

THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES

Nutrition Status among 3-5 years Children of Chitwan and Makawanpur Districts of Nepal

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Abstract:

The proper nutrition for 3-5 years children is mandatory to develop the sound body and sound mind. The study has focused to analyse nutrition status of Chepang and Non-Chepang children of Makawanpur and Chitwan districts of Nepal.

The study was based on cross-sectional descriptive design. The data collected the height, weight, and arm girdle, physical description of children, feeding, breast-feeding and supplementary diet of 1250 children. The data was based on the census study.

In total 53% children participated from Chitwan followed by 47% from Makawanpur district. Similarly 49.3% participants were male followed by 50.7% female. In average height of children was measured 61-121cm in both districts. Similarly, 6-25 weight and 12-26cm thickness of arm was found among children. Feeding of colostrums milk is high among the Chepang than Non-Chepang mothers of both districts. An additional feeding practice was found high among Chepang than Non-Chepang communities.

The average nutritional status of children was found better among Non-Chepang than Chepang. District wise, nutrition status was good in Makawanpur than Chitwan district. Longitudinal study on nutritional practices can explore more in-depth analysis of communities.

Keywords: *Chepang and Non-Chepang, ECD, Height, Mid Upper Arm Circumference, Nutrition, Weight,*

1. Introduction

Nutrition may be defined as the science of food and its relationship to health. It is concerned primarily with the role played by nutrients in body growth, development and maintenance. The nutrient or "food factor" used for specific dietary constituents are proteins, vitamins and minerals. Dietetics is the practical application of the principles of nutrition; it includes the planning of meals for the well and the sick. Good nutrition means "reformed a nutritional status that enables us to grow well and enjoy good health" (Park, 2007, p. 480).

"There are two dimensions in nutrition - the environmental and the physiological. The environmental dimensions concern the spatial, physical and economic conditions, which favour the availability and distribution of food (Uyanga, 1981, p. 331)." The subject of nutrition is very extensive. Since our concern relates to community aspects of nutrition, the subject will be dealt under the five sections: dietary constituents, nutritional requirements, assessment of nutritional status, nutritional problem in public health and nutritional programme (Sethuraman & Duvvury, 2007).

Undernourishment or malnutrition contributes to an estimated 53% of all deaths of children under the age of 5 years. Malnutrition has been defined as "a pathological state resulting from a relative or absolute deficiency or excess of one or more essential nutrients" (Yang, Sangthong, Chongsuvivatwong, McNeil, & Lu, 1979, p. 403). It comprises four forms under-nutrition, over-nutrition, imbalance and the specific deficiency. Under-nutrition is the condition that results when insufficient food is eaten over an extended period of time. In extreme cases, it is called starvation. Over nutrition is the pathological state resulting from the consumption of excessive quantity of food over an extended period of time. The high incidence of obesity, atheroma and diabetes in western societies is attributed to over-nutrition. Imbalance is the pathological state resulting from a disproportion among essential nutrients with or without the absolute deficiency of any nutrient. Specific deficiency is the pathological state resulting from a relative or absolute lack of an individual nutrient (Park, 2007, p. 519).

The national nutrition programme under the Department of Health Services has laid the following vision "all Nepali people living with adequate nutrition, food safety and food security for adequate physical, mental and social growth and development and survival (Government of Nepal Ministry of Health and Population Department of Health, 2011)" with the mission to improve the overall nutritional status of children, women of child bearing age, pregnant women, and all ages through the control of general malnutrition and prevention and control of micronutrient deficiency disorder having broader and intra-sectoral collaboration and coordination, partnership among different stakeholders and high level of awareness and cooperation of population in general.

Malnutrition remains a serious obstacle to child survival, growth and development in Nepal. The most common form of malnutrition is protein-energy malnutrition (PEM). The other form of malnutrition is iodine, iron and vitamin A deficiency. Each type of malnutrition wrecks its own particular disorder on the human body, and to make matter worse, they often appear in

combination. Even moderately acute and severely acute malnourished children are more likely to die from common childhood illness than those adequately nourished. In addition, malnutrition constitutes a serious threat especially to young child several and is associated with one third of child mortality. One of the important causes of PEM in Nepal is low birth weight of below 2.5 kg, a sign of poor maternal nutrition leading to an intergenerational cycle of malnutrition.

Malnutrition is worldwide health problem especially in developing or underdeveloped countries. According to WHO 2003-2009, 16% of under-five year children of India found suffered severely from underweight. Similarly, Srilanka 15%, Pakistan 14 percent, Bhutan 3 percent and 11 percent Nepalese under-five children found suffered from severe underweight.

The children between 3-5 years have special nutritional needs for their extensive growth and development. Thus, the Middle-upper Arm Circumference (MUAC) is an important measurement which is often used for the assessment of nutritional status among pre-school children (Biswas, Bose, & Mukhopadhyay, 2010, p. 63).

The overall purpose of this study was to identify the nutrition status of 3-5 years children of Makawanpur and Chitwan districts of Nepal.

2. Methodology

The study is based on descriptive study design. The study was based on descriptive cross sectional design. The study was carried out in Chitwan and Makawanpur from Sep. – Oct, 2014 among the 1250 respondents. Respondents were selected from 3-5 years children households from Chitwan and Makawanpur districts. The country was divided into four epidemic zones in 2003: among them Chitwan is inner valley and Makawanpur is inner hills districts. Ethical approval is taken from the Nepal Health Research Council for data collection and written consent was taken from the each respondent. Census method was applied to select 3-5 years children from Chepang community of Chitwan and Makawanpur districts. Mothers and children were the key respondents of this study. Primary data was collected by using the structured questionnaires. Simple frequency distribution is done to identify the nutrition status of 3-5 years children. Comparative study was done between the Chepang and Non-Chepang community.

3. Results

In total, data shows that 40.9% Non-Chepang children were selected from Makawanpur and Chitwan district whereas 59.1% children were from Chepang. On the basis of district, in total 53% children participated from Chitwan followed by 47% from Makawanpur district. Sex wise, distribution of children in total 49.3% male followed by 50.7% were found. Among them, 49.9% Non-Chepang and 48.8% Chepang were male. In total, 24.9% children were less than 36 months followed by 16.6% were between 36-41 months, 7.8% were between 41-46 months, 22.9% were between 46-51 months, 5% were between 51-56 months, and 22.9% were between 56-60 months. Comparatively, majority children were under the 36 months.

3.1. Height of Child (in centimetre)

Total 1250 children were selected from Makawanpur and Chitwan district to measure the height. Normally less than 61 centimetres to more than 121 centimetre heights were measured.

District	Ethnicity		< 61	61-71	71-81	81-91	91-101	101-111	111-121	> 121	Total
Makawanpur	Non-Chepang	#	16	8	16	32	138	63	37	3	313
		%	5.1	2.6	5.1	10.2	44.1	20.1	11.8	1.0	100
	Chepang	#	93	27	17	27	93	18	-	-	275
		%	33.8	9.8	6.2	9.8	33.8	6.5	-	-	100
	Total	#	109	35	33	59	231	81	37	3	588
		%	18.5	6.0	5.6	10.0	39.3	13.8	6.3	0.5	100
Chitwan	Non-Chepang	#	-	-	-	15	123	60	-	-	198
		%	-	-	-	7.6	62.1	30.3	-	-	100
	Chepang	#	-	-	8	101	241	113	1	-	464
		%	-	-	1.7	21.8	51.9	24.4	0.2	-	100
	Total	#	-	-	8	116	364	173	1	-	662
		%	-	-	1.2	17.5	55.0	26.1	0.2	-	100
Total	Non-Chepang	#	16	8	16	47	261	123	37	3	511
		%	3.1	1.6	3.1	9.2	51.1	24.1	7.2	0.6	100
	Chepang	#	93	27	25	128	334	131	1	-	739
		%	12.6	3.7	3.4	17.3	45.2	17.7	0.1	-	100
	Total	#	109	35	41	175	595	254	38	3	1250
		%	8.7	2.8	3.3	14.0	47.6	20.3	3.0	0.2	100

Table 1: Height of child (in centimeter)

Sources: Field survey, 2014

As the data presented in table no. 1 out of 739 Chepang children, 12.6% had less than 61cm whereas 0.1% (only 1) children had 111-121cm height. Similarly, among 511 Non-Chepang children, only 3.1% had less than 61cm and 0.6% (3) had more than 121cm height. District wise, 588 children from Makawanpur and 662 from Chitwan district participated in study where 5.1% Non-Chepang children against the 33.8% Chepang children were found less than 61cm height in Makawanpur district. In

Chitwan, children height was found in between of 71 -121cm where Chepang children's height was between the 71 -121cm whereas Non-Chepang children's height was between the 81 -111cm.

3.2. Weight of Child in Kg

Medically, weight of children gives the result of nutritional status of children. It is taken as an important measure of child's health. Among the 1250 Chepang and Non-Chepang children of Makawanpur and Chitwan district, 6 to 25 kg weight was measured in 3-5 years children. Ration of 6 kg weight was found high in Chepang children and 25kg weight was measured high in Non-Chepang children in both districts.

Kg	Makawanpur			Chitwan			Total			
	Non-Chepang	Chepang	Total	Non-Chepang	Chepang	Total	Non-Chepang	Chepang	Total	%
6	0	4	4	0	1	1	0	5	5	0.4
7	2	0	2	0	1	1	2	1	3	0.2
8	1	0	1				1	0	1	0.1
9	1	0	1	2	2	4	3	2	5	0.4
10	2	5	7	5	18	23	7	23	30	2.4
11	10	3	13	5	33	38	15	36	51	4.1
12	8	17	25	20	71	91	28	88	116	9.3
13	23	20	43	26	88	114	49	108	157	12.6
14	52	36	88	40	84	124	92	120	212	17.0
15	63	128	191	43	76	119	106	204	310	24.8
16	27	35	62	41	41	82	68	76	144	11.5
17	23	2	25	13	42	55	36	44	80	6.4
18	35	16	51	3	7	10	38	23	61	4.9
19	20	1	21	-	-	-	20	1	21	1.7
20	11	6	17	-	-	-	11	6	17	1.4
21	14	1	15	-	-	-	8	0	8	1.2
22	8	0	8	-	-	-	8	0	8	0.6
23	6	0	6	-	-	-	6	0	6	0.5
24	1	0	1	-	-	-	1	0	1	0.1
25	6	1	7	-	-	-	6	1	7	0.6
Total	313	275	588	198	464	662	511	739	1250	100

Table 2: Weight of Child in Kg
Sources: Field survey, 2014

The table no. 2 shows that in total, 0.4% was found 6kg weight whereas 0.6% were found 25kg weight. District wise, 4 Chepang children were reported only 6kg from Makawanpur whereas only 1 was reported from Chitwan district. More children's height fall in 15kg, this is 24.8% of total selected children from both districts. In Makawanpur district, 6 Non-Chepang children had 25kg weight against the only 1 Chepang children of same district. In Chitwan district, children were not reported more than 18kg from both Chepang and Non-Chepang communities of study areas.

3.3. Thickness of arm in Centimetre (3 of them were not stated)

Thickness of arm is one of the tools to measure the health (nutrition) status of children. The following table shows the comparative data of Makawanpur and Chitwan districts.

District	Ethnicity		< 12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	Total
Makawanpur	Non-Chepang	#	20	93	108	73	16	2	1	-	313
		%	6.4	29.7	34.5	23.3	5.1	0.6	0.3	-	100
	Chepang	#	14	38	182	29	1	7	-	1	272
		%	5.1	14.0	66.9	10.7	0.4	2.6	-	0.4	100
	Total	#	34	131	290	102	17	9	1	1	585
		%	5.8	22.4	49.6	17.4	2.9	1.5	0.2	0.2	100
Chitwan	Non-Chepang	#	12	29	109	46	2	-	-	-	198
		%	6.1	14.6	55.1	23.2	1.0	-	-	-	100
	Chepang	#	10	107	282	62	3	-	-	-	464
		%	2.2	23.1	60.8	13.4	0.6	-	-	-	100
	Total	#	22	136	391	108	5	-	-	-	662
		%	3.3	20.5	59.1	16.3	0.8	-	-	-	100
Total	Non-Chepang	#	32	122	217	119	18	2	1	-	511
		%	6.3	23.9	42.5	23.3	3.5	0.4	0.2	-	100

	Chepang	#	24	145	464	91	4	7	-	1	736
		%	3.3	19.7	63.0	12.4	0.5	1.0	-	0.1	100
	Total	#	56	267	681	210	22	9	1	1	1247
		%	4.5	21.4	54.6	16.8	1.8	0.7	0.1	0.1	100

Table 3: Thickness of arm in Centimeter

Sources: Field survey, 2014

Thickness of arm was measured between the less than 12 to 26cm. in total, 6.3% Non-Chepang against the 3.3 Chepang children has less than 12cm thickness in arm. Similarly, highest thickness of arm was 22-24cm among the Non-Chepang whereas 1 Chepang child was reported 24-26cm thick arm. District wise, in Makawanpur district, thickness of arm was found in between the less than 12cm to 24-26cm whereas in Chitwan district, thickness was reported in between less than 12cm to 20cm. In Makawanpur district, 6.4% Non-Chepang against the 5.1% was reported less than 12cm thick arm whereas 6.1% and 2.2% Non-Chepang and Chepang children respectively reported less than 12cm thick arm in Chitwan district. From the data, nutrition status was found somehow better among the children of Makawanpur district than the Chitwan district in both Chepang and Non-Chepang communities.

3.4. Description of Health Status of Child

In this study, data collection was collected about the general descriptive of health status of child. The general status gives the information of physically looks healthy, thin, dwarf, big belly. One and two physical quality of children was studied and calculated the data. District wise, in Makawanpur district, out of 313 Non-Chepang, 237 (75.72%) were found healthy whereas out of 275 Chepang; only 55 (20%) were found healthy. Similarly, in Chitwan district, out of 198 Non-Chepang; 93 (46.96%) were found healthy and out of 464 Chepang; only 124 (26.72%) were found healthy. It gives result that in general Non-Chepang children were found healthier than Chepang children in both districts.

Description	Makawanpur			Chitwan			Total			
	Non-Chepang	Chepang	Total	Non-Chepang	Chepang	Total	Non-Chepang	Chepang	Total	%
Healthy (fukilo)	237	55	292	93	124	217	330	179	509	40.7
Thin	32	18	50	94	202	296	126	220	346	27.7
Dwarf	1	1	2	6	56	62	7	57	64	5.1
Bhudithulo, thin	-	-		-	5	5	-	5	5	.4
Dwarf, bhudithulo	-	-		1	25	26	1	25	26	2.1
Thin & dwarf	-	-		1	23	24	1	23	24	1.9
Bhudithulo	-	-		3	27	30	3	27	30	2.4
Not Stated	43	201	244	0	2	2	43	203	246	19.7
Total	313	275	588	198	464	662	511	739	1250	100

Table 4: Description of Health Status of Child

Sources: Field survey, 2014

The table no. 4 gives that in total 40.7% children looked healthy physically followed by 27.7% were found thin, 5.1% were dwarf, 0.4% were big belly and thin, 2.1% were Dwarf and big belly, 1.9% were thin and dwarf, 2.4% had big belly and 19.7% had not given any information.

3.5. Colostrums (bigauti) Milk Feeding Status

Caring of children is determined because of the socio-cultural orientation of parents also. In Nepal, different ethnic communities have different culture and practice. Still in many more closed rural communities do not want to visit health post during the pregnancy period or for delivery because they do not want to disclose their personal issue or organs in-front of medical person on the one hand. On the other hand, they had no knowledge about the importance of colostrums (Colostrums (bigauti)) milk of mother so they do not allow to feed that milk to baby.

District	Ethnicity		All Fed	Half Fed	Not Stated	Total
Makawanpur	Non-Chepang	#	203	109	1	313
		%	64.9	34.8	0.3	100
	Chepang	#	264	2	9	275
		%	96.0	0.7	3.3	100
	Total	#	467	111	10	588
		%	79.4	18.9	1.7	100

Chitwan	Non-Chepang	#	198	-	-	198
		%	100	-	-	100
	Chepang	#	457	7	-	464
		%	98.5	1.5	-	100
	Total	#	655	7	-	662
		%	98.9	1.1	-	100
Total	Non-Chepang	#	401	109	1	511
		%	78.5	21.3	0.2	100
	Chepang	#	721	9	9	739
		%	97.6	1.2	1.2	100
	Total	#	1122	118	10	1250
		%	89.8	9.4	0.8	100

Table 5: Colostrums (bigauti) Milk Feeding Status
Sources: Field survey, 2014

The table no. 5 shows that 64.9% Non-Chepang whereas 96% Chepang mother said that they fed all colostrums (bigauti) milk to their baby in Makawanpur district. Similarly, 100% Non-Chepang and 98.5% Chepang mother said that they had fed all colostrums (bigauti) milk to baby in Chitwan district. Data presents that in total, respondents of Chitwan district was found more aware about the importance of Colostrums (bigauti) milk of mother to baby than the Makawanpur district. Similarly, in total, 97.6% Chepang against the only 78.5% Non-Chepang mother had fed colostrums (bigauti) milk to their children. It means, Chepang had better practice on breast-feeding of colostrums (bigauti) milk than Non-Chepang.

3.6. No. of Breast-Feeding Times

Breast feeding times and duration also determines the sufficiency of nutrition food for child. Up to 6 month of birth, child's growth totally depends on the breast-feeding of mother. The study also identified the practices of breast-feeding of mother. The following table no. 6 gives the data of breast-feeding times and duration.

The data presents that in total 13.5% had practiced breast-feeding up to and less than 6 times in a day whereas 85.9% had practiced more than 6 times. Among them, 14.6% Non-Chepang and 11.7% Chepang had up to and less than 6 times and 85.4% Non-Chepang and 86.6% Chepang had practiced more than 6 times. District wise, more than 90% both Chepang and Non-Chepang had practiced breast-feeding more than 6 times in Makawanpur district. As compare with Chitwan district, around 80% Chepang and Non-Chepang had practiced breast-feeding times more than 6 times in a day. As result of data, mothers of Makawanpur district had done adequate breast-feeding to child in a day than the Chitwan.

District	Ethnicity		< 6 times	> 6 times	Not Stated	Total			
Makawanpur	Non-Chepang	#	15	141	-	156			
		%	9.6	90.4	-	100			
	Chepang	#	-	56	3	59			
		%	-	94.9	5.1	100			
	Total	#	15	197	3	215			
		%	7.0	91.6	1.4	100			
Chitwan	Non-Chepang	#	28	111	-	139			
		%	20.1	79.9	-	100			
	Chepang	#	21	99	-	120			
		%	17.5	82.5	-	100			
	Total	#	49	210	-	259			
		%	18.9	81.1	-	100			
Total	Non-Chepang	#	43	252	-	295			
		%	14.6	85.4	-	100			
	Chepang	#	21	155	3	179			
		%	11.7	86.6	1.7	100			
	Total	#	64	407	3	474			
		%	13.5	85.9	0.6	100			
No. of Breast-feeding duration (Years)									
District	Ethnicity		1 year	2 yrs	3 yrs	4 yrs	5 yrs	Not Stated	Total
Makawanpur	Non-Chepang	#	1	141	163	5	1	2	313
		%	0.3	45.0	52.1	1.6	0.3	0.6	100
	Chepang	#	6	143	114	4	6	2	275
		%	2.2	52.0	41.5	1.5	2.2	0.7	100
	Total	#	7	284	277	9	7	4	588
		%	1.2	48.3	47.1	1.5	1.2	0.7	100

Chitwan	Non-Chepang	#	1	63	132	-	2	-	198
		%	0.5	31.8	66.7	-	1.0	-	100
	Chepang	#	41	128	274	17	2	2	464
		%	8.8	27.6	59.1	3.7	0.4	0.4	100
Total	#	42	191	406	17	4	2	662	
	%	6.3	28.9	61.3	2.6	0.6	0.3	100	
Total	Non-Chepang	#	2	204	295	5	3	2	511
		%	0.4	39.9	57.7	1.0	0.6	0.4	100
	Chepang	#	47	271	388	21	8	4	739
		%	6.4	36.7	52.5	2.8	1.1	0.5	100
Total	#	49	475	683	26	11	6	1250	
	%	3.9	38.0	54.6	2.1	0.9	0.5	100	

Table 6: No. of Breast-feeding times
Sources: Field survey, 2014

Similarly, study also asked to mothers about the duration of breast-feeding. Data is calculated in year. In total, 3.9% had fed up to 1 year, 38% had fed up to 2 years, 54.6% had fed up to 3 years, 2.1% had 4 years and 0.9% had fed up to 5 years. Majority of mothers had practices breast-feeding to their child up to 3 years. District wise, higher no. of respondents (48.3%) reported that they had practiced breast-feeding up to 2 years in Makawanpur district whereas 61.3% reported that they had practiced up to 3 years in Chitwan district. Ethnicity wise, 52% Chepang had said that they had fed up to 2 years whereas 52.1% Non-Chepang had said that they had fed up to 3 years. It means, Non-Chepang children had got better nutrition than the Chepang children in Makawanpur district. Similarly, 66.7% Non-Chepang and 59.1% Chepang mother had practiced breast-feeding up to 3 years in Chitwan district. It means, both Chepang and Non-Chepang are equally aware about the importance of breast-feeding in Chitwan district. Chepang children of Chitwan had got long time breast-feeding than the Chepang children of Makawanpur district.

3.7. Extra/Additional Food

Generally, children need additional food after 6 months of birth because breast-feeding will not be adequate for the physical and mental growth of child. So, it is general practice that mother use to give additional food as available in her house. Study also asked the question to mother about their practice to provide additional food to their children. Data shows that in total, 98.8% reported that they had given the additional food to their child, among them equal no. 98.8% Chepang and Non-Chepang said that they had given extra food except breast-feeding to their child. District wise, 100% respondents of Chitwan district had reported that they had given additional food from both communities; Chepang and Non-Chepang whereas 98.1% Non-Chepang and 96.7% Chepang of Makawanpur district had given extra food to their child. The data shows that parents of Chitwan district were found more aware about the importance of additional food than Makawanpur district.

District	Extra Food Except Breast-Feed		Non-Chepang	Chepang	Total
Makawanpur	Yes	#	307	266	573
		%	98.1%	96.7%	97.4%
	No	#	3	3	6
		%	1.0%	1.1%	1.0%
	NS	#	3	6	9
		%	1.0%	2.2%	1.5%
Total	#	313	275	588	
	%	100.0%	100.0%	100.0%	
Chitwan	Yes	#	198	464	662
		%	100.0%	100.0%	100.0%
	Total	#	198	464	662
		%	100.0%	100.0%	100.0%
Grand Total	Yes	#	505	730	1235
		%	98.8%	98.8%	98.8%
	No	#	3	3	6
		%	0.6%	0.4%	0.5%
	NS	#	3	6	9
		%	0.6%	0.8%	0.7%
Total	#	511	739	1250	
	%	100.0%	100.0%	100.0%	

Use of Lito as additional food					
District		Lito	Non-Chepang	Chepang	Total
Makawanpur	Yes	#	224	9	233
		%	72.73%	3.35%	40.67%
	No	#	84	259	343
		%	29.27%	96.65%	59.33%
	Total	#	308	268	573
		%	100.0%	100.0%	100.0%
Chitwan	Yes	#	53	35	88
		%	26.8%	7.5%	13.3%
	No	#	145	429	574
		%	73.2%	92.5%	86.7%
	Total	#	198	464	662
		%	100.0%	100.0%	100.0%
Total	Yes	#	277	44	321
		%	54.21%	6.0%	25.68%
	No	#	234	695	929
		%	45.79	94.04	74.32
	Total	#	505	730	1235
		%	100.0%	100.0%	100.0%

Table 7: Extra/Additional Food

Sources: Field survey, 2014

Respondents were asked about the use of Lito (locally prepared food by mixing of different crops) as additional food. In total, 25.68% reported that they had given Lito to their child where 54.21% Non-Chepang and only 6% had given Lito to their child. It seems that either Chepang were unaware about the use of Lito or had economic problem to collect different crops to prepare the Lito. District wise, 72.73% Non-Chepang and only 3.35% Chepang had given Lito to their child in Makawanpur district whereas 26.8% Non-Chepang and 7.5% Chepang had given Lito to their child in Chitwan district. The data shows that Non-Chepang of Makawanpur district was more aware about the use of Lito as additional nutrition than Non-Chepang of Chitwan district whereas % of Chepang was high in Chitwan district than the Makawanpur district who had given Lito to their child. It says that, the level of awareness and economic status of ethnic communities are different in both district because practice of giving additional food is different between the Chepang and Non-Chepang communities as well as, district situation is also different.

4. Discussions

In Nepal, Health Ministry and other like-minded organization are working to improve the nutrition status of 3-5 years children. Among them, Save the Children has been working in School Health and Nutrition (SHN) sector with the Government healthier children are able to attend school more regularly, learn more lead to healthy productive life. In Kapilvastu, Pyuthan and Siraha districts, the year 2014 saw 100% schools implementing SHN program which include de-worming, iron supplements, hearing dental and visioning and sanitation program (Children, 2013).

According to Suaahara Baseline Survey Report of Save the Children, March, 2013 Nutrition and health situation in Nepal: Child stunting and underweight: are high but there having been impressive declines bent 2001 and 2011: 16 percentage points for stunting and 14 percentage for underweight. Even so, four in 10 children less than 5 years of age are stunted. The prevalence of wasting remains stagnant. Child wasting: according to the Nepal Demographic and Health Survey, 10.9 per cent of children less than 60 months of age are wasted. This percentage has remained largely unchanged. Child anaemia: 42.2 per cent of children suffer from mild, moderate or severe anaemia (Save the children, 2013, pp. 1-2). In the mountains, nearly 43 per cent of children less than five years of age are stunted, but only 37 per cent of children in the hills and 38 per cent of children in the Terai are stunted. Underweight is also the highest in the mountains. (Save the children, 2013, p. 7). The present study identified that among the 1250 children of the age of 3-5 years of Makawanpur and Chitwan district; normally less than 61 centimetres to more than 121 centimetre heights were measured. Similarly, 6 to 25kg weights were measured and Thickness of arm was measured between the less than 12 to 26cm.

According to the report of UNICEF, the data presented that 13% children of age of 1-5 years died due to the diarrhoea, 20% were suffering from ARI and 8% were suffering from diarrhoea and ARI. (UNICEF, 2011, pp. 2-25). From the nutritional perspective, Nepal government has tried to mobilize the most of the concerned stakeholders as well as mass media to aware about the use of Vitamin A for children so the report of Nepal Health Sector Program (NHSP) reported that 90% children age of 6-59 months had got Vitamin A in 2012. Though, still on the basis of setting, all caste and ethnicity have no equal access on health. So, additionally, report of NHSP reported that there were no significant differences by urban/rural residence, ecological zone, educational level or caste/ethnicity (Nepal Health Sector Program, 2012, p. 217). The finding of this study also identified that there is differences between the health status of Chepang and Non-Chepang children. Non-Chepang communities were found

more aware, and had access on health services which finally affect the nutrition status of their children. So, awareness program should also focus on the disadvantaged groups of rural and remote areas.

On average, only 39% innate breast feeding within one hour of birth and less than half exclusively breastfeed until six months of age. Over 90 per cent of mothers gave colostrums and almost a quarter of the mothers give their babies pre-lacteal feeds with the most common being animal, infant formula, ghee and sugar water. Exclusive breastfeeding deteriorates considerably as early two months of age. As the comparison of above mention data with the finding of my study; the present study found that 100% Non-Chepang and 98.5% Chepang mother said that they had fed all colostrums (bigauti) milk to their baby in Chitwan district. The study found that feeding of colostrums is high in Makawanpur and Chitwan district than the study conducted by Suaahara baseline report, 2013 of Save the children.

Regarding the additional food feeding practices of mother to their children, the report of Save the Children, 2013 shows that among children 6-23.9 months of age, only 45 per cent receive the minimum dilatory diversity of at least four food groups and less than 20 per cent consumes iron-rich foods. Among children aged 6-23.9 months, only one-third consume vitamin A rich fruits and vegetable. Consumption of eggs and flesh foods is alarmingly low at seven per cent and 15 per cent, respectively. It was similar pattern among children age 24 to 59.9 months age (p. 9). The present study conducted by researcher also identified that Data shows that in total, 98.8% reported that they had given the additional food to their child, among them equal no. 98.8% Chepang and Non-Chepang said that they had given extra food except breast-feeding to their child.

5. Conclusions

From the overall discussions of data analysis and interpretation, it came to know that in average height, weight and thickness of arm of children was found better in Makawanpur district than Chitwan district. Similarly, data presents that in general Non-Chepang children were found healthier than Chepang children in both Makawanpur and Chitwan districts. Breast feeding practices is found high in Chepang mothers than Non-Chepang. Frequency of breast feeding time in a day was found similar in both Chepang and Non-Chepang communities. Additional feeding practice was found better in Chitwan district than Makawanpur district. This study has based on cross-sectional data so it gives only descriptive analysis of nutritional status of children. Further researcher can observe the daily food consumption practices to explore their hygienic behaviour and environmental sanitation practices because human behaviour and environmental factors may affect the nutritional status of children also.

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