration	4	27	6	40	3.06
Decaying	-	-	1	6	
Pain	2	14	2	14	
Original color	8	52	9	60	
White	3	20	3	20	
<i>Appearance of the Gums</i>					
Bleeding	2	14	-	-	4.4
Swelling	1	7	4	27	
Painful	4	26	5	33	
Pink	1	7	2	13	
<i>Appearance of the Nose</i>					
Inflamed	9	60	4	27	22
Without inflamed	5	33	9	60	
<i>Appearance of the Nails</i>					
Easily breaks	10	67	6	40	2
Hard	2	13	1	7	
White spots	1	7	2	13	
Soft	9	60	9	60	
Pale	1	7	-	-	
<i>Appearance of the Skin</i>					
Dry	2	13	3	20	3
Patched	2	13	5	33	
Rashes	-	-	1	7	
Soft and smooth	1	7	1	7	
	12	80	8	53	

Table 4: Contd.

<i>Clinical examination</i>	<i>Children attended ICDS Centres</i>		<i>Children not attended ICDS Centres</i>		χ^2
	<i>n=15</i>	<i>%age</i>	<i>N=15</i>	<i>%age</i>	
<i>Appearance of the Legs and Feet</i>					
Swollen	1	7	3	20	24
Not flexible	-	-	1	7	
Problem in walking	2	13	2	13	
Flexible	12	80	9	60	

* Significant difference at .10 level of significance ** Significant difference at .025 level of significance

of lustrous hair. Majority of the children (73% and 80%) attending Anganwadi centres had soft and normal face and skin as compared to the children (40% and 53%) who were not enrolled in any Anganwadi centres. Most of the ICDS children (73%) and only 47% of non-ICDS children had normal eyesight. More than half (64%) children who attended ICDS centres and less than half (40%) of the children who did not attend Anganwadi centres had soft and pink lips. 47% of ICDS children and 40% non-ICDS children had pink tongue. More than half of the children who attended Anganwadi centres and not attended Anganwadi centres (52% and 60%) had painful teeth. Majority of the children attended ICDS centres (60% and 67%) had pink gums and without inflamed nose whereas 33% and 60% of the children who did not attend Anganwadi centres had swelling gums and inflamed nose. 60% of both the children who attended ICDS centres as well as children who not attended ICDS centres had white spots on the nails. 80% of the ICDS children and only 60% non ICDS children had flexibility in legs and feet. Ch-square reveals that there is significant difference in the height and weight of the children who attending ICDS centres and who not attending ICDS centres at .10 and .025 level of significance but there is no significant difference in the appearance of hair, face eyes,

lips tongue teeth, gums nose, nails, skin, legs and feet of both the children.

Table 5 reveals that calorie, protein, fat and iron intake was higher in the children attending ICDS centres as compare to the children who were not attended ICDS centres

DISCUSSION

Children are the most assets of a country because they will be tomorrow's youth and provide the human potential required for country's development. Nutrition in the formative years of life plays a very important role in physical mental and emotional development of child and permits the highest state of fitness. Poor and inadequate nutrition leads to malnutrition, morbidity and mortality among children. To overcome the mortality and morbidity and to upgrade the nutritional status of children, Government of India, providing health, nutrition and educational services, launched a multifaceted program named as Integrated Child Development Services/schemes (ICDS). Keeping this in view, the present study has been undertaken to evaluate the nutritional services being imparted to children in Anganwadi centres. The present study indicated that all the ICDS centres were providing supplementary nutrition to children, pregnant

Table 5: Dietary recall table

	<i>Children attended ICDS centres</i>				<i>Children attended ICDS centres</i>			
	<i>Mean</i>				<i>Mean</i>			
	<i>1st day</i>	<i>2nd day</i>	<i>3rd day</i>	<i>Total</i>	<i>1st day</i>	<i>2nd day</i>	<i>3rd day</i>	<i>Total</i>
Calories (kcal)	1323.1	1356.1	1469.65	1382.95	1116.69	1186.5	1126.68	1143.3
Protein (gms)	37.5	43.17	43.71	41.46	34.25	36.17	35.57	35.33
Fat (gms)	30.05	23.36	27.11	27.95	19.1	18.4	26.25	20.25
Iron (mg)	10.05	11.54	14.88	12.16	9.02	9.04	9.48	9.18

and nursing women enrolled in Anganwadi centres. Lal, Mevda, and Kulkarni (1989) revealed from their studies that in all the ICDS centres there was provision of supplementary nutrition for children, pregnant women and nursing mothers. The present study found that all the parents especially mothers had knowledge regarding supplementary nutrition provided to their children at ICDS centres as compare to the other mothers whose children did not attend ICDS centres. Lakshmi (1984), Raina (1985), Bhatnagar and Singhal (1986), Sharma (1987), Yegammai and Nivargi (1995) and National Council of Applied Economic Research (1998) revealed similar results. Present study shows that all the Anganwadi workers were assessing the nutritional status of children by taking height and weight in Anganwadi centres and most of the mothers had knowledge regarding how to assess the nutritional status of the children as compare to those mothers whose children never attending any ICDS centres. Renu and Rekha (1982) observed that nutritional status of the children was improved as a result of the ICDS centres. It was also found from the present study that the children who attending anganwadi centres were taller and heavier as compared to the children not attending ICDS centres. Gupta (1988) and National Institute of nutrition (1990) found that mean body weight and height in ICDS area were higher nutritional status of children were better than their non-ICDS counterparts. Similar conclusions were drawn by the previous studies of Yegammai and Nivargi (1995) and Jayalakshmi and Naik (1996). It was also observed that dietary requirements to the children who attending ICDS centres were higher as compare to the other children who not attending ICDS centres. Vivek and Zaheer (1984) and Chaturvedi (1987), found that children under ICDS scheme were received better diet in better way. National Institute of Nutrition (1990) found that overall nutritional status of children was better in ICDS centres than those children who were not attending ICDS centres. Present study too reached on the similar conclusion that ICDS children are better nutritional status as compare to their non-ICDS counterparts.

SUGGESTIONS

1. Parents who did not send their children to

ICDS centres need a motivated program.

2. The facilities provided in the ICDS centres should be improved
3. ICDS centres play an important role in the up gradation of nutritional status of children, pregnant women and nursing mothers so initiative should be taken up by the Government to open such ICDS centres and make people aware of such facilities so that the people can make best use of it.

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