# CHAPTER 4.

RESULT OF THE STUDY:

4.1 prevalence of malnutrition:

Some characteristics of the sample, The prevalence of malnutrition, various information were collected by interviewing 248 mothers of study area, who has at least one under five child at present. The weight of the youngest child of the families were recorded very carefully As shown in the pie figure 1. The prevalence of malnutrition among under five yrs children was found total 47.5 percent. While using weight for height ratio nutritional status classification based on Waterlow criteria. which was widely used in Nepal by Save the Children Fund (SCF) project. All these cases were recorded according to grades of malnutrition. The figure 2 showed various grades of malnutritional status in the Dadhikot village among under 5 yrs children. Pie 2 (figure 2) showed that the prevalence of malnutrition first grade was 29.8 % (mild wasted) second grades was 13.3 percent (moderate wasted) third grades was 4.4 percent (severe wasted) which was shown in pie, Figure 2.

PERCENT OF MALNUTRITIONAL STATUS
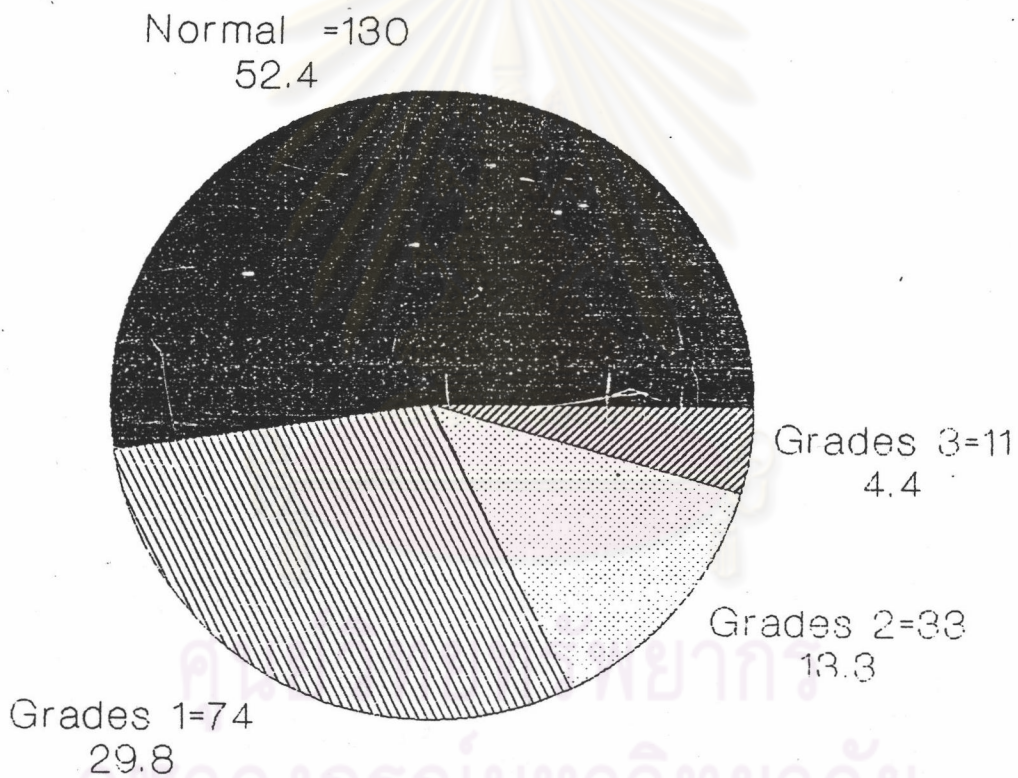## AMONG UNDER 5 YRS   IN
DADHIKOT VILLAGE.1993
(PIE 1 FIG.1)
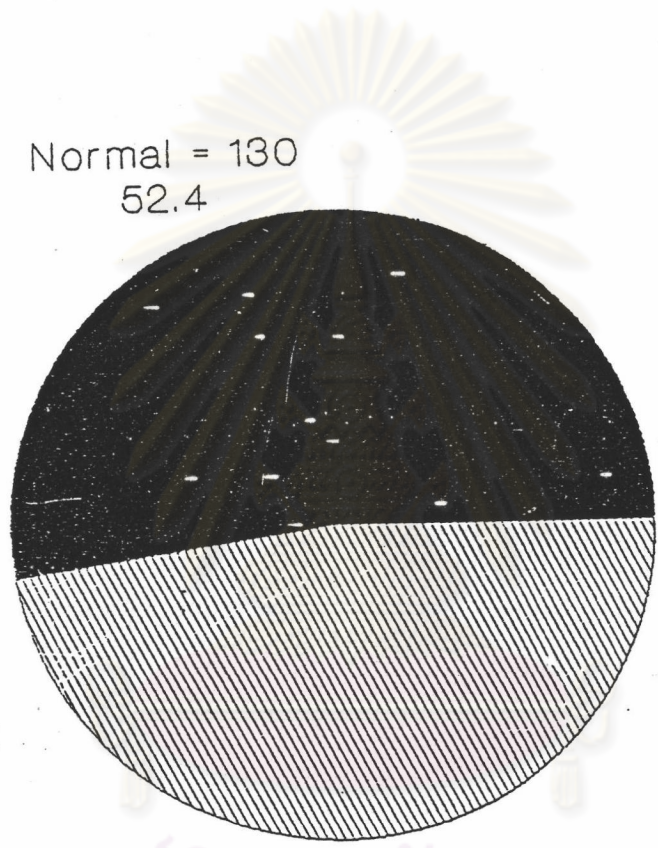
Normal = 130
52.4

Malnutrition = 118
47.5

GRADES OF MALNUTRITIONL STATUS AMONG UNDER 5 YEARS CHILDREN IN DADHIKOT VILLAGE 1993

(PIE 2 FIG 2)

Normal =130
52.4

Grades 3=11
4.4

Grades 2=33
13.3

Grades 1=74
29.8

4.2 Descriptive community profile:

Various family characteristics Of 248 children are collected from household interviewed in 1993 to find out, what are the associated factors of malnutrition among pre-school children in Dadhikot village. Details tables are showed in table 4.6 to 4.20 It can be seen that, the community under study having many indicators direct or indirect of high morbidity among children at risk, that they had history of diarrhoea among malnutrition child was 28.0 % fever, cough, breathlessness was 32 % history of worms seen was 22.9 % On examination of the eye was found pale conjunctiva 16 % . So these above mentioned predisposing factors and added with other factors such as demography, socioeconomic factors may be the one of the etiology of malnutrition among pre-school children in Dadhikot village.

Prabhakar Roa (1988) said that malnutrition is one of the major causes of high prevalence of parasitic infection, diarrhoea, respiratory infection, probability sign of anaemia are found to be relatively high. Mother was the main persons, who could perform good rearing practice to bring her child in a proper way of growth and development. But in this study most of the mother were earning members, and mothers, who do not go out as a earning. They works as a house hole duty as well as they go to the field regular or irregular for the purpose of cutting grass to feed their animal cows and buffalos. So in this study some of the predictor confounding factors are busy mother who

could not able to take care of their children. Illiterate
father, (P.03) age of the mother, (P.006) Occupation of the
mother, (P.006) these are the factors associated with
malnutrition. Popkin (1980) reported that effect of labour
force that included mother; author had conducted studies and
showed that mother absence affected the diet and time input
into child care resulting in poor nutritional status of
children in a rural village. The mother specially
those, who has breastfeed, when remain away from their
children, affected the nutritional status of children. Even
the mother doing house work has no sufficient time to take
care of their children. The writer again says that a big
family has also effect on how much time mother can allocate to
take care of their children care. The old believes that
children take care in old age also affects in the rearing of
the children. So in this study age of the parents also taken
into account as a factors of child care practice. The age
of the child 13-36 month was the usually weaned from the
breast feeding in this study these age group of children was
significant P.value 0.01 Income of the family , the lower
income group of families had shown p. value significant 0.05.
Kind of food preservation and food availability information
had p.value 0.01. The logistic regression analysis shows
that, there are strong association between age of the mother
occupation of the mother and mother job outside home regular
job, irregular job, and the nutritional status as shown (Table
4.20).

Note: Table 4.3 to Table 4.20 All Case means (malnutrition children), and All Control means (Normal Children).

Table 4.3. Socioeconomic characteristic:

1. Occupation of father	Case N	Case %	Control N	Control %
1. Others Milk seller	10	8.5	7	5.4
2. Labour	11	9.2	18	13.8
3. General Farmer	39	33.1	48	36.9
4. Government service	39	33.1	40	30.8
5. Business/Landlord	19	16.1	17	13.1
Total	118	100.0	130	100.0

S2.Occupation of mother	Case N	Case %	Control N	Control %
1. Other veget+milk seller	1	0.8	2	1.5
2. Labour	5	4.2	2	I.5
3. Farming	63	53.4	51	39.2
4. Service	4	3.4	3	2 .3
5. House wife	45	38.1	72	55.4
Total	118	100.0	130	100

S3.Education of father	Case N	%	Control N	%
1. Illiterate	27	22.9	17	13.1
2. literate	9	7.6	25	19.2
3. Primary school	28	23.7	43	33.1
4. High school 10th grade	34	28.8	32	24.6
5. High school to university graduate	20.	16.9	13	10.0
Total	118	100.0	130	100.0

S4.Education level of mother	Case N	%	Control N	%
1. Illiterate	71	60.1	83	63.8
2. Literate	13	11.0	19	14.6
3. Primary school	22	18.6	17	13.1
4. High school 10th grade	7	5.9	8	6.2
5. High school to university graduate	5	4.2	3	2.3
Total	118	100.0	130	100.0

S5. Income equivalent to cash/Rs/month	Case N	%	Control N	%
1. 100 – < 1000	29	24.5	43	33.1
2. 1000 – < 2000	46	39.0	54	41.5
3. 2000 – < 3000	28	23.7	21	16.2
4. 3000 – < 4000	10	8.5	9	6.9
5. 4000 and above.	5	4.2	3	2.3
Total	118	100.0	130	100.0

Cont.4.3

S6. Income enough or not to rare your family	Case N	%	Control N	%
1= Yes	98	83.0	22	16.9
0= No	20	16.9	108	83.1
Total	118	100	130	100.0

Table 4.4

Child care information:

	Case N	%	Control N	%
C1. Mother work out side home?				
1= Yes	110	94.1	109	83.8
0= No	8	5.9	21	16.2
Total	118	100.0	130	100.0

If yes :

1 = regular work	35	29.7	39	30.0
2 = irregular work	76	64.4	70	53.8

Who takes care under 5 yrs children?	Case		Control	
	N	%	N	%
1. Friend/relative	2	1.7	3	2.3
2. Brother/sister	8	6.8	3	2.3
3. Grand parents	27	22.2	36	27.7
4. Mother	76	64.4	87	66.9
5. Father/Mother	5	4.2	1	0.8
Total				
	118	100.0	130	100.0

Table 4.5
Food habit information

FH1.Is there any food taboo during sick?	Case		Control	
	N	%	N	%
1 = yes	55	46.6	52	40
0 = No	63	53.4	78	60.0
Total				
	118	100.0	130	100.0

If yes please specify which kind of food taboo during sickness such as spices protein,carbohydrate.	Case		Control	
	N	%	N	%
	55	46.6	52	40.0

Table 4.6

Food supplement information: Case   Control

FS1. At what age the food supplementary was introduce	N	%	N	%
1. 0 – 4 month	48	40.6	58	44.5
2. > 12 month	3	2.5	3	2.3
3. 8 –12 month	9	7.6	8	6.2
4. 5 – 7 month	58	49.1	61	47.0
Total	118	100.	130	100.

Cont.4.6

FS2. How long was the baby breast feed	Case N	%	Control N	%
1. 0 – 5 month	12	10.1	10	7.7
2. 6 – 11 month	7	5.9	11	8.5
3. 12 – 18 month	3	2.5	11	8.5
4. 19 – 24 month	25	21.2	21	16.2
5. > 24 month	23	19.5	28	21.5
6. Until next preg.	48	40.7	49	37.6
Total	118	100	130	100

FS3. At what age of milk supplementation	Case N	%	Control N	%
0. Never	28	23.7	40	30.8
1. 24 month +	17	14.4	20	15.4
2. 18 –24 month	14	11.9	9	6.9
3. 12 – 17 month	12	10.2	22	16.9
4. 3 – 5 month	41	34.7	34	26.2
5. 6 – 11 month	6	5.1	5	3.8
Total	118	100	130	100

FS4. Age of animal protein supplementation	Case		Control	
	N	%	N	%
0. Never	26	22.0	31	23.8
1. 24 month +	3	2.5	1	0.8
2. 18 - 24 month	3	2.5	7	5.4
3. 12 - 17 month	27	22.9	31	23.8
4. 3 - 5 month	3	2.5	43	15.1
5. 6 - 11 month	56	47.4	56	43.1
Total				
	118	100	130	100

Cont.4.6

FS5. What type of milk substituted for breast milk.	Case		Control	
	N	%	N	%
1. None	30	25.4	52	40.0
2. Other	2	1.7	39	30.0
3. Condense milk	3	2.5	36	27.7
4. Animal milk	77	65.3	0.0	0.0
5. Powder milk	6	5.0	3	2.3
Total	118	100	130	100.0

		Case		Control	
FS6. Age of egg yolk supplementation		N	%	N	%
0. Never		32	27.1	41	31.5
1. 24 month +		3	2.5	0.0	0.0
2. 18 - 24 month		2	1.7	2	1.5
3. 12 - 17 month		29	24.6	33	25.4
4. 3 - 5 month		4	3.4	2	1.5
5. 6 - 11 month		48	40.7	52	40.0
	Total	118	100	130	100

Cont.4.6

		Case		Control	
FS7. Age of legume supplementation		N	%	N	%
0. Never		23	19.5	26	20.0
1. 24 month +		1	0.8	0.0	0.0
2. 18 - 24 month		0	0.0	4	3.1
3. 12 - 17 month		17	14.4	21	16.2
4. 3 - 5 month		5	4.2	5	3.8
5. 6 - 11 month		72	61.0	74	56.9
	Total	118	100	130	100

FS8. Age of fat and oil supplementation	Case N	%	Control N	%
0. Never	21	17.8	38	27.0
1. 24 month +	2	1.7	0.0	0.0
2. 18 - 24 month	1	0.8	2.0	1.5
3. 12 - 17 month	12	10.2	9	6.9
4. 3 - 5 month	5	4.2	6	4.6
5. 6 - 11 month	77	65.3	57	59.2
Total	118	100	130	100

Table 4.7 Food availability information:

FA1. Is there any kind of food preservation	Case N	%	Control N	%
1 = Yes	109	82.3	114	87.7
0 = No	9	7.6	16	12.3
Total	118	100	130	100.0

Cont.table 4.7

If YES	Case N	%	Control N	%
0 = Other	0	0	0.0	0.0
1 = Cereals, rice, dry veg.	105	88.1	108	83.1
2 = Vegetable or Fruit	1	0.8	0	0.0
3 = Vegetable + meat	1	0.8	3	2.3
4 = Fish + meat	1	0.8	0	0.0
5 = Fish + meat fruit and vegetable	1	0.8	3	2.3
Total	109	91.3	114	87.7

	Case		Control	
FA2. Do you grow vegetable	N	%	N	%
1 = Yes	111	94	109	84
0 = No	7	6	21	16
Total	118	100	130	100

If yes

2. Spices	7	5.9	9	5.9
3. Green or root and tubers	12	10.2	8	5.2
4. Green+root and tubers/spices	83	70.2	92	72.9
No growing vegetable	7	5.0	21	16.0
Total	118	100	130	100

Cont. 4.7

	Case		Control	
FA3.How long you grow	N	%	N	%
1. 4 month/ year	39	33.0	52	40.0
2. 5-8 month/year	41	34.7	39	30.0
3. 9-12 month/year	38	32.2	39	30.0
Total	118	100	130	100

FA4.Frequency of buying vegetable	Case		Control	
	N	%	N	%
1. Monthly	90	76.3	97	74.7
2. Fortnightly	1	0.8	2	1.5
3. Weekly	9	7.6	8	6.2
4. Twice a week	5	4.2	7	5.4
5. Every days	13	11.0	16	12.2
Total	118	100	130	100

	Case		Control	
	N	%	N	%
FA5. Types of salt use				
1. Sea salt (iodine without)	1	0.8	3	2.4
2. Rock salt	115	97.5	125	96.2
3. Iodized	2	1.7	2	1.6
Total	118	100	130	100

Table 4.8 Health information:

Characteristic	Main finding			
H1.Child suffered from diarrhoea	Case		Control	
> 4 times/day during last 2 weeks	N	%	N	%
1 = Yes	3	28.0	35	22.3
0 = No	85	72.0	95	77.7
Total	118	100	130	100

H2.   Child suffered from
Fever, cough,   Case   Control
breathlessness
during last   2 weeks   ---------   ----------

                                                       N   %   N   %
                                                    ----
1 = Yes   38   32.0   32   24.6
0 = No   80   67.8   98   75.4
                                     Total   ----------------------------------
                                                  118   100   130   100

H3.H/O   Worms seen in
         childs's stool   -----------------------------

                                                    Case   Control
                                                 ---------   ----------

                                                    N   %   N   %
                                                 ----
1 = Yes   27   22.9   29   22.3
0 = No   91   77.1   101   77.7
                                  Total   -----------------------------
                                                  118   100   130   100

Table 4.9 Screening physical examination:
H4.   Examination of conjunctiva
         pale or pink   Case   Control
                                                 ---------   ----------

                                                    N   %   N   %
                                                 ----
1 = Yes   19   16.1   21   16.2
0 = No   99   83.9   109   83.9
                                  Total   -----------------------------
                                                  118   100   130   100

H5. Examination of eye bitot,s
        spot

	Case		Control	
	N	%	N	%
1 = Yes	1	0.8	2	1.5
0 = No	117	99.2	128	98.5
Total				
	118	100	130	100

H6. Examination of angular
stomatitis
in the angle of the mouth

	Case		Control	
	N	%	N	%
1 = Yes	5	4.2	3	2 .3
0 = No	113	95.8	127	97.7
Total				
	118	100	130	100

Continue Table 4.9

H7. Dental decay ,dental carries

	Case		Control	
	N	%	N	%
1 = Yes	5	4.2	3	2 .3
0 = No	113	95.8	127	97.7
Total				
	118	100	130	100

H8. Goiter feel in the neck

	Case		Control	
	N	%	N	%
1 = Yes	2	1.7	0	0
0 = No	116	98.3	130	100
Total				
	118	100	130	100

H9. Examination of the leg
     pitting oedema

	Case		Control	
	N	%	N	%
1 = Yes	3	2.5	3	2.3
0 = No	115	97.5	127	97.7
Total				
	118	100	130	100

Continue Table 4.9
Characteristic   Main finding
H10.Examination of the child
looks extremely thin

	Case		Control	
	N	%	N	%
1 = Yes	5	4.2	9	6.9
0 = No	113	95.8	12	93.1
Total				
	118	100	130	100

In this study at first investigator had been performing chi-square test to test association between all independent variable and nutritional status of the preschool children. After that by selecting the significant result of association test which was shown in the following table.

Table 4.10

% Distribution of age of mother by Wt/Ht nutritional status classification:

Nutritional status Age of mother	case		Control		TotaL	
	N	%	N	%	N	%
1= < 25	90	75.6	78	60.0	168	67.8
0 = > 26	28	24.4	52	40.0	80	32.2
Total	118	100.0	130	32.5	248	100.0

Chi-square 7.46   DF 1   P.value 0.006

Table 4.11

% Distribution of occupation of mother by Wt/Ht nutritional status classification:

Nutritional status 2.Occupation	case		Control		TotaL	
	N	%	N	%	N	%
0=House wife.	45	37.8	72	55.4	117	47.1
1=Earning house wife	73	62.2	58	44.6	131	52.9
Total	118	100.0	130	100.0	248	100.0

Chi-square 7.36   DF 1   P.Value 0.006

Table 4.12

% Distribution of education of father by Wt/Ht
nutritional status classification:

Nutritional status Education	case		Control		TotaL	
	N	%	N	%	N	%
S3. 1= Illiterate	27	23.5	17	13.1	44	17.7
2 =Literate to university graduate	91	76.5	113	86.9	204	82.3
Total	118	100.0	130	100.0	248	100.0

Chi-square 4.06   DF 1   P.Value   0.04

Table 4.13
% Distribution of total no of family with food
preservation by Wt/Ht nutritional status classification:

Nutritional status Food preservation	case		Control		TotaL	
	N	%	N	%	N	%
0= Food not preservation	9	8.4	16	12.3	25	10.1
1=Food preser -ved	109	91.6	114	87.7	223	89.9
Total	118	100.0	130	100.0	248	100.0

Chi-square 6.4   DF   1   P.Value   0.01

Table 4.14

% Distribution of total no of family with not grow
vegetable by Wt/Ht nutritional status classification:

Nutritional status / grow vegeta.	case		Control		TotaL	
	N	%	N	%	N	%
0= no grow vegetable	111	94.1	21	16.0	132	52.2
1= Grow vege-table	7	5.9	109	94.0	116	47.8
Total	118	100.0	130	100.0	248	100.0

Chi-square 6.43   DF   1   P.Value   0.01

Table 4.15

% Distribution of Duration of breast feeding by
Wt/Ht nutritional status classification:

Nutritional status / Breast.feedin	case		Control		TotaL	
	N	%	N	%	N	%
3= 12-18 month	3	2.5	11	8.5	14	5.6
breastfeeding <12 >36	115	97.5	119	91.5	234	94.4
Total	118	100.0	130	100.0	248	100.0

Chi-square 6.43   DF   1   P.Value   0.01

Table 4.16
% Distribution of income Of family/Rupees/month by Wt/Ht
nutritional status classification:

Nutritional status / Income	case N	%	Control N	%	TotaL N	%
1= 100 < 2000	75	63.5	97	74.6	172	69.4
2=> 2000 /Rs/ month	43	36.5	33	25.4	76	30.6
TOTAL	118	100.0	130	100.0	248	100.0

Chi-square 3.54   DF   1   P.value 0.05

Table 4.17
% distribution of age of child by Wt/Ht
nutritional status classification:

Nutritional status / Age	case N	%	Control N	%	TotaL N	%
< 12 month > 36	76	64.4	43	33.1	119	47.9
> 13-36 month	42	35.6	87	66.9	129	52.1
Total	118	100.0	130	100.0	248	100.0

Chi-square 5.67   DF   1   P.value 0.01

Table 4.18

% Distribution of mother job out side home by
Wt/Ht nutritional status classification:

Nutritional status / job outside home	case N	%	Control N	%	TotaL N	%
1=irregular+ regular job	7	6.9	21	16.2	28	12.2
0= No out side job.	111	93.1	109	83.8	220	87.8
Total	118	100.0	130	100.0	248	100.0

Chi-square 6.43   DF 1   P.value 0.04

Table 4.19

List of association test between Wt/Ht classification
and various indicators:

Indicators	Case (118)	Contr -ol (130)	Chi- squa re	DF	P.
Age of mother	90	78	7.46	1	0..006
S2.House Wife vs Earning HW.	45	73	7.36	1	0.006
S3.Illiterate vs Literate-above graduate.	27	17	4.06	1	0.04
S5.Income.<2000 vs >2000	9	16	3.54	1	0.05
FS2.Duration of breast feeding 12 to 18 month	111	21	6.43	1	0.01
FA1 kind of food preservation	3	11	6.43	1	0.01
Age of child 13-36 month vs < 12 - > 36	75	97	5.67	1	0.01
C1.Mother job out side home	76	53	6.43	1	0.01
FA2.Not grow vegetable	7	21	6.43	1	0.01

4.10.1 The association of age of mother and the nutritional status:

Age of mother's were considered to be a risk factors associated with nutritional status of children. The mothers age were categorized as below 25 yrs and above 25 years. The result revealed that (75.6 %) of tne mothers of the age below 25 years and (60 %) of the mothers age group above 26 years were having their malnourished children. An analysis was made to measure significant association both the different age groups (< 25 years and > 26 years mothers) with regards to the malnourished children. A significant association was found (x^2 = 7.46 DF 1. P. value 0.006) (Table 4.10).

4.11.2 The association between occupation of mother and the nutritional status.

Occupation of the mother's were considered to be a risk factors associated with nutritional status of children. The mothers occupation were categorized eg labour, farming, services, vegetable and milk seller categorized as earning mothers. The result revealed that (55.4 %) earning mother and (37.8 %) non earning mothers) with regards to the malnourished children. An analysis was made to measure significant association both the occupation group (earning mother and non earning mother) with regards to their malnourished children. A significant association was found (x^2 = 7.36. DF 1. p.value 0.006) (Table 4.11).

In this research study mother have less time to care and the feed their children. In absence of the mothers' child was take care by other family members in the family. Majority of the mother are earning members as well as need to work out side home even their roll as a house wife need to go to field for the purpose of bring the grass to feed their cows and buffalos.

4.12.3 The association between education of father and the nutritional status:

Education of father's were considered to be a risk factors associated with nutritional status of children. the result revealed that (23.5 %) illiterate (13.1 %) literate to university graduate father were having malnourish children. An analysis was made to measure significant association both education (illiterate and literate to university graduate) with regards to the malnourished children. A significant association was found (x^2 = 4.06 DF 1. p.value 0.04) (Table 4.1.4). Illiterate father is usually low productivity in this research study, because it was found (16.1 %) only business and landlord found in occupational information. (Table 4.12).

4.13.4 The association between food preservation and the nutritional status:

Total number of family with food preservation were considered to be a risk factors associated with nutritional status of children.

The families with food preserved categorized as (12.3 %) of families with food preservation (8.4 %) of family with not preserved food were having their children malnutrition.

An analysis was made to measure significant association both Families with regards to the malnutrition children. A significant association was found (x^2 = 6.43 DF 1 p. value 0.01).

The technical report on (WHO, Geneva 1976), It had been define that preservation can serve the availability of certain food during off season. The availability of food also considered as food availability of the family.

In this study there is significant correlation between food preservation and the nutritional status p.value 0.01 (Table 4.13). In this study it was found that they preserved food such as grains, cereals, dry vegetable for the purpose of make food availability during off season time. (Table 4.13).

4.14.5 The association between families who did not grow vegetable and the nutritional status:

Number of family with not grow vegetable were considered to be a risk factors associated with nutritional status of children. The food availability information were categorized as grow vegetable means food availability in the families. Because they dont buy food offenly in a rural village and not grow vegetable means shortage of food availability at home were having malnutrition children.

The result revealed that (16.0 %) not grow vegetable and (5.9 %) grow vegetable in the families were having malnutrition children.

An analysis was made to measure significant association both (grow vegetable and not grow vegetable) with regards to the malnutrition children. A significant association was found (x^2 = 6.43 Df 1. p.value 0.01) (Table 4.14)

4.15.6 The association between duration of breast feeding and the nutritional status:

Duration of breast feeding considered to be a risk factors associated with nutritional status of children. Duration of breast feeding were categorized as 12-18 month breast feeding and before 12 month and after 18 month of breast feeding were having their children malnutrition .

The result revealed that (2.5 %) 12-18 month breast feeding and (8.5 %) before 12 month and after 18 month breast feeding were having their children malnutrition.

An analysis was made to measure significant association both (12 - 18 month breast feeding and before 12 month and after 18 month breast feeding) with regards to the malnourished children. A significant association was found between duration of breast feeding and nutritional status (x^2 = 3.54 DF 1 p.value 0.05) (Table 4. 15).

4.16.7 The association between income of families per month by nutritional status:

Income of family /Rupees /month were considered to be a risk factors associated with nutritional status of children.

The income of families were categorized as < 2000 > 2000. The result revealed that (74.6 %) of family have < 2000 income/month and (25.4 %) > 2000 income per families were having their children malnourished .

An analysis was made to measure significant association both income groups of families (< 2000 > 2000 income per month) with regards to the malnourished children. A significant association was found (x^2 = 3.54 DF 1 p.value 0.05) (Table 4.16)

4.17.8 The association between age of the child and the nutritional status:

Age of the child were considered to be a risk factors associated with nutritional status of children. The age of the child categorized as < 12 month > 36 month and 13-36 month were having their children malnourished .

The result revealed that (64.4 %) of children have < 12 month > 36 month and (35.6 %) of children 13-36 month were having their children malnutrition.

An analysis was made to measure significant association both age group (< 12 month >36 month and 13 -36 month) with regards to the malnourished children.

A significant correlation between age of the child and the nutritional status was found (x^2 = 5.69 DF 1 p.value 0.01) (Table 4.17).

4.18.9 The association between mother job out side home and the nutritional status:

Mothers job outside home were considered to be a risk factors associated with nutritional status of children.

Mothers job outside home categorized as regular job, irregular job, and no outside job. The result revealed that (6.9 %) of mother have regular plus irregular job outside home (16.2 %) of mothers have no outside job were having malnourished children.

An analysis was made to measure the significant correlation association was found (x^2 =6.43 DF 1. p.value 0.01). In this research studies the mother who do not go out as a earning they works as a house hold duty as well as they go to the field regular plus irregular for the purpose of cutting grass to feed their cows and buffalos. There is significant association between mother job out side home and the nutritional status p.value 0.01 (Table 4.18).

Wary and agiurre (1969) studied in Columbia that they found there was correlation between nutritional status and the maternal work, part time and full time work affected the nutritional status of the pre-school children but p.value was found > 0.05 but in this research study, it was controversy. Because in this study maternal work out side home irregular plus regular work p.value as shown significant 0.01. (Table 4.18).

4.19.10 The association between expected factors and

nutritional status among under five years children.

Waterlow classification has been used to showed the relationship between independent variable and dependent variables of this study, which are shown in cross tabulation are for testing the association between associated factors of the nutritional status. The table 4.19 showed that all the independent variables have been significantly correlation with dependent variables including p. value, x^2, degree of freedom also has showed in (Table 4.19).

Table 4.20 Prediction of out come malnutrition

Total no of under 5 yrs children 248

No of case (malnutrition =118) 1 = Case   0 = Control

Variable	ß	S.E.	EXP(B)	SIG
Ageofmot < 25=1 > 26=0	.7624	.2910	2.1435	.008
S2. Occuofmot < 4=0 > 5=1	-.5536	.2745	0.5749	.043
S3. Eduoffat < 1=1 > 2=0	.5805	3545	1.7869	NS
C1. Motjob 0=0 > 1=1	.9928	.4719	2.6988	.0354
S5. Income < 2=1 > 3=1	-.2810	.2986	.7551	NS
Constant	1.2789	.5460	.7551	.0192

Note:Logistic regression model applied in spsspc+

Level of significance < 0.05.

4.1.11 Logistic regression was used in this study to test the strength of association between the dependent and independent variable. It is a powerful statistical tool for the estimation of odds ratio adjusted for counfounding variables.

In this model, the dependent variable is a dichotomous outcome represented by either 0 or 1. In this study logistic regression analysis was to predict the factors associated with malnutrition, i.e., the dependent variable and a dichotomous outcome while the independent or predictor variables were either dichotomous or continuous data. Five predictor variables were included in the logistic regression model.

Both criterion and predictor variables were recategorized to dichotomous variable, e.g., all grades of malnutrition 1, 2, 3 were pooled into one group (i.e., grouped into malnutrition category) and those who did not have malnutrition into the non-malnutrition group before fitting into model. Likewise, the age of mothers were recategorized into those who were 26 and above and those who were 25 years of age. Logistic regression analysis allows us to estimate the ßeta coefficient of each of the independent variables, the standard error, the Exponential (B) (odds ratio), and probability of type I error (i.e., the statistical significance). If the P value obtained was below 0.05 then a statistical significant was declared.

The table 4.20 indicates that the predictors which were the associated factors of malnutrition included age of mother, occupation of mother (S2), mother's regular job outside home (C1), irregular job, no job outside home.

The estimated partial odds ratio are computed from equation fitted into model. Thus, mothers aged below 25 yrs would have an odd of 2.14 times higher risk of having malnutrition of their children compared to mother aged above 26 years. Likewise, earning housewives (S2) would have odds only 57 percent the risk of non earning housewives. Illiterate fathers (S3) had odds of 1.78 times the risk of having malnutrition of their children compared to fathers who were literate or had formal education up to university graduates. Mother with jobs outside home (C1) (regular job + irregular job) had odds of 2.69 times higher risk than those mothers with no outside jobs. Those with income per family per month below 2000 (S5) have odds of 75 percent the risk of having malnutrition compared to those with income per family per month higher than 2000. The details of the analysis were shown in Table (4.20).