

**GENDER DIMENSIONS IN CHILDCARE AND
NUTRITION AMONG MAASAI CHILDREN AGED 6 – 59
MONTHS IN NAROK CENTRAL DIVISION, NAROK,
KENYA.**

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(A Human Rights Approach)

**BY
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**A dissertation presented to the Department of Food Science,
Nutrition and Technology in partial fulfilment of the requirements
for the Degree of Master of Science in Applied Human Nutrition of
the University of Nairobi.**

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DECLARATION

I, Ruth Nematei Tiampati, hereby declare that this dissertation is my original work and has not been submitted for a degree in any other university.




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 nd August 2007

Date

This dissertation has been submitted for examination with our approval as university supervisors.



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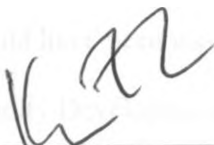
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This work is dedicated to my father, the Late John M. Tiampati, who believed in my capabilities from early childhood and continuously encouraged and supported me till his departure.

TABLE OF CONTENTS

Declaration	2
Acknowledgement	3
Dedication	4
Table of contents	5
List of Tables	9
List of Figures	10
List of abbreviations	11
Operational definition of terms	14
Abstract	17

CHAPTER ONE

1.0	INTRODUCTION	19
1.1	Background Information	19
1.2	Statement of the problem	21
1.3	Justification of the study	23
1.4	Aim of the study	24
1.5	Purpose of the study	24
1.6	Objectives of the study	25
1.6.1	General objective	25
1.6.2	Specific objectives	25
1.7	Hypotheses of the study	26
1.8	Benefits of the study	26

CHAPTER TWO

2.0	LITERATURE REVIEW	28
2.1	Overview of malnutrition	28
2.1.1	Global PEM situation	28
2.1.2	Nutritional Status of children under five in Kenya	29
2.1.3	Nutrition in Arid and semi arid lands	29
2.1.4	Socio-economic situation in Narok District	30
2.1.4.1	Nutrition and health	30
2.1.4.2	Water and sanitation	30
2.1.4.3	Social services	31
2.1.4.4	District poverty level	32
2.1.5	Determinants of malnutrition	32
2.1.6	Consequences of malnutrition	35
2.2	Gender Dimensions	36
2.2.1	Gender Roles	36
2.2.2	Gender and Resource Distribution	36
2.2.3	Gender and decision-making	37
2.2.4	Gender issues among the Maasai	37
2.3	Gender and childcare practices	38
2.3.1	Child feeding practices and nutrition	39
2.3.1.1	Breastfeeding practices	40
2.3.1.2	Complementary feeding	42
2.3.2	Home health care practices	43
2.3.3	Psychosocial care	44
2.3.4	Hygiene practices	44

2.3.5	Food preparation	45
2.4	Children's Rights	45
2.4.1	Protection of children's rights in Kenya	46
2.5	Right to adequate food	47
2.5.1	Frameworks for analysing right to food	48
2.5.2	Corrective measures	51
2.5.3	Enabling and non-enabling environments	53
2.5.4	Millennium development goals and human rights	54
2.6	Rights as a gender issue	55
2.7	Gaps in Knowledge	57

CHAPTER THREE

3.0	STUDY SETTING AND RESEARCH METHODOLOGY	59
3.1	Study area –Narok District profile	59
3.1.1	Geographic location and size	59
3.1.2	Population size and distribution	59
3.1.3	Physical features	60
3.1.4	Economic activities	60
3.2	Research Methodology	61
3.2.1	Study design	61
3.2.2	Study population	61
3.2.3	Sample size determination	62
3.2.4	Sampling frame	63
3.2.5	Sampling procedure	64
3.3	Data collection	68
3.3.1	Recruitment and training of field assistants	68
3.3.2	Study instruments	69
3.3.3	Pre-testing of study tools	70
3.3.4	Questionnaire administration	70
3.3.5	24-hour dietary recall	71
3.3.6	Anthropometric measurements	72
3.3.6.1	Age	72
3.3.6.2	Height measurements	72
3.3.6.3	Length measurements	73
3.3.6.4	MUAC measurements	74
3.3.6.5	Weight measurements	74
3.3.7	Guidelines for Focus Group Discussion	75
3.3.8	Data Quality Assurance	76
3.3.9	Ethical clearance of the research	77
3.3.10	Data entry and cleaning	78
3.3.11	Data analysis	78
3.3.12	Indicators used in the study	80
3.3.12.1	Nutritional status	80
3.3.12.2	Childcare practices	80
3.3.13	Challenges and limitations of the study	82

CHAPTER FOUR

4.0	RESULTS	83
4.1	Socio-demographic and socio-economic characteristics of the sample population	83

4.1.1	Distribution of household members by age and gender	83
4.1.2	Household size	84
4.1.3	Marital status of the mothers in the study	84
4.1.4	Level of education of the study population	85
4.1.5	Religion	87
4.1.6	Occupation of household heads and the mothers	87
4.1.7	Waste disposal	87
4.1.8	Sources of water	88
4.1.9	Main sources of fuel in the study region	88
4.2	Child feeding practices	89
4.2.1	Exclusive and continued breastfeeding	89
4.2.2	Frequency of breastfeeding between male and female children	91
4.2.3	Complementary Feeding	92
4.2.4	Dietary intake	94
4.2.4.1	Calories	94
4.2.3.2	Protein	95
4.2.3.3	Iron	95
4.2.3.4	Vitamin A	95
4.2.5	Order of serving children in the household	96
4.2.6	Alternative caregivers	96
4.2.7	Gender issues in child feeding	97
4.2.8	Fathers' role in ensuring the right to breastfeeding	98
4.3	Health practices	99
4.3.1	Morbidity	99
4.3.2	Action taken during illness of the child	100
4.3.3	Immunization and growth monitoring status	101
4.4	Nutritional status of the children	102
4.4.1	Nutritional status by age group	103
4.4.2	Nutritional status by gender of the children	104
4.4.2.1	Mean HAZ by gender	104
4.4.2.2	Mean WHZ by gender	105
4.4.2.3	Mean WAZ by gender	106
4.4.3	Regression and correlation for some variables and nutritional status	106
4.5	Gender roles in childcare	107
4.5.1	Constraints encountered by parents in providing childcare	110
4.6	The right to adequate food	111
4.6.1	Awareness of human rights	111
4.6.2	Understanding of the right to adequate food	112
4.6.3	Obligations of duty bearers	113
4.6.4	Remedial action in cases of violations of children's rights	113

CHAPTER FIVE

5.0	DISCUSSION	116
5.1	The right to adequate food	116
5.1.1	Understanding of the right to adequate food	116
5.2	Child feeding practices as indicators of the right to adequate food	118
5.3	Alternative childcare givers	120
5.4	Nutritional status as an indicator of the right to adequate food	121

5.5	Gender roles	122
5.6	Access to adequate health	124
CHAPTER SIX		
6.0	CONCLUSION AND RECOMMENDATIONS	126
6.1	Conclusions	126
6.2	Recommendations	127
REFERENCES		128
APPENDIX I	Questionnaire	136
APPENDIX II	FGD guide	146
APPENDIX III	Field assistants training curriculum	147
APPENDIX IV	Data analysis matrix	148

LIST OF TABLES

Table 1	Global malnutrition situation	33
Table 2	Sampling units	67
Table 3	Recommended Daily Allowances	79
Table 4	Distribution of household members by age and gender	84
Table 5	School attendance among household members	86
Table 6	Mean duration of breastfeeding for male and female children	90
Table 7	Mean intake of nutrients by gender	94
Table 8	Association and correlation between nutritional status indices and other variables	107
Table 9	Involvement of parents in childcare activities	109
Table 10	Constraints in undertaking childcare roles	110
Table 11	Remedial actions for mothers and fathers who violate childrens right to adequate food	114

LIST OF FIGURES

Fig 1	Conceptual framework on the causes of malnutrition	28
Fig 2	Flow chart on sampling procedure	65
Fig 3	Marital status of mothers in the study	85
Fig 4	Level of education attained by children aged 20 years and below	86
Fig 5	Gender distribution of the exclusive breastfeeding duration	90
Fig 6	Distribution of children by gender according to duration of breastfeeding	91
Fig 7	Breastfeeding patterns of male and female children	92
Fig 8	Age (months) of introducing complementary food to the child	93
Fig 9	Alternative caregivers	97
Fig 10	Respondents view on the father's role in ensuring the child's right to Breastfeeding	99
Fig 11	Morbidity status of the study children	100
Fig 12	Action taken in response to a child's illness	101
Fig 13	Prevalence of malnutrition among the study children	103
Fig 14	Nutritional status by age groups (mean z scores)	104
Fig 15	Mean HAZ scores by gender	105
Fig 16	WHZ scores by gender	106
Fig 17	Awareness of human rights	111

LIST OF ABBREVIATIONS

ACC/SCN	Administrative Committee on Coordination/ Sub committee on Nutrition
BCG	Bacillus Calmine Guerine
CBO	Community Based Organization
CBS	Central Bureau of Statistics
CEDAW	Convention for the Elimination of all Forms of Discrimination Against Women.
CESCR	Committee on Economic, Social and Cultural Rights
CIDA	Canadian International Development Agency
CRC	Convention on the Rights of the Child
CSO	Civil Society Organizations
DPT	Diphtheria Pertusis Tetanus
FA	Field Assistants
FAO	Food and Agriculture Organization

FBO	Faith Based Organization
FGD	Focus Group Discussion
GOK	Government of Kenya
HIV	Human Immuno Deficiency Virus
hh	Household(s)
IDD	Iodine Deficiency Disorders
IFPRI	International Food Policy Research Institute
KDHS	Kenya Demographic and Health Survey
MDG	Millennium Development Goals
MHRG	Millennium Human Rights Goals
MOH	Ministry of Health
MUAC	Mid Upper Arm Circumference
NGO	Non Governmental Organization

PEM	Protein Energy Malnutrition
RE	Retinol Equivalents
RDA	Recommended Daily Allowances
s.d	Standard Deviation
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund
VIP	Ventilation Improved Pit latrine
WHO	World Health Organization

OPERATIONAL DEFINITION OF TERMS

Child Care – Care encompasses the behaviours and practices of caregivers to provide food, health care, stimulation and emotional support necessary for children's healthy physical and psychological growth and development. In this study the care practices were feeding (breastfeeding and complementary feeding) and nutrient adequacy of diets and health practices (immunization, growth monitoring, and response to illness of children).

Chronic illness - children with terminal illnesses affecting their physical growth e.g. heart ailments, kidney as well as physical disability e.g. spina bifida, clubfoot, hunchback etc.

Complementary feeding – the transitional period when a child's diet gradually changes from one of breast milk alone to a diet based on what the family eats

Covenant – Formal agreement or contract between parties or states to do or not do something contained in a document that may be a deed or contract which may be officially signed.

Framework – Set of ideas, beliefs or rules used as a basis for making judgements or decisions.

Gender – Those characteristics of men and women, which are socially determined in contrast to those that are biologically determined.

Gender Dimensions – Elements or aspects of gender.

Gender roles – Socially determined behaviour that influence which activities, tasks and responsibilities are considered male and female, including productive, reproductive, community managing and political functions

Household- A group of people who are related, living in the same compound, are dependent on the same head and share a common source of food and income. They should have been living in the study area for the last six months.

Human Rights – Rights of men and women to basic freedoms that every living person should have. Entitlements that human beings have by virtue of being human.

Claim holders – Have legitimate claim to rights being upheld

Duty bearers – Those who are obligated to uphold (respect, protect, facilitate and fulfil) the rights of the claimants.

Duty bearers and claimants can be the international community, national and local Governments, NGO's, communities, families, households, parents and children

Right to adequate food – the physical and economic access to food or means to its procurement, in a quantity and quality sufficient to satisfy the dietary needs of individuals. It should also be free from adverse substances and acceptable within a given culture.

Awareness of the right to adequate food - refers to a relatively higher understanding of the respondents to the child's right to adequate food gauged against proxy indicators of the right to adequate food (quantity, quality, safety,

physical/ economic access and acceptability). Knowledge of all the 5 indicator constitutes good understanding and high awareness, 3-4 indicators reflect fair understanding and awareness, while 1- 2 indicators means little awareness and knowledge of none of the indicators shows no awareness or understanding of what constitutes adequate food.

Malnutrition – The disorders that result from excess or deficient food energy or nutrient intake or from failure to absorb or assimilate dietary elements.

Manyatta - A group of households that are close or extended relatives who live together within the same compound and share common facilities e.g. cow shed, water source etc

Respondents- This refers to the person who provided information on behalf of the children and in this study was the child's mother.

Sanction – official permission or approval for an action or a change to take place

ABSTRACT

This study sought to establish whether the male and female children aged 6 – 59 months in Narok District are provided with similar feeding and health care practices. In addition, the involvement of the mothers and fathers in the responsibility of ensuring that their children's right to adequate food is actualised was also studied. It was hypothesized at the onset that male children had better nutrient intake than their female counterparts and that the increased involvement of the fathers' in childcare as well as the mothers awareness of the right of the child to adequate food, result in well nourished children.

A cross sectional study was conducted among 271 Maasai households with children aged between 6 – 59 months in Nkareta and Oletukat locations of Narok District between August and September 2005. A combination of purposive and random sampling was used to include 2 locations, 6 villages and 271 households. Quantitative and qualitative data was collected through interviews, focus group discussions, anthropometric measurements and dietary assessment. A structured questionnaire and focus group discussion guide were developed to capture the information.

Results indicated that the mean duration of exclusive breastfeeding was 3.7 months, while that of total breastfeeding was 2.4 years. However no significant difference between the male and female children was found ($P= 0.1$ t test) for exclusive breastfeeding and ($P=0.7$ t test) for total breastfeeding. The mean caloric intake was 1032.8 (males) and 1199.4 (females), while that of vitamin A was 182.8 (males) and 153.8(females). The mean age for introduction of complementary foods was 3.7 months, but without a significant difference between the gender (t test, $P=0.2$). While

51.7% of the children were taken to health facilities when they were unwell, 41.7% of them were given traditional herbs at home. The immunization coverage established in the study was 72.3%. Stunting levels were found to be 4.4%, while 14.4% and 28.1% of the children were underweight and wasted respectively. The main roles the fathers played were in food production and decision-making. Only 5% of the mothers were aware of the right to adequate food.

The study therefore concludes that male children did not have better nutrient intakes than the female. No correlation was found to exist between the involvement of fathers and their childrens nutritional status, however a strong positive relationship between the mothers' awareness of the right to adequate food and the nutritional status of her child.

1.0 INTRODUCTION

1.1 Background information

Protein Energy Malnutrition is the most common form of malnutrition and it describes a range of different stages of malnutrition from underweight to severe malnutrition. Other forms of malnutrition are chronic energy deficiency (insufficient quantity of food) and micro nutrient deficiencies (insufficient quality of food).

Weight for height gives information on the present nutritional status and indicates whether a child suffers from acute malnutrition (wasting) or not. Height for age gives information on the nutritional status in the past and indicates whether a child suffers from chronic malnutrition (stunting) or not. Weight for age is mostly used to monitor the growth of children. If a child is underweight the cause can be chronic or acute malnutrition, (Caritas Netherlands, 1997).

According to UNICEF (2006), prevalence of World stunting in 2005 was 31.1% for stunting while that of Sub Sahara Africa (38%), remains higher than the global figure. UNICEF (1995) estimates that, as many as 50% of all children in tropical countries pass through a stage of serious malnutrition when growing up and particularly during the weaning period of 6 to 24 months. The Kenyan national rate for overall stunting is 30% and 11% for severe stunting, (CBS/MOH/ORC, 2004). Arid and semi arid lands, in which Narok belongs, produce limited amounts of food thus caloric intakes are low and the population is at risk of malnutrition. Studies so far indicate a higher prevalence of malnutrition in these areas, compared to other areas in Kenya.

Nutritional status of children below 5 years of age in 1994 in Narok indicate stunting levels of 40.4% and wasting of 11.7%, (WHO/FAO, 1992).

In practice, the main responsibility for childcare lies with the mother. Her ability to manage many competing demands on available time will govern the degree to which she can maintain a clean household environment, care for a sick child, provide and prepare food for all household members particularly infants. The integral precondition for adequate nutrition may not be as well recognized by policy makers partly because little data is routinely collected to reveal the gender dimensions of nutritional problems, (Gillespie and Mason, 1991). Widespread recognition of fathers' involvement in childcare may help motivate many men to become more involved in nurturing children. Evidence exists that indicates mothers are more effective parents when fathers are supportive partners, (Storrs, 2006). Children are major beneficiaries when they are raised by warm, loving mothers and fathers.

The principal obligation towards children is to promote their development and self-reliance. So long as they are not mature, children ought to get their nurturance from their parents, failing that; they ought to get it from their local community, local government, national governments and the international community. In cases of failure, agents more distant from the child should not simply substitute for those closer to the child, but instead try to work through and strengthen those closer to help them become more capable of fulfilling their responsibilities towards children. To the extent feasible, those in the outer circles should try to empower those in the inner circles so that they can meet children's nutritional and other needs. However, there should be also a clear duty of the government enshrined in Law to do what needs to

be done if the family and community's response is inadequate which may include direct feeding programmes and a variety of health and care services. Several nations have articulated forms of the right to nutritional security in their laws, but in most cases these have not been enforced through the courts. There is no elaboration in detailed statutes of distinct nutrition rights and no legal enforcement. The idea of the right has not yet been implemented, (Kent, 1993).

Protection of the rights of the child is much more than a mere legal relationship. It cannot be adequately achieved even through a perfect legal system of rules and regulations. It cannot ignore the psychological and socio-economic base, which is necessary to make such protection a reality, (Murungi, 1988).

1.2 Statement of the problem

Despite the fact that according to the Arid lands resource management 2005 bulletin, Global Acute Malnutrition rates for children under five years of age in Narok declined from 13.35% in December 2005 to 4% in January 2006, the nutritional status of the children under five years of age in arid areas is constantly characterized by seasonal fluctuations, (Arid Lands Resource Management, 2005). While childhood malnutrition is generally directly related to shortage of food in the family as a whole, the problems encountered in child feeding are more of cultural problems in intra family distribution and attitudes towards childcare and child feeding practices as is the case in conservative communities like the Maasai. Discrimination in the form of gender specific allocation of food, inequalities in responsibilities of caregivers and in

access to education and health care are examples of gender based inequalities that result in ill health and malnutrition, (Lingen, 1997).

Gender disparities are widespread in the Maasai community including those in Narok District. Women are shielded from taking a meaningful role in community affairs and therefore their full potential is never realized. These inequalities pose a critical barrier to productivity, equitable and economic growth. These have a bearing on their childcare abilities. The traditional structure shields women from positive change processes. Women rarely benefit from education, new technologies and new sources of income, and are disproportionately exposed to the outcomes of negative changes such as droughts, loss of key resources and increasing incidence of single-parenthood, (Catholic Diocese of Ngong, 2005). Men in the Maasai community, on the other hand, provide less direct care to children than mothers. Besides the productive roles they play, they have little understanding of what constitute good childcare practices yet they are in control almost solely in most cases of the family resources and of the decisions that affect childcare practices (Catholic Diocese of Ngong, 2005).

It is now widely recognized that effective poverty reduction is not possible without empowerment. The human rights approach to poverty reduction is essentially about such empowerment. The most fundamental way in which empowerment occurs is through the introduction of the concept of rights itself. For a long time poverty reduction of which malnutrition is a cause and a consequence of, has been pursued using a needs based approach that has not had sustainable impact. Increasingly the human rights approach has been accepted as more effective in ensuring that claimants

get their rights and duty bearers are supported and made accountable for the provision of the basic rights to the claimants. Despite the human rights approach being accepted, albeit recently as an effective approach to poverty reduction, little is known on the human rights status at the household level.

1.3 Justification of the study

Research and documentation of the different roles, involvements and contributions played by both men and women in the care of children in Narok has been inadequate and this research attempts to bridge that gap by providing data on the current situation. The conservative nature of the Maasai community has enabled them to hold on to age old traditions and practices that may not be promoting good childcare practices.

Discrimination in access to education, control of family assets e.g. land and livestock as well as decision making largely exists in the Maasai community. The study sought to identify whether discriminative culture in the allocation of food and provision of healthcare is based on the gender of the child. This could form a basis for formulating strategies that discourage preferential childcare practices, especially since girls who are healthy and well fed during their childhood have fewer problems in pregnancy and childbirth

The fundamental human rights to nutrition, food, health and life now need to be converted into accelerated action in terms of implementation at the household level. As it is currently, human rights as a concept is still largely at the national and

international level, yet its actual implication at the grassroots is not actualised. In using the human rights approach, each country needs to provide for a system of clearly defined sanctions, in case the rights are not implemented. Citizens should have the right to pressurize their governments, the UN and donors to implement their obligations. If the citizens are not in the first place aware of their rights to adequate food, they will not be in positions to demand for their rights and those of their children.

1.4 Aim of the study

1.5

The aim of the study is to generate information on childcare practices and whether they are based on gender of the child, the allocation of childcare roles between parents and the awareness of the right to adequate food for the children by the mothers and assess their relationship with the nutritional status of the children aged 6 – 59 months in Narok.

1.5 Purpose of the study

The study brings into perspective the prevalence and distribution of malnutrition, child feeding and healthcare practices, the childcare roles and the level of awareness on the right to adequate food for the children by their parents and how these relate to the nutritional status of the children aged 6- 59 months in Narok District.

The findings of this study will enable beneficiaries i.e. parents, community, NGOs/CBOs/FBOs and the government to identify, understand and act on the

knowledge gaps and practice in the rights to adequate food as well as the gender inequalities that result in child malnutrition.

1.6 Objectives of the Study

1.6.1 General objective

To establish whether gender based discrimination in childcare practices and in the distribution of childcare roles as well as the awareness of the rights of the child to adequate food by the parents, play a role in the nutritional status of the children aged 6-59 months in Narok District, Kenya.

1.6.2 Specific Objectives.

- 1) To determine the socio economic and demographic characteristics of the households.
- 2) To assess the breastfeeding and complementary feeding practices and determine the nutrient adequacy of diets given to male and female children aged 6 – 59 months in Narok.
- 3) To determine the growth monitoring attendance, immunization status and the action taken in illness of children aged 6 –59 months in Narok.
- 4) To assess the nutritional status of children aged 6 –59 months in Narok.
- 5) To determine the roles played by mothers and fathers in productive, reproductive and decision-making practices involved in the feeding and healthcare of children aged 6 – 59 months in Narok.

- 6) To assess the households awareness of adequate food for children between 6-59 months as a human right.

1.7 Hypotheses of the study

- 1) Male children aged 6 – 59 months have better nutrient intake than their female counterparts.
- 2) Fathers' involvement in childcare results in better nourished children.
- 3) Awareness about the right of the child to adequate food results in better nutrition for the child.

1.8 Benefits of the study

This study provides baseline data on child nutrition situation, child feeding and healthcare practices as well as gender issues affecting childcare in Narok. This information will be vital in designing, planning, implementing and evaluating interventions and programmes that address child nutrition. Organizations working in this area will also appreciate the human rights approach in nutrition and health programmes.

The identification of the policy gaps in as far as human rights is concerned will enable the Government to assess how well the community understands and is aware of its role in implementing their obligations in the provision of adequate food for their children. The human rights approach to food will be crucial in coming up with legislation in nutrition programmes.

The Narok community will have the opportunity to improve the nutrition of their children by getting access to baseline information on their nutritional status and how it can be improved. Fathers will appreciate the contributions of women in childcare and view childcare as a responsibility for both men and women, thus assisting women appropriately and make informed decisions regarding childcare.

Once aware of their obligations in ensuring provision of adequate food to the child, individuals, households and communities will more effectively safeguard their children's nutrition and be able to demand their rights from the government and international community.

2.0 LITERATURE REVIEW

2.1 Overview of malnutrition

2.1.1 Global PEM situation

Protein Energy Malnutrition levels in the developing countries remains high. Although South Asia still has the highest rates of malnutrition, it has improved its efforts in combating malnutrition as compared to Sub Saharan Africa. Much still needs to be done in order to bring these figures down.

Table 1: Global nutritional situation

Region	UNDERWEIGHT		STUNTING		WASTING	
	Moderate & Severe 1a	Severe 1b	Moderate & Severe 2a	Severe 2b	Moderate & Severe 3a	Severe 3b
Sub-Sahara Africa	28.9	8.4	38.0	17.5	8.8	1.7
Middle East & N. Africa	13.7	2.3	21.1	5.8	5.7	0.7
S.Asia	45.7	16.4	44.2	21.7	14.6	2.6
E. Asia & Pacific	16.8	2.8	19.1	5.4	3.5	0.2
Latin America & Caribbean	7.3	1.0	15.9	4.8	2.0	0.4
Developing Countries	27.0	8.2	31.4	13.8	8.4	1.3
Least Developed	35.9	10.2	42.4	18.8	10.4	1.6
World	26.6	8.0	31.1	13.6	8.3	1.3
1a. % Children under five years below –2 s.d from the median weight for age for reference population 1b. % Children under five years below – 3 s.d from the median weight for age for reference population 2a. % Children under five years below – 2 s.d from the median height for age for reference population 2b. % Children under five years below –3 s.d from the median height for age for the reference population. 3a. % Children under five years bellow – 2 s.d from the median weight for height for the reference population. 3b. % Children under five years below – 3 s.d from the median weight for height for the reference population.						

(UNICEF, 2005)

2.1.2 Nutritional status of children under five years of age in Kenya.

Stunting (Height for age) is a measure of linear growth. Nationally, 30% of children under five years of age are stunted while 11% are severely stunted, (CBS/MOH/ORC, 2004). Stunting is highest among children between 12 – 23 months (43%) and lowest in children less than 6 months (7%). Severe stunting is similar in trend with 12 – 23 months old children (16%) and less than 6 months (1%). A higher proportion of male children (33%) are stunted compared to female children (28%). Six percent of children under 5 years of age are wasted while 1 in every 5 is underweight. Rural areas and low socio-economic groups have higher prevalence of underweight.

According to the 1990 world food summit for children's goals and the national plan of action developed by the GOK in 1994, the target was to virtually eliminate Vitamin A disorders by 2000, (GOK and UNICEF, 1998). Overall 62% of the children under 3 years of age consume foods that are rich in Vitamin A and 33% of the children under 5 years receive Vitamin A supplements, (CBS/MOH/ORC, 2004).

2.1.3 Nutrition in arid and semi arid lands

It can be hypothesized that because arid and semi arid lands produce limited amounts of food, caloric intakes are likely to be low and population is at risk of malnutrition. Studies so far indicate a higher prevalence of malnutrition in these areas, (WHO/FAO, 1992). Nutritional status of children below 5 years of age in Narok indicates stunting levels of 40.4% and wasting of 11.7% in 1994.

According to the Arid lands resource management 2005 Bulletin, Global Acute Malnutrition rates for children under five years of age in Narok declined from 13.35% in December 2005 to 4% in January 2006. Nutritional status of the children under five years of age in arid areas is characterized by seasonal variations, weight gain registered during the rainy seasons and weight loss in drought (Arid Lands Resource Management, 2005).

2.1.4 Socio- economic situation in Narok District

2.1.4.1 Nutrition and health

Narok is served by one district hospital, 28 dispensaries and 10 health centres. Health services offered in the District by the Government and NGOs range from health and nutrition education, maternal and child health (MCH), outpatient and inpatient care and voluntary counselling and testing for HIV/AIDS, (Republic of Kenya, 1994).

Nkareta location has only one dispensary serving a population of 2337 households, while Oletukat has none. Besides FBOs involvement in growth monitoring, immunization, MCH and health and nutrition education, no other conventional health services are found in these areas.

2.1.4.2 Water and sanitation

Narok district is characterized by frequent droughts and unreliable rainfall. Five percent of the population have access to piped water while 30% have access to portable water for domestic use. The district has less than 50 boreholes and 90 water

pans and dams. Approximately 25% of the households in the district have roof catchment and the average distance to the nearest portable water point is 8 km.

The sanitation infrastructure and awareness in Narok District is generally lacking and results in high prevalence of feacally-transmitted infections. There are 20 VIP pit latrines in the district, (Arid Lands Resources Management, 2005).

2.1.4.3 Social services

Educational facilities in Narok are scanty, inadequate, poorly equipped and staffed with insufficient classrooms, housing, teaching and learning materials. The long distances to schools coupled with harsh environmental condition are prohibitive to many of the young school children. Due to the high poverty levels, local households are not able to meet the costs of sending their children to secondary and tertiary levels of education.

The girl-child is even worse affected and is totally disadvantaged. Parents prefer, if at all to send boys to school rather than girls whom they would prefer to marry off as soon as possible. Their chance for formal education is complicated further by the gender inequality in the Maasai society and the fact that girls matures faster and are more needed at home to assist their mothers in household-chores and in the process get prepared for early marriages. Those in schools are also vulnerable to the practice and the same affects retention of girls in learning institutions, (Catholic Diocese of Ngong, 2005).

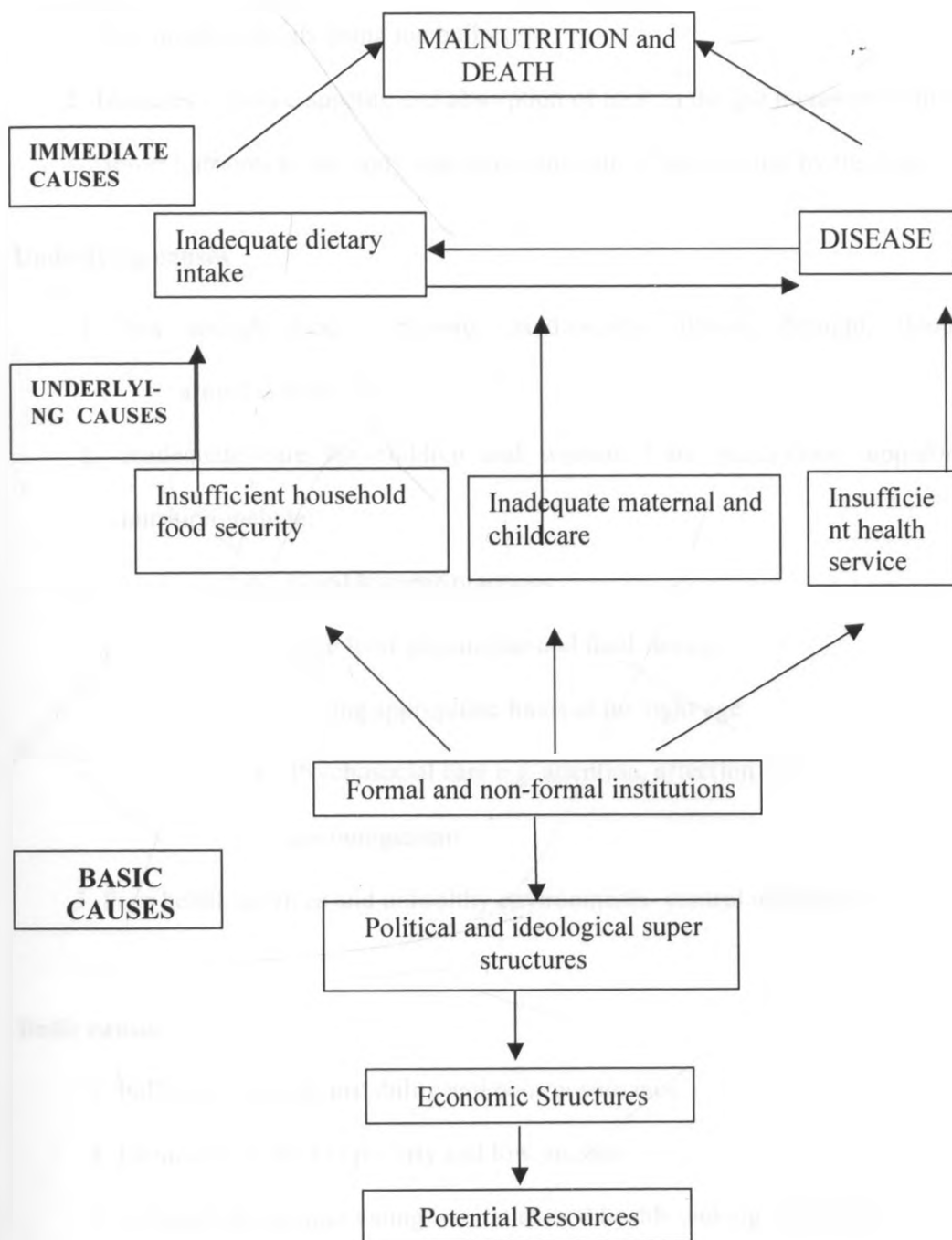
2.1.4.4 District poverty level

According to 1997 welfare monitoring survey, 64% of the population in Narok District live below the poverty line. Of this 70% are women. The illiteracy level lies at 85% with a large proportion being women. Poor infrastructure facilities, poor markets, high prices of agricultural inputs, recurrent droughts, human- wildlife conflict and increase in HIV/AIDS contribute to poverty, (Republic of Kenya, 2001).

2.1.5 Determinants of malnutrition

Understanding the causes of malnutrition helps health workers to promote good nutrition. An integrated approach is needed to overcome the causes of malnutrition, which can be classified under 3 causes as illustrated in figure 1.

CONCEPTUAL FRAMEWORK ON CAUSES OF MALNUTRITION



(GOK/UNICEF, 1998)

Fig 1: Conceptual framework on causes of malnutrition

Immediate causes

1. Inadequate dietary intake- due to insufficient and poor variety of food, too few meals or foods being too bulky.
2. Diseases – reduce appetite and absorption of food in the gut therefore availing fewer nutrients to the body and increasing rate of nutrient use by the body.

Underlying causes

1. Not enough food – poverty, landlessness, illness, drought, floods, armed conflict etc.
2. Inadequate care for children and women. Care behaviours supporting nutrition include:
 - a. Good hygiene practices
 - b. Safe food preparation and food storage
 - c. Giving appropriate foods at the right age
 - d. Psychosocial care e.g. attention, affection and encouragement.
3. Poor health services and unhealthy environments- control of diseases.

Basic causes

1. Political – include instability and poor governance
 2. Economic- linked to poverty and low income
 3. Cultural- determines eating, sanitation and health seeking behaviour.
- (Kavishe, 1997).

2.1.6 Consequences of malnutrition

Each year malnutrition causes nearly seven million deaths in children, more than any other single disease, war or natural disaster. Over 50% of deaths in children between 6 months and 5 years in low income countries are nutrition related. About three quarters of these are due to mild or moderate under nutrition.

Malnutrition kills, disables and causes immense suffering because a malnourished child has a weakened immune system. Poor nutrition also leads to growth faltering, inactivity, apathy and also affects the physical, mental, emotional and social development. Malnourished children lack the capacity for learning .In young children malnutrition dulls motivation and curiosity and reduces play and exploratory activities. This in turn impairs mental and cognitive development by reducing the amount of interaction children have with their environment and those who provide care, (UNICEF, 1998).

Malnutrition is closely linked to high risk permanent brain impairment; which has long-term impact on human society at a time of increasing demand for intellectual flexibility and capacity, (ACC /SCN, 1998).

2.2 Gender Dimensions

2.2.1 Gender roles

Both women and men have roles in production (of goods and services) and public life. However, reproductive tasks (ensuring basic needs at family and house hold level are met, homes and children are maintained and cared for) fall almost entirely on the women. This results in women having longer working days than men. Reproductive work is undervalued and is not recognised as real work and lacks remuneration. Productive work of women is often seen as an extension of their reproductive work and is also undervalued, (Williams et al, 1994).

2.2.2 Gender and resource distribution and control

Access to resources and benefits and control over them is allocated according to gender. In some societies, women may not own land and their access to it depends on a male relative. UN statistics (Williams et al, 1994) indicate that: Women perform 2/3 of the worlds work, they earn 1/10 of the world income yet they are 2/3 of the world's illiterates and own less than 1/100 of the world's property. Women who have or control an income have more decision making power about use of time, family income and family assets. This boosts their self-esteem and self-confidence and their ability to care for her children and themselves, (UNICEF, 1997).

2.2.3 Gender and decision-making

Local level gender roles, responsibilities and norms determine the types of decisions that men and women are entitled to participate in and have control and control over. Studies in Afghanistan (Wakefield, 2004), indicate that elderly women have control over decisions related to the household, including distributing of work to younger women. The elder men have control over decisions that take place outside the household. Household compositions combined with personality of household members are important determinants of how decision- making takes place.

Most local gender norms deem it generally inappropriate for women to participate fully in community life and take leadership positions. Local perceptions of the level of knowledge held by men and women may be important determinants of the acceptability of their participation in different types of household and community decision- making.

2.2.4 Gender issues among the Maasai

Gender disparities and inequality is widespread in the Maasai community including those in Narok District and the status of women in society is generally low. Women are shielded from taking a meaningful role in the community affairs and their full potential is never realized due to this unfair and discriminatory state. These inequalities pose a critical barrier to productivity, economic and equitable growth. The traditional structure shields women away from positive change processes. Women rarely benefit from education, new technologies, and new sources of income and are disproportionately exposed to the outcomes of negative changes such as

droughts, loss of key resources and increasing incidence of single-parenthood. The multiple burdens of women are too much yet they have no control over family resources and have little say in most local activities, (Catholic Diocese of Ngong. 2005).

2.3 Gender and child care practices

Childcare in nutrition refers to the practices of the caregivers to the household, which translate food security and health care resources into a child's growth and development, (UNICEF, 1997).

In child nutrition, care facilitates optimal use of household food resources for child feeding and the optimal use of parental or other resources to protect the sick child or other vulnerable household members from infection and care for them, (ACC/SCN, 1990). According to ACC/SCN and IFPRI (2000), care practices generally include,

1. Care for women, including care for pregnant and lactating women
2. Breastfeeding and complementary feeding
3. Psychosocial care and cognitive stimulation
4. Hygiene practices
5. Home health practices
6. Food preparation and storage

Childcare practices including the ways that they are performed, with affection and responsiveness to children is critical to their growth and development. Differences between children can have a major effect on their care and consequently their

nutritional status. Some of the differences are due to the way children behave, such as temperament or verbal abilities. Others are due to the social value of children and their development period or age, (UNICEF, 1997).

WHO, IFPRI and the University of Ghana in 1997 undertook a survey in Accra to examine the determinants of child nutrition. Good care practices for children 4-36 months of age were found to be beneficial for child nutritional status. The most significant constraint to good childcare practices was found to be lack of maternal schooling, (ACC/SCN and IFPRI, 2000).

2.3.1 Child feeding practices and nutrition

Feeding practices play a pivotal role in determining optimal development of infants. Poor breastfeeding and infant feeding practices have absolute consequences on the Health and Nutritional Status of children, which in turn has consequences on the mental and physical development of the child. Malnutrition is most prevalent between 6 months and 2 years of age, mainly due to poor child feeding, not lack of food. According to Nurture (1996), malnutrition is usually the result of:

1. Sub optimal breastfeeding practices.
2. Poor quality complementary foods (too few calories, protein and /or micronutrients).
3. Detrimental feeding practices (inappropriate timing of the introduction of complementary foods as well as infrequent unsupervised feedings).
4. Contaminated food.

Good feeding practices encompass use of appropriate food (quality, quantity and frequency) at the right time taking into account the stage of development of the child. Early introduction of complementary foods (before four to six months of age), carries the risk of increased morbidity due to diarrhoea and food allergies, as external challenges are introduced to the immature digestive tract. Delays in introduction of children to complementary foods (after six months of age), can lead to faltering growth, decreased immune protection, increased diarrhoeal diseases and malnutrition. Food availability, acceptability and avoidance as well as availability of fuel also affect diet and feeding.

Other behaviour that affects nutrition includes whether children are fed first or last among family members and whether boys are fed preferentially over girls. In a number of cultures and countries, men, adult guests and the male children eat before women and girls, (UNICEF, 1998).

2.3.1.1 Breastfeeding practices

Breastfeeding practices include

1. Exclusive breastfeeding for 6 months
2. Initiation of breastfeeding within the first hour after birth
3. .Breastfeeding on demand
4. Development of skills of breast milk expression
5. Protection from commercial pressures for artificial feeding

Exclusive breastfeeding for the first six months of age is a WHO recommendation. Social networks, ethnic factors, demographic play a role in the variation of

breastfeeding, (Lawrence, 1996). Women are encouraged to initiate breastfeeding within the first 30 minutes after birth, except for an HIV positive mother who has chosen not to breastfeed, (CBS/MOH/ORC, 2004). Exclusive breastfeeding up to the age of 6 months and sustained with complementary foods to the age of two years is recommended.

In Kenya the median duration of any breastfeeding is slightly higher in rural areas 20 months compared to urban areas 19 months. Analysis indicates that education level and socio-economic status of the mother are related to breastfeeding practices. Women with no education are more likely to breastfeed longer (24 months) than those who have at least some secondary school education (19 months), (CBS/MOH/ORC, 2004).

Breastfeeding also increases the infant's ability to elicit a strong bond with the mother. Children who are exclusively breastfed have lower rates of infection with diarrhoea, acute respiratory infections and earaches, (UNICEF, 1997). Research shows that the risk of mother to child transmission of HIV/AIDS is significantly higher if the mother becomes infected with HIV during pregnancy or while breastfeeding and when the mother is at an advanced stage of the disease. When the mother is infected with HIV, it may be preferable to replace breast milk to reduce the risk of transmission to her infant. The risk of illness and death from replacement feeding should be less than the risk of HIV transmission through breastfeeding, (WHO/UNICEF/UNAIDS, 1998).

2.3.1.2 Complementary feeding

From 4-6 months of age, the child is introduced to complementary feeding. A staple food dense in calorie and with good digestibility is given. Other foods are added according to the progressive rate of the infant. Initially one meal a day is given, then two times by about 6 months, and 4 – 6 times over 6 months of age. By the time the child is one year old, they are encouraged to feed themselves and to receive a variety of both taste and texture of food in their diet, (Luboya, 2001).

In Kenya, 54% of children under the age of six months receive solid or semi solid foods. Children between 6 – 12 months should be breastfed on demand and given foods that are rich in energy and nutrients. From 1 – 3 years, foods other than breast milk become the main source of energy and nutrients. Other foods should be given up to 5 times a day with continued breastfeeding. As from 3 – 5 years, children should eat at least 3 times a day and it should be ensured that they eat enough. They should be given plenty of energy and nutrient rich foods from the family diet, (King and Burgess, 1993).

In this study, dietary patterns were investigated as a dimension of child feeding practices. Dietary assessment is an important part of nutritional assessment but cannot be used alone to make a diagnosis of nutritional health. However it is possible to estimate whether or not individuals are consuming adequate amounts and compositions of the nutrients that are necessary for good nutrition. Methods used in dietary assessment include daily food consumption methods e.g. 24 hr recall designed to measure the quality of foods consumed by an individual in the preceding day by means of detailed questions. Estimates of food eaten are recalled from memory.

Advantages of the recall methods are that the satisfactory cooperation by the participant is easily achieved and it gives a more exact picture of the actual food intake unlike in the recalled usual food consumption methods e.g. diet history. The limitation however is that the respondents must have a good memory and well defined pattern of diet, (Den Hartog and Van Staveren, 1985).

2.3.2 Home health care practices

Home health practices include management of illness at home, utilization of health services and home based protection of children. Home management of illness includes the prevention of illness, its diagnosis and subsequent home treatment. Home management of child illnesses promotes capacity of mother or caretaker at home level to take appropriate measures before getting outside in order to prevent deterioration of the condition e.g. giving oral dehydration salts (ORS) in case of diarrhoea or accepting referral of child to health facility. Mothers in most case play the role of implementing the prevention and diagnosis of illness, while fathers provide the means of prevention eg purchasing cleaning materials, warm clothing etc. administration of drugs or herbs for home treatment is mainly the fathers role in the case of the Maasai.

Utilization of health services includes growth monitoring, immunization, diagnosis and treatment. In the event of inadequate treatment at home, curative health services must be consulted as early as possible. Attendance of routine immunization and growth monitoring services is ensured by the mother. While some fathers may be involved in taking their children to health facilities when they fall ill, most will provide the resources required for curative services. In 2004, only 52% of the

Kenyan children aged 12- 23 months had received full regimen of recommended vaccines in Kenya (1 dose BCG, 3 doses DPT/Hepatitis B, Influenza and Polio and 1 dose measles), (CBS/MOH/ORC, 2004).

Home based protection includes control of pests and avoiding accidents. Children also require protection from forms of abuse such as severe physical punishment or other physical and mental abuses. Home based protection is ensured mainly by the mother.

2.3.3 Psychosocial care

Psychosocial care describes a constellation of social, mental health and emotional needs and the care given to meet them. Relevant and continuous interactions with caregivers as well as their environment, enables children to move on to the next development phase.

The common element in care giving practices, which lead to psychosocial adaptation, is responsiveness of the caregiver to children's behaviour. Caregiver's affection, attention, involvement and encouragement of autonomy, exploration and learning are correlated with better nutritional status, (UNICEF, 1997). Psychosocial care should be undertaken by both parents.

2.3.4 Hygiene practices

Hygiene practices directly affect the cleanliness of the environment and the number of infectious agents children ingest, either through contaminated food or water, or by physically placing contaminated objects in their mouths. Hygiene practices include

personal and household hygiene practices, (UNICEF, 1997). Ideally, both parents should complement each other in ensuring that the child's personal hygiene and his environment are clean. Although in the African set up the man does not directly engage in the cleaning itself, they facilitate the acquisition of cleaning facilities e.g. wash basin, water containers, soap, while women do the cleaning itself.

2.3.5 Food preparation

Food preparation practices encompass household food preparation, cooking and processing, food storage and food hygiene. A substantial amount of time is spent on these activities and the effort and skill involved affect child nutrition, (UNICEF, 1997). In the Maasai community, the food is usually prepared and served by the women. The kitchen where food preparation is undertaken is the preserve of women and children alone. The order in which food is served favours guests followed by men then children and finally women who eat left overs when food is inadequate.

2.4 Children's rights

Human rights are internationally agreed legal and moral standards. They are birthrights of every human being and reflect fundamental dignity and worth of all people. The International Convention on the Rights of the Child (CRC) Article 27 states, the enjoyment of these rights requires, at a minimum, that everyone shall enjoy the necessary subsistence rights - adequate food and nutrition, clothing, housing and the necessary conditions of care, (ACC/SCN, 1999).

Provision of Adequate food and nutrition for children has been enshrined as a human right in the convention on the rights of the child, a convention ratified by all countries except the United States and Somalia. The principle of the best interest of the child ensures that adequate nutrition is one of the rights of the child, (ACC/SCN and IFPRI 2000).

The concept of nutrition rights was developed in the context of the Convention on the Rights of the Child (CRC) and adopted by UNICEF, which defined nutrition rights as the combination of access to food, health and necessary care. These three components are necessary to guarantee adequate nutrition to children.

2.4.1 Protection of childrens' rights in Kenya

The overall Kenyan legal system provides an enabling environment for the operation of various mechanisms for the protection of children. A framework consisting of cultural norms, statutory laws and religious rules providing for the protection of children has emerged. Effective protection of children must be conceptualised within the rules pertaining and developed within this framework.

The Kenyan law recognises the right of the child to an adequate living standard. However this law has been criticized for failing to support concrete and focussed interventions that would provide such a standard of living. Enforcement of the right is through laws found in the penal code. Thus, statutory provision imposing the responsibility to provide children with necessities makes the failure to do so a punishable offence under the penal code. The provision under the children and young persons act also imposes punishment for wilful acts of neglect or omissions resulting

in a child needing protection. Such wilful acts or omissions to provide adequate food, clothing, medical aid and shelter to the child are punishable by a fine.

The punitive nature of the law, has also failed in protecting childrens' rights and is a constraint to the community in their role of providing for the child, since they are only protective in situations of economic abundance where wilful neglect can be established, but are unrealistic and fail to address the circumstances of the poor who may not be able to provide basic necessities of life to their children, (GOK and UNICEF, 1998).

2.5 Right to adequate food

The right to adequate food is linked to other human rights and the ultimate objective is to achieve nutritional well being which in turn is dependent on achievements in the fields of health and education. The concept of adequacy means the overall supply should cover overall nutritional needs in terms of quantity and quality sufficient to satisfy the dietary needs of individuals, free from adverse substances and acceptable within a given culture, (ACC/SCN, 1999).

Committee on economic, social and cultural rights (CESCR), General Comment 12 of 1999 states that the right to adequate food is realised when every man, woman and child alone or in community with others have physical and economic access at all times to adequate food or means to its procurement.

A fundamental misunderstanding in the implementation of the right to food, has been the notion that the principal obligation is for the state to feed the citizens under its jurisdiction (fulfilling the right to food), rather than respecting and protecting the rights related to food, as well as emphasizing the obligations of individuals and civil society in this regard, (Robinson, 1999).

Without adequate food, people cannot lead healthy, active lives. They are not employable. They cannot care for their children, and their children cannot learn to read or write. The right to food cuts across the entire spectrum of human rights, (FAO, 2001).

2.5.1 Frameworks for analysing the right to food

The CESCR (1999) asserts that states should set verifiable benchmarks for national and international monitoring, including through the possible adoption of a law framework as a major instrument in the implementation of the national strategy concerning the right to food. The development of the benchmarks and framework legislation should actively involve civil society organizations. Other requirements set out in the General comment include that states should develop and maintain mechanisms to: monitor progress towards the realization of the right to adequate food for all; identify the factors and difficulties affecting the degree of implementation of their obligations; facilitate the adoption of corrective legislation and administrative measures, including measures to implement their obligations.

While twenty States in the world have made "more or less" explicit reference to the right to food in their Constitution, no State has yet passed consistent domestic laws

ensuring effective protection of the right for its population, including the vulnerable groups. This is despite the adoption of the General Comment on the right to food by the Committee on Economic, Social and Cultural Rights, which explicitly requests States to "*consider the adoption of a framework law as a major instrument in the implementation of the national strategy concerning the right to food*". The General Comment further establishes that every individual or group who is a victim of a violation of the right to adequate food must have the right to and the possibility of redress in a domestic court of law. NGOs are identified as asserting a "*basic truth*" that unless the macroeconomic conditions that determine the poor state of development of societies in the southern hemisphere are viewed critically, any discussion regarding the measures needed to guarantee the right to food will remain purely academic, (ISHR, 2004).

The obligations deriving from rights may be analysed in reference to the duties to respect, protect and fulfil. *The duty to respect* requires the duty-bearer not to breach directly or indirectly the enjoyment of any human right. *The duty to protect* requires the duty-bearer to take measures that prevent third parties from abusing the right. *The duty to fulfil* requires the duty-bearer to adopt appropriate legislative, administrative and other measures towards the full realization of human rights.

According to FAO legal office (1998), the right to adequate food imposes three types of obligations on states:

1. Obligation of respect – the state should not interfere with the livelihoods of its subjects or their abilities to provide for themselves provided that they have earned their livelihood in an ethical context and without infringing on the rights of others.

2. Obligation to protect – establishing an enabling regulatory environment (Legislation and sanctions) e.g. in food safety and nutrition, environmental protection, land tenure, etc. Governments should act to prevent others, individuals or private entities, from depriving individuals of their access to adequate food. The state should ensure that there are adequate and effective avenues for redress.

3. Obligation to fulfil – action by state to identify vulnerable groups and to design, implement and monitor policies that will facilitate their access to food – producing resources or an income. As a last resort direct assistance may be provided to ensure a minimum freedom from hunger.

To make human rights approach more concrete and give it substance, one way could be to develop indicators of human rights that are pertinent in food and nutrition. For example,

1. Child malnutrition rates
2. Measures of discrimination e.g. differences in male – female wage rates or life expectancies
3. Human rights violations – the denial of the right to grow crops, the denial to health services to women, lack of food safety, non-enforcement of covenants and laws. Government budget allocations for health, education, agriculture, social welfare. There is also a need for some kind of minimum standards of conduct with regards to indicators and violation of rights, (Haddad, 1999).

As provided and interpreted by Kenyan law, Under section 7 (2) of the Employment Act, maternity leave is two months with full pay, provided that a woman who has taken two months maternity leave forfeits her annual leave in that year. This effectively means that women only receive one month of maternity leave. The draft Employment Act submitted by the Taskforce to the Attorney General in April 2004, within the labour law reform process, contains a provision stipulating that a woman shall no longer forfeit her annual leave entitlements. If this provision is adopted, a woman may be entitled to two months and three weeks of leave, in the year she gives birth. Further protective legislation of women workers during pregnancy and after childbirth does not exist.

The Factories Act that deals with issues of occupational safety and health does not provide any additional protection for pregnant employees in respect to pollution, and hazardous working environments. Cash benefits and other entitlements during pregnancy, and breaks for breastfeeding are provided in selective collective agreements, without representing a general trend, (Ochiel, 2004).

2.5.2 Corrective measures

Using the obligations to respect, protect and fulfil human rights as a framework for a national analysis of poverty it is necessary to look at and correct:

1. National legislative environment – to look at the constitutional provisions and laws relating to the right to food, to housing, to education and to social security, for example, including the legal

measures addressing discrimination on the basis of gender, race, age and disability or other grounds.

2. The administrative framework at the national and local level – to look at the mechanisms responsible for delivering services and for upholding human rights and providing recourse in cases where rights have been infringed – including the courts and national human rights institutions
3. The policy and budget framework – to look at government policies and spending priorities - the extent to which these facilitate the realization of specific rights, promote awareness of human rights and prioritise the provision of services to the poor, the marginalised and vulnerable groups – those most denied their rights.
4. International human rights obligations – to look at which international and regional human rights agreements have been ratified by the government and the record of interaction between the government and the relevant monitoring bodies that might have identified particular issues of concern or priorities for action, (Earle, 2003).
5. Human rights contribution to poverty reduction cannot be realised if it is not addressed at the household level. Currently in Kenya and in most parts of the world, there lacks an explicit framework for implementation of human rights principles from the national, local and household level. The implementation and measurement of progress in the absence of agreed

upon indicators and processes for rights is the challenge being currently faced in human rights programming and research.

2.5.3 Enabling and non-enabling environments

Right to food violations occur when states fail in their obligations to respect, protect or fulfil the right to food, and such state failure is one of the major causes of the persistence of hunger and malnutrition. The rights approach, therefore, helps civil society organizations to deal with this type of problem and policy. To be able to enjoy the right to food fully, people need access to health care and education, the right to own property and the right to organize themselves economically and politically and some communities require respect for their cultural values.

Enabling political, social and economic environments have to be designed to create the best conditions for the eradication of poverty and for durable peace based on full and equal participation of men and women, which is most conducive to achieving food security for all. The environments could include:

1. Ensuring stable economic conditions
2. Ensuring gender equality and the empowerment of women
3. Encouraging national solidarity and improve equal opportunities for all at all levels (social, economic and political) particularly with respect to vulnerable and disadvantaged groups and persons, (FAO, 2001).

There is a positive correlation between democracy and avoidance of under nutrition, suggesting a relationship between civil and political rights and good nutrition. The

rule of law, freedom of assembly, freedom of information i.e. all civil and political rights, are crucial to avoidance of famine and malnutrition, (Haddad, 1999).

2.5.4 Millennium Development Goals (MDG'S) and Human Rights

World leaders placed development at the heart of the global agenda by adopting a set of commitments leading to agreement on 8 discrete, quantitative and time bound development goals – the MDGs, at the UN Millennium summit in 2000. The MDGs aim at improving human conditions by 2015 by providing focus and frameworks for poverty reduction commitments and a common benchmark for progress

Apart from development and poverty reduction, MDGs contain a set of commitments for human rights and democracy and good governance, which have come to be known as Millennium Human Rights Goals (MHRG). MDGs reflect a human rights agenda, the right to food, education, health care and decent living standards, (UNICEF, 2006). Human Rights and MDGs are two sets of interdependent and mutually reinforcing commitments; MDGs can provide relevant benchmarks for realization of human rights while human rights strategies provide more effective and sustainable means of achieving MDGs. They both share the same ultimate goal – promoting human welfare.

Pursuing a rights based realization of MDG 1 of eradicating extreme poverty and hunger requires to effectively implement several human rights including the Right to adequate food. Indicators in the Right to adequate food's target of eliminating gender inequality in access to food include:

1. Proportion of males and females with inadequate intake of dietary energy
2. Proportion of male and female adults and adolescents with low body mass
3. Proportion of underweight boys and girls.

Gender equality is an integral part of any rights based approach to development problems and thus should be seen as an integral and cross cutting element for achieving all the MDGs.

2.6 Rights as a gender issue

According to Williams et al (1994), the world over, women are generally denied their human rights. Gender differentiation is about inequality and power relations between men and women. Despite international human rights laws which guarantee people equal rights, irrespective of sex, age, race, caste, women are denied equal rights with men to land, property, mobility, education, employment opportunities, shelter, food, worship and over the lives of their children. They are denied even the right to manage, control and care for the health of their own bodies and reproductive functions. International human laws prohibit cultural practices, which are damaging to women.

Efforts to enhance women's social status and discourage gender-based discrimination are essential because of the negative impacts these factors have on women's health. Governments can help to establish a package of essential services for women and ensure access to them. Among the package of essential services is prevention of practices harmful to health. This can be achieved through public education

programmes and policies to encourage equitable access to food and health care for women and girls and education services to discourage gender discrimination.

The social construction of gender roles affects the physical and psychological development of boys and girls in a number of areas, mainly accentuated by poverty:

1. Access to food – in many countries, girls have lower nutritional health and less access to food than boys.
2. Vulnerability to illness and access to Healthcare – studies have shown that girls' condition has to be more serious before she can be taken to the doctor. In several developing countries, child mortality rates are higher among girls while the norm is for boys' mortality to be higher (Including in utero), (UNESCO, 1994).

Women often have to contend with problems stemming from discrimination against them as women. Such discrimination is rooted deeply in cultural attitudes and social behaviour. Discriminatory practices have grave implications for the dignity, the health, the economic well being and sometimes the survival of women and girls, (Allan Guttmacher Institute, 1998).

The situation is particularly difficult for rural women who are often denied the most basic economic and social rights to own property, to find decent work and to have an education and good health. Without basic rights, it is difficult for rural women to develop their own capacities fully and make a decent living as agriculturists, entrepreneurs or wage earners.

2.7 Gaps in knowledge

There has been little research on the role of socio cultural values on the gender of the child in selective discriminatory practices affecting health and nutrition among children despite the fact that discrimination in aspects of childcare and feeding is likely to contribute to greater gender differentials. Narok District has had minimal research on nutritional issues mostly only in times of emergencies and therefore do not represent all dimensions of malnutrition and the exact nature of gender roles and relations.

Human rights approach is a recent concept in ensuring adequate nutrition of children. According to UN estimates, approximately 841 million people in the developing countries mostly women and children do not have enough food to meet their basic nutritional needs, which infringes on their fundamental human right, (Robinson, 1999). Hunger is by far the most widespread of all serious human abuses. The right to food has been violated more comprehensively and systematically than probably any other right, (Kent, 1993). There is generally lack of capacity of the duty bearers be it the Government, community, NGOs, families and parents to meet their obligations in ensuring the right to adequate food by the claimants. The claimants or right holders also have scanty knowledge about their rights and therefore fail to claim them. Some duty bearers and claimants are unaware of their rights to adequate food and, or their duties in respecting, protecting and fulfilling these obligations.

The right to adequate food remains a concept largely at the international and national level. The administrative framework at national, local and household level have not

developed mechanisms for delivering services, upholding human rights and providing recourse in cases of infringement. This therefore means that operationalizing human rights at the household and community level remains a gap in ensuring human rights for all.

3.0 STUDY SETTING AND RESEARCH METHODOLOGY

3.1 Study Area -Narok District Profile

3.1.1 Geographical location and size

Narok District is situated in the southern part of Rift valley Province and, is one of the 17 districts in the province.

It covers an area of 17, 128sq. km., and borders Tanzania to the south, Transmara District to the west, Bomet and Nakuru Districts to the north and Kajiado District to the east.

Administratively Narok is subdivided into 8 divisions with 44 locations (Central, Mau, Osupuko, Mara, Olokurto, Mulot, Lulunga and Loita). There are 2 parliamentary constituencies Narok North and South. The study was located in the semi arid central and eastern part of the District. Narok Central covers an area of 558sq.km and has 3 locations – Lower Melili, Oletukat and Nkareta, (Republic of Kenya, 2001).

3.1.2 Population size and distribution

According to the 1999 population and housing Census, population had grown by 28.3% from 262,066(1989) to 366,750 people, 184,231 male and 181,519 female. There were a total of 73,985 children under five years of age, 37,684 male and 36,344 female. Households totalled 76,450. Central Division had a total of 46,553 people, 23,501 males and 23,052 females, living in 12,411 households, (Republic of Kenya, 1999).

3.1.3 Physical features

The topography is diversified and ranges from 1000 to 3,098m above sea level. The climate is bimodal with long rains between mid March and June and short rains between September and December. Rainfall is uneven, ranging from 500mm in the central part to 1200/1800mm in the northern and western parts. The major rivers are Ewuaso Ngiro and its tributaries Siyapei and Narok, which drain into Lake Natron, (Republic of Kenya, 2001).

3.1.4 Economic activities

The District is well endowed with natural resources (fertile soils, livestock, forestry, rich culture, wildlife and tourism) which if well exploited can reduce poverty levels.

Narok is divided into 5 agro ecological zones:

1. The tropical alpine zone where sheep and dairy cattle are raised.
2. Upper Highland zone – sheep, wheat, barley, pyrethrum, forest
3. Lower highland zone – Tea, dairy, maize, barley, cattle, sheep
4. Upper midland zone – coffee, tea, maize, barley, sunflower, livestock and sorghum
5. Lower midland zone – sorghum, millet, sweetpotatoes and livestock

Rangelands dominate the lower midland zone and about two thirds of the district. The main economic activity is pastoralism, which is practised through individual or group ranches (communally owned and used mainly for grazing livestock). The lower

midland zone is inhabited mainly by the pastoralist Maasai and a few small holders who practise mixed farming (Osupuko, Central, Mara), (Republic of Kenya, 2001).

3.2 Research Methodology

3.2.1 Study design

A cross sectional study was undertaken in the months of July and August 2005 to gather information on the situation at the given time. The design involved the collection of data from a well defined sample population in a single interview per subject. Qualitative and quantitative methods were used to assess and compare the nutritional status and care practices given to male and female children in Narok and to determine the reasons for differential care if it existed. Parents' roles in childcare and human rights awareness with regards to provision of adequate food were described and analysed.

3.2.2 Study population

The study population consisted of female and male children aged 6 – 59 months, living in Narok Central Division. The age group of 6 – 59 months of age was chosen because it is the period when childcare is critical and early signs of deterioration in nutritional status manifest.

3.2.3 Sample size determination

The desired sample size was predetermined before the survey was conducted.

Fisher's formula (Fisher et al, 1991) was used to obtain the sample size as follows:

$$n = \frac{z^2 pq}{d^2}$$

Where: n = the desired sample size

z = the standard normal deviate (confidence interval)

p = proportion of wasted children under five years in Kenya (CBS , 2004)

q = 1 – p

d = degree of accuracy desired

Hence the sample size was computed as:

z = 1.96 (95% confidence level)

p = Total population in Narok = 366,750 = 100%

Population of children under 5 in Narok = 73,985 = $\frac{73,985 \times 100}{366,750}$ = 20%

p = 0.2

q = 1 - 0.2 = 0.8

d = 0.05

n = $\frac{1.96^2 \times 0.2 \times 0.8}{0.05^2}$

n = 246

$$10\% \text{ attrition} = \frac{10 \times 246}{100} = 25$$

$$100$$

$$n = 25 + 246 = \underline{271}.$$

A sub sample of 60 households was taken for the 24 hr Recall which was more than the minimum sample size recommended, (Fisher et al, 1991).

3.2.4 Sampling frame

A list of manyattas in the 3 villages in Nkareta and Oletukat was drawn from which the sample population was selected through a random process. The sample population of 271 was selected from this sampling frame as per section 3.2.5 on sampling procedure. Only one child per selected household was included in the study. If more than one child met the selection criteria, a coin would be tossed (heads selected) to determine which child was included.

Inclusion Criteria

Children must have been:

1. Between 6 and 59 months of age.
2. From Maasai ethnic group.
3. Without chronic illness.
4. Living with their mothers (biological or otherwise) at the time of study

3.2.5 Sampling procedure

Multi-stage sample design was used to select the study population. The first stage sampling was purposive for Narok District and Central Division, which were selected from a total of 8 divisions. Two locations within Narok Central Division (Nkareta and Oletukat) were also purposively selected due to the specific characteristics of the inhabitants (Maasai). To get a good representation of the Divisions, one sub- location from each location was selected by simple random sampling using wrapped up numbered papers.

The number of households from each sub location was proportionately calculated based on the number of households with children who met the inclusion criteria. Random sampling was used to arrive at three villages per sub- location as illustrated in Table 2.

A sampling frame consisting of 172 and 68 manyattas was obtained for Nkareta and Oletukat respectively, from which simple random sampling by use of random numbers from a calculator enabled the selection of 27 (Nkareta) and 23 (Oletukat) manyattas to be included in the study. Three households were randomly selected from the manyattas through simple random sampling by numbering the households with children aged 6 – 59 months on a piece of paper, wrapping it and picking.

Table 2: Sampling units

Location	Nkareta	Oletukat	Total
Sub- locations	Nkareta	Oletukat	2
Households in locations	2337	266	2603
Study households	243 (89.8%)	28 (10.2%)	271
Villages	3 (Oltikampu, Nkareta and Kotolian)	3 (Oletukat Iltumtum Emurwa Dikirr)	6
Manyattas in study	27	9	50
Study hh per manyatta	3	3	6
Study hh per village	81	9 and 10 in Oletukat	271

Total households in both locations = 2337 (Nkareta) + 266 (Oletukat) = 2603 households.

Proportion of households per location = households per location/total households in both locations. Nkareta = $\frac{2337}{2603} \times 100 = 89.8\%$

2603

Oletukat = $\frac{266}{2603} \times 100 = 10.2\%$

2603

Sample size per location = proportion of households/location x desired sample size (271). Nkareta = $\frac{89.9}{100} \times 271 = 243$

100

Oletukat = $\frac{10.2}{100} \times 271 = 28$

100

Similar allocation based on proportion of households per location was used to derive a sub sample of 60 children for the 24-hour recall from the total sample children. Two Focus group discussions were held, one with a group of 8 randomly selected fathers and another with a group of 12 mothers with children above the age of five years. One men's group was selected from the existing 8 men's groups in the area by random picking of a numbered paper. The men in the group who had children below the age of five were selected. The TBAs were drawn from a team of 30 TBAs undergoing training and who met the selection criteria.

Sixty children were selected for the 24-hour dietary recall. This number was allocated proportionately according to the households in each location (89.9% and 10.2% in Nkareta and Oletukat respectively). This resulted in 54 ($89.9/100 \times 60$) in Nkareta and 6 ($10.2/100 \times 60$) in Oletukat. Each of the villages were allocated an equal number of children for the dietary intake (Nkareta $54/3 = 18$ and Oletukat $6/3 = 2$). Selection of children for 24-hour dietary recall was done for every 5th household in both Nkareta and Oletukat. The Flow chart in figure 2 summarises the sampling procedure for the study.

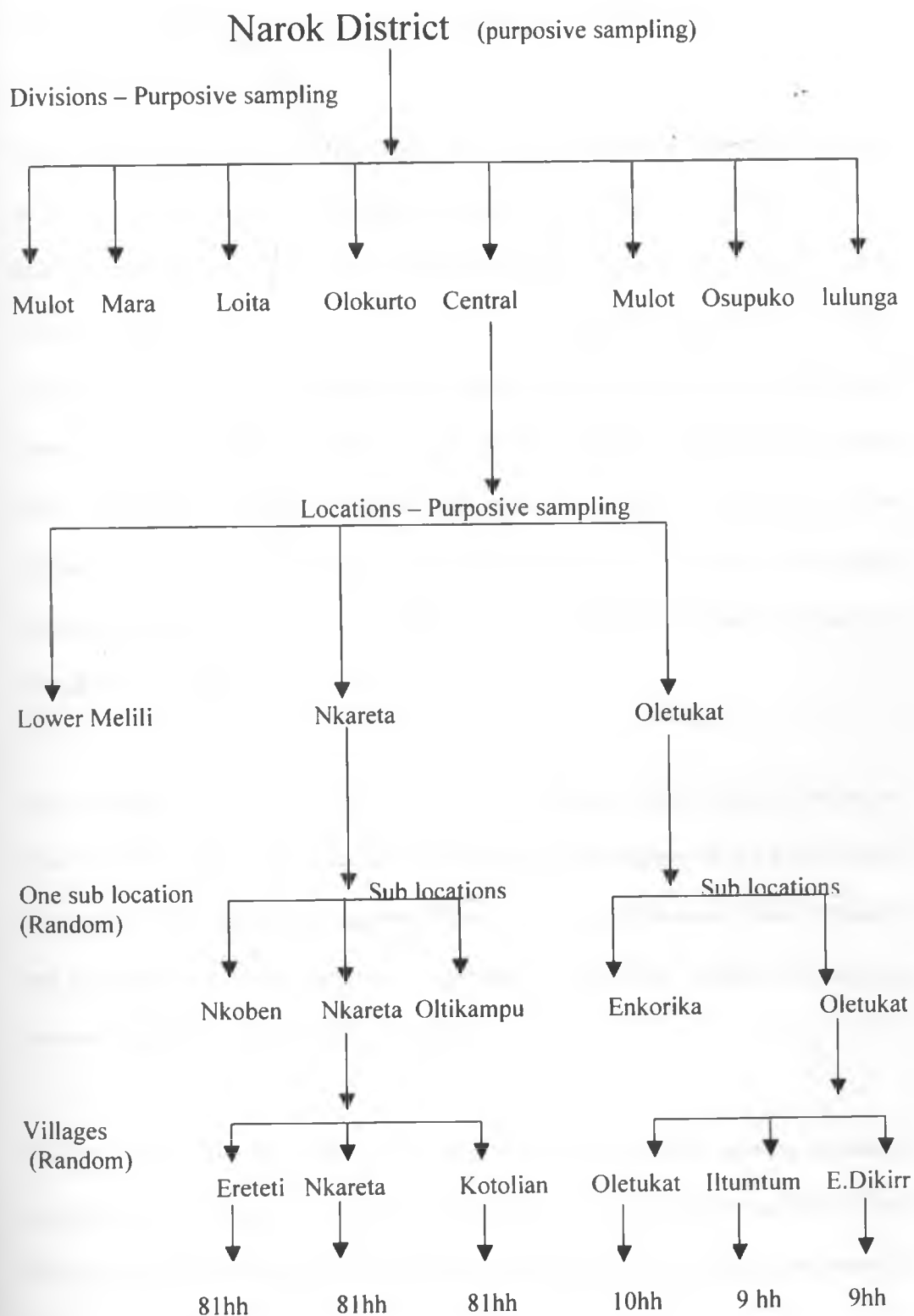


Fig. 2: Flow chart on sampling procedure

3.3 Data Collection

3.3.1 Recruitment and training of field assistants

Eight NACODEP trained community health workers (CHWs) were recruited to serve as field assistants. NACODEP has trained a total of 65 CHWs from different areas of Narok Central Division. All were mature persons who had at least 12 years of school education (form four leavers) except one who had completed standard eight and was a competent mobilizer. Good command of English, Kiswahili and Kimaasai and gender balance were the criterion that was used for selection. The field assistants comprised of six males and two females from the study area. Out of the six trained CHWs from Oletukat location, the three who were active and met the selection criteria were recruited. Nkareta had ten trained CHWs of which five were available and met the recruitment criteria.

After recruiting the Field assistants, a two day training on data collection techniques relevant to the study was conducted by the principal investigator on the use of survey instruments, administration of questionnaire, interview techniques, ethical clearance and procedures of data collection. Appendix III shows the content and learning methods that were used during the training.

The field assistants were exposed to a pretest of the data collection process in order to acquire hands on experience. A two hour refresher practical exercise was done for the field assistants on anthropometric and dietary intake measurement after one week of the research activity.

The FGD facilitating team comprised of two persons who included the principal investigator as moderator and one research assistant who registered the participants and also served as a recorder. The NACODEP community mobilizer was recruited as the research assistant for both the FGDs due to her familiarity with the area and the people in both locations. She was trained on the role of selecting, mobilizing, recruiting, registering participants and on recording the discussions.

3.3.2 Study instruments

Both qualitative and quantitative data was collected in this study. Quantitative data was collected using a structured questionnaire, taking anthropometric measurements and measuring dietary intake of the child. Qualitative data was collected using Focus group discussions. Equipment that was used were as follows

1. Anthropometric measurements – UNICEF Salter weighing scales measuring up to 25kg, height boards and Medecins Sans Frontieres MUAC tapes .The precision for weights was 0.1kg and 0.1cm for length, height and arm circumference. Height was taken for children over 24 months of age using a height board measuring 175cm.
2. Dietary intake- Measuring cylinders, measuring spoons, measuring cups, plates, kitchen scale and tape measure.

Four sets of equipment for anthropometry were hired from the department of food technology and nutrition in the University of Nairobi while the equipment for dietary intake was bought.

3.3.3 Pretesting of study tools

Pretesting of the research tools, techniques and equipment was done in Murua, a village in Narok Central division. It involved the administration of the questionnaire, collection of observational data, dietary intake and anthropometric data on 16 children selected from a sampling frame of 50 children from Murua village who met the inclusion criteria. This was done by numbering the children's names and using random numbers from a calculator to randomly select the children. The questionnaires were pretested for practicability, reliability and validity of the questions. The data from pretest were not included in the final analysis but were used for the purpose of correction and making appropriate changes to the research tool according to pretest results.

3.3.4 Questionnaire administration

The pretested structured questionnaire (Appendix 1) was administered to the mothers of the child under study and the response recorded. A total of 271 (243 Nkareta and 28 oletukat) mothers were interviewed. First, there was an introduction done for the mothers to understand the purpose of the interview, what was requested of them and consent from them to participate. The questionnaire was divided into different sections namely:

1. Socio economic and demographic characteristics of study households including age, occupation, religion, marital status and education.
2. Anthropometric measurements (Height, weight, MUAC).

3. Feeding practices of study children: information was sought on breastfeeding and complementary feeding.
4. Dietary intake: using 24 hour recall method to find out what the child consumed in the preceding 24 hour period.
5. Health Practices: immunization status, growth monitoring attendance, action taken when the child gets sick, morbidity information.
6. Human rights awareness to adequate food: understanding of the human right to food by the child and of the obligations expected of each duty bearer.
7. Gender and childcare: roles and responsibilities of parents in childcare and the constraints they face.

3.3.5 24- Hour dietary recall

Quantitative dietary assessment was done for all food consumed by the child in the 24 hour period preceding the survey. A sub sample of 60 children was used. The nutrients of interest for the study were protein, iron, vitamin A and the total calories consumed by the child in a day. The mothers were asked to recall and describe every item of food and drink that the child consumed over exactly the past 24 hours e.g. if data was being collected at lunch time, the recall begun from the previous days lunch to the days lunch of the interview. The respondent would recall the type of meal/food eaten, name of the dish, ingredients used in its preparation, and then estimate the quantities of mentioned ingredients including water. Amount of food consumed by the child was derived from quantity of food served to the child and the leftovers. Quantity estimates were acquired through measuring cylinders, which standardized household

measures of food volumes, and then the volumes were converted into weights in grams. These details were recorded in the questionnaire.

3.3.6 Anthropometric measurements

Anthropometric measurements were taken for all the study children and their corresponding Z scores calculated with reference to the National Centre for Health Statistics (NCHS) population. To avoid errors, a team of two people measured the weight and height of the children. One team member read out the measurement aloud, while the other member recorded on the questionnaire. In evaluating the results, a cut off value of 0.1cm for height and length and 0.1kg for weight was used. If the two measurements differed by 0.1cm or 0.1kg, both readings were discarded and redone. The average of the weights was used for analysis (UN, 1986).

3.3.6.1 Age

Documentary evidence of birth specifically clinic card was used to determine the age of the child accurately and the immunization status. However if documentary evidence was not available, the mothers' word of mouth was used. A total of 240 children's ages were confirmed by the child welfare card and 31 were obtained from the mothers memory.

3.3.6.2 Height measurements

The measurer held the child on the left side while the assistant helped to hold the child and record the measurements. The child was made to stand on a flat surface by the

scale with feet parallel and with the heels, buttocks, and shoulders and back of head touching the upright scale. The head was held comfortably erect with the lower border of the orbit of the eye in the same horizontal plane as the external canal of the ear. The arms were left hanging loosely at the sides and the headpiece of the measuring device was then gently lowered, crushing the hair and making contact with the top of the head. The measurement reader lowered the headpiece and observed the reading to the nearest 0.1 cm, as the other placed a hand on the child's feet to prevent lifting of heels and keep heels against vertical board, and make sure the knees were extended with the other hand, (WHO, 1995). Two readings were taken for each child, thus the process was repeated and the average was calculated during data processing and recorded as the child's height.

3.3.6.3 Length measurement

Length measurement of the children below 24 months of age was taken using a length board. The child was made to lie on the board on a flat surface. The head was held firmly against the fixed headboard with eyes looking vertically. The knees were extended by one field assistant applying firm pressure and the feet flexed at right angles to the lower legs. The other field assistant moved the upright sliding foot piece to obtain contact with the heels and read. The measurements were taken twice to the nearest 0.1 cm. The average of the two readings was calculated for analysis, (WHO, 1983).

3.3.6.4. MUAC measurements

To take MUAC measurements, the child was made to totally exposure their arms and shoulder area. The circumference was then measured at the midpoint of the arm. The midpoint was located by flexing the child's elbow at 90degrees with the palm facing upward. The tape was then placed at the tip of the shoulder and pulled to the tip of the bent elbow. The mid point was located and marked. The MUAC tape was then placed around the arm and positioned perpendicular to the long axis of the arm at the marked midpoint. Two readings were taken and the average circumference was recorded to the nearest 0.1 cm, (WHO, 1995).

3.3.6.5 Weight measurements

Headgear, shoes and heavy clothing were removed from children having them before taking measurements. Before measuring, scales were adjusted by bringing the scale pointer to the zero mark with a pair of pants attached. After adjusting the scale to zero the pants were removed and the child placed in them. The pant was then hooked to the scale and suspended from a tree or strong support so that the weight was equally distributed. When the child was suspended quietly and not touching anything, the measurer held the scale and read the weight at eye level when the needle stopped moving, to the nearest 0.1 kg. After taking the readings, the child was held by the arm and gently lifted by the body to prevent the child getting hurt. The strap was released from the hook of the scale. Two measurements were taken and the average of the weights was used for analysis as recommended by UN (1986).

3.3.7 Guidelines for Focus Group Discussion

The FGDs were conducted on different days. The men were met in Nkareta shopping centre while the mothers were met at the Farmers training centre in Narok where they were undergoing training. The research assistant mobilized the FGDs such that they would be incorporated with the market day for the men and with the TBA training so as to eliminate transport costs and only provide snacks.

On the day of the meeting, participants gave details of name, age, marital status and occupation. The principal investigator, who was the moderator, introduced the meeting and informed the participants the purpose of the meeting. An already developed focus group discussion guide (Appendix 3) was used as a guideline to obtain general qualitative information on childcare activities, duties of mothers and fathers in childcare and on their recommendations on how each parent can be assisted to better handle their childcare responsibilities. Probing was done to gather more information where necessary or for further clarification. Participants were encouraged to talk freely about the topic. Open-ended questions were used to elicit discussion. The FGDs took an average of one and a half hour each. After the FGDs a debriefing was done for purposes of reviewing the session and complete the notes taken during the meeting.

3.3.8 Data Quality Assurance

During fieldwork, the research assistants underwent thorough and intensive training on the use of research tools, equipment, research ethics and techniques of data collection. Field assistants were closely monitored during pretesting and the early stages of data collection by the researcher who made necessary corrections. Omissions and errors were discussed at the end of each day and the households revisited the following day. The FAs worked in pairs to reduce interpersonal and interviewer bias and they were provided with refresher training on how to take measurements accurately. Pretesting of the questionnaire was done in order to:

1. Avoid bias and errors in reading and recording data
2. Finding out if the questions were understood in the way they were intended by the respondents i.e. validate contents
3. Safeguard against offending peoples social, cultural, religious traditions and values.

Before commencing fieldwork, scales were taken to the Department of weights and measurers for corrections. Each day, the Salter scales were well calibrated before commencement of data collection by weighing a known weight i.e. a two kilogramme maize flour packet and making necessary adjustments. Before each measurement was done, the scales were adjusted by bringing the scale needle back to exact zero mark using the slide screw.

Each questionnaire was counter checked for completeness and accuracy before leaving the household. Health cards were used to verify the birth date as well as immunization and growth monitoring status.

SPSS computer software was used to ensure data quality control at the time of data entry. Exploratory analysis was used to detect outliers and make the necessary corrections on outliers e.g. use of box plots for dietary intakes. Flagging was used to identify and rectify the outliers encountered in epi-nut module for the anthropometric analysis.

3.3.9 Ethical clearance of the research

The Principal researcher obtained permission to undertake the research from the Ministry of Education's Research department. Two copies of the research proposal had been submitted for scrutiny on ethical, feasibility among other considerations and upon qualifying, a permit was issued. All the interviews were carried out through informed oral consent, by explaining to the respondent what the study entailed and the procedure for data collection. Anthropometric measurements were carried out only through consent of the mother. The mothers were informed that all the information given was confidential and that they were under no obligation to be interviewed and could therefore terminate the interview at anytime or not to answer questions that they were uncomfortable with. All the respondents in the study were informed that they had a right to feedback and access to the research findings.

3.3.10 Data entry and cleaning

The principal investigator designed data entry templates in SPSS computer software package. After the fieldwork, data was entered into the computer and checked to rectify errors by running frequencies, cross tabulations and exploratory methods to obtain good quality data.

3.3.11 Data analysis

EPI info software and SPSS 10 were used for processing and analysing the data. Conversion of anthropometric data (weight and height/length) into anthropometric indices of Z score for classification into levels of nutritional status was accomplished using EPINUT programme.

Outliers were statistically filtered out using the same software packages. Descriptive statistics including, frequencies, means, confidence intervals, range and standard deviation were computed. P value of statistical significance was calculated at 0.05. Chi square and students t test were used to compare proportions and means of independent variables. Correlation analyses were used to measure the strength of the relationship between two variables e.g. the gender of the child and their WAZ. The r-values ranging from -1 to 1, which implies a perfect linear correlation, no correlation ($r=0$) and a perfect inverse linear correlation ($r=-1$). Linear regression was used to determine the strength of association of continuous and categorical data e.g. WHZ and the level of involvement of parents in childcare and the understanding of the right to adequate food. Details of the analysis and statistical tests used are outlined in Appendix IV (Data analysis matrix).

Analysis of the diet adequacy involved conversion of the recorded food and ingredient volumes into their gram equivalents using conversion factors given in Sehmi (1993). The food composition tables were also used to estimate the amount of calories, protein, vitamin A and iron derived from all the ingredients ingested by the child. Calculations of the total grams consumed for each food for the day by the child was obtained by adding amounts of calories, protein, vitamin A and iron derived from all ingredients ingested. Dietary intake data was analysed by administering t-test to compare the mean caloric, protein, vitamin A and iron intake. Dietary adequacy was calculated by comparing the child's nutrient intake against the RDA for their age. Statistical package for social science (SPSS) computer software was used to classify those children above and those below the RDA for each nutrient. The recommended daily allowances of each of these nutrients for children in the study group are outlined in table 3 below as cited by Sehmi (1993).

Table 3: Recommended Daily Allowances

Age (years)	Energy (Kilocalories)	Protein (Grams)	Iron (Milligrams)	Vitamin A (Micrograms)
1	820	13.5	5-10	300
1-2	1150	13.5	5-10	250
2-3	1350	15.5	5-10	550
3-5	1550	17.5	5-10	300

3.3.12 Indicators used in the study

3.3.12.1 Nutritional status

Collection of anthropometric data at population level helps in the defining health and nutritional status for purposes of programme planning, implementation and evaluation. The objective is to identify concurrent or past health or socio economic problems and prediction of future risk and potential response to intervention programmes. WHO, (1995) criteria for judgment for low weight for height and low weight for age for children under five years of age is: children below -2 Z scores for moderate malnutrition (weight for age, height for age and weight for height) and -3 Z scores for severe malnutrition. Classification for populations (children with -2 Z scores and below) are:

Height for age	Weight for age	
<20%	<10%	low
20 – 29 %	10 – 19%	medium
30 – 39%	20 – 29 %	High
>40 %	>40 %	very high

3.3.12.2 Childcare practices

1) Child feeding practices indicators included duration of exclusive breastfeeding, duration of total breastfeeding, complementary foods used, intrahousehold food distribution, frequency of feeding and nutrient adequacy of meals. Exclusive breastfeeding for 4-6 months and continued breastfeeding with addition of safe, high quality complementary foods into the second year of life provides the best nourishment and protects the child from infection, (UNICEF, 1998).

According to WHO, BASICS and UNICEF (1999), FADU principles are key in feeding young children successfully.

1. Adequate Frequency of feeds as follows:

<u>Age (months)</u>	<u>No. of feedings/day</u>
6-8	2-3 (mashed or semi solid food)
9-11	3-4 (introduce snacks and fried foods)
12-23	4-5 (chopped or mashed family foods).

2. Sufficient Amounts of foods at each feed.
3. Use of foods to increase nutrient Density
4. Ensure food is Utilized after eating e.g. reducing infections from contaminated foods.

2) Health practices included morbidity, immunization and growth monitoring status and action taken when the child is ill. Growth monitoring is measuring the weight and /or height of individual children periodically e.g. monthly to see if they are growing adequately. It helps to detect underlying medical problems before they become serious and can reinforce good caring practices, WHO, BASICS and UNICEF (1999).

The Government of Kenya adapted the WHO goal to ensure completion of vaccination by 12 months. The target was to fully vaccinate 80% of children in 80% of the districts by that age by 2005. Kenya expanded programme on immunization follows WHO guidelines for vaccination which stipulate that a child should receive

one dose of BCG at birth, three doses of DPT/Hepatitis B/Influenza and polio and one dose of measles, (CBS /MOH/ORC, 2004).

3.3.13 Challenges and limitations of the study

Generally the infrastructure in Narok is very poor and transport from one place to another was a problem due to the rough terrain and the scarcity of public transport. Using private transport was very expensive for the researcher.

Due to the vastness of the study area, households are scattered and increased the distances that had to be covered to reach each household. This, coupled with the respondents' unwillingness to give information at the beginning of the interviews, consumed a lot of time.

4.0 RESULTS

This chapter presents the findings from data collected through the use of questionnaires and discussions with parents of children between 6 and 59 months of age. The information gathered has been analysed using (SPSS) and EPI info computer software. It has been presented and discussed as per the objectives and research questions of the study.

4.1 Socio-demographic and socio-economic characteristics of the sample population.

Socioeconomic status is often represented as education, income, or occupation. Measures of socioeconomic status, such as education and income, have proven to be correlated with health status among people of all ages, as they have an effect on mortality, morbidity, and a host of health disorders. In this study, socio-demographic characteristics of the sampled households were represented by the following variables: age, gender of population, gender of household head, level of education, marital status, religion, household size, while socio-economic indicators included occupation of household heads, waste disposal methods, water and fuel sources.

4.1.1 Distribution of household members by age and gender

The total population within the 271 households was 1445 persons of whom 769(53%) were male while 686 (47 %) were female. Children below five years of age constituted 31.3 % of the total household membership in the sample. Among them, 57.1% were male, while 42.9 % were female (N=271). The female population was

slightly less than that of males in all the age categories except the 16-34 years age category. Table 4 summarises the gender and age distribution of the study population.

Table 4: Distribution of the household members by age and gender

Age (yrs)	Male	Female	TOTAL
<5	260(33.8)	195(28.4)	455(31.3)
5 – 15	194(25.2)	180(26.2)	374(25.7)
16 – 34	175(22.8)	271(39.5)	446(30.7)
35—50	122(15.9)	39(5.7)	161(11.1)
>50	18(2.3)	1(0.1)	19(1.3)
TOTAL (1445)	769(53)	686(47)	1445(100)

N.B figures in parenthesis are percentages

4.1.2 Household size

The size of household dictates the resources required to sustain the family. The household size ranged between 2 and 8 persons with a mean of 4.8, mode of 5 median of 5. Findings of this study shows that 43.2% of the households had between 3-4 children. 41.3% had 5-6 children, 14.4% had more than 7 children; while 1.1% had less than 2 children in their homestead. This shows that most families have more than 3 children to care for which is quite a burden for many to feed and at the same time provide with quality education.

4.1.3 Marital status of the mothers in the study

Ninety five point eight percent (95.8%) of the mothers in the study were married, 0.2% were separated, 0.4% were widows, while 3.6% were single. Of those that were married, 50.0% and 45.8% were in monogamous and polygamous unions

respectively. The culture of the Maasai community allows men to marry many wives as a sign of prestige and affluence. Figure 3 summarizes the marital status of the mothers.

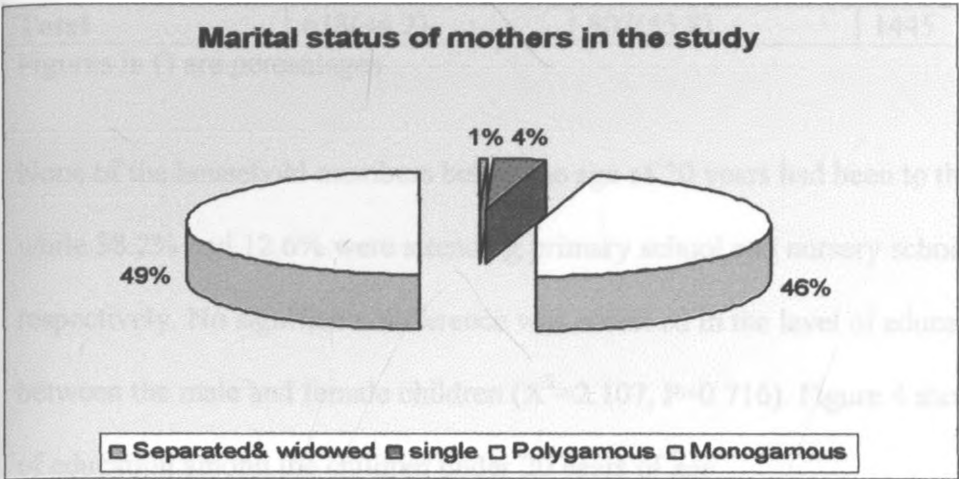


Fig 3: Marital status of mothers in the study

4.1.4 Level of education of the study population

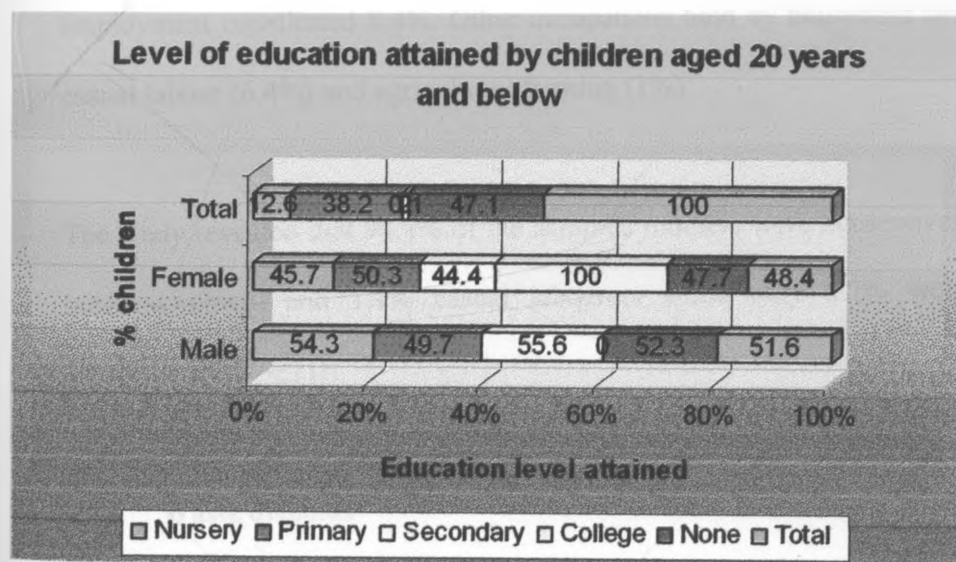
The level of education has an influence on development since those with some formal education are able to acquire better jobs and improve their living standards and that of their families. The majority of the respondents (55.8%) were not in school at the time of the study, while a majority of the children between ages 5- 15 years (93.3%) were attending school. Table 5 shows the school attendance status of the household members.

Table 5: School attendance among the household members

Age category (yrs)	In school	Not in school	Total
<5	75(16.5)	380(83.5)	455
5-15	349(93.3)	25(6.7)	374
16-20	19(21.6)	69(78.4)	88
21-34	205(57.3)	153(42.7)	358
35-50	0	161(100)	161
>50	0	19(100)	19
Total	638(44.2)	807(55.8)	1445

Figures in () are percentages

None of the household members below the age of 20 years had been to the university, while 38.2% and 12.6% were attending primary school and nursery school respectively. No significant difference was observed in the level of education attained between the male and female children ($X^2=2.107$, $P=0.716$). Figure 4 shows the level of education among the children under 20 years of age

**Fig 4: Level of education attained by children aged 20 years and below**

Majority of the mothers in the study (61.6%, $N=271$) had no education at all, while those with education above primary school level constituted 2.6%. Table 6 summarises the level of education attained distributed by the age group in years of the sample population

4.1.5 Religion

Christianity was the dominant religion in the study population with a representation of 79.3%. Muslim faithful were represented by 0.1% while 20.7% are traditionalists

4.1.6 Occupation of the household heads and the mothers

The picture obtained on the occupations is representative of a typical rural area without benefit of any Industrialization. The highest percentage (71.3%) of the household heads engaged in business mainly livestock trade, 10.8%, were not engaged in any occupation but had animals (cattle, sheep and goats) purely for subsistence, 2% of the household heads were mothers who depended on livestock, farming and other assets for subsistence. Those household heads who were in formal employment constituted 8.4%. Other occupations held by household heads included casual labour (6.4%) and agricultural farming (1%)

The study revealed that 90.8% of the sampled mothers were housewives, 7.5% were businesswomen, and 1.1% casual labourers while only 0.7% were in formal employment (N=271).

4.1.7 Waste disposal

In the third world, many deaths have been attributed to poor hygiene. The findings of this study shows that 87.1% of the respondents dispose of human waste indiscriminately in the nearby bushes, while 12.9% use pit latrines (N=271).

4.1.8 Sources of water

Water is an essential commodity in life. Access to adequate and safe water supply is a fundamental need and human right. It also has considerable health and economic benefit to society. On the other hand lack of adequate water contributes to poor health, underdevelopment and sometimes conflicts. The survey revealed that majority of the respondent (99.3%) consumed water from rivers and streams. Generally this is not running water, which has a high risk of being contaminated.

4.1.9 Main sources of fuel in the study region

In the study area, fuel wood and charcoal constitute 95–99% of the total energy demand for cooking, heating and lighting. Ninety six percent (96.7%) of the households used fuel wood, while 3.3% used charcoal.

4.2 Child feeding practices

Optimal feeding for sustained child health and growth includes initiation of breastfeeding within the first hour of life, exclusive breastfeeding for six months, timely complementary feeding with appropriate foods, and continued breastfeeding for two years and beyond. The researchers requested the respondents to indicate whether the child in the study was breastfeeding at that time. It was established that 52.8% of the study children were still breastfeeding, while 47.2 % (N=271) had stopped. Those that did not have breastfeeding children at the time of study indicated that all the children had been breastfed previously. This finding is an indication that the children's right to adequate food through breastfeeding at some point in time for male and female children was met. No significant difference ($X^2=2.264, P= 0.520$)

was found to exist between the male and female children who were still breastfeeding among the age groups (N=143). Only children above 24 months of age had stopped breastfeeding by the time of the study but no difference was observed between the two gender in their respective age groups ($X^2 = 2.976$ $P = 0.085$).

4.2.1 Exclusive and continued breastfeeding

During the first 6 months of life, infants should be exclusively breastfed i.e. a baby should receive breast milk and no other fluids, such as water, teas, juice, cereal drinks, animal milk or formula. The mean duration for exclusive breastfeeding was 3.7 months with a mode of 3 (N=271). While 67.6% of the children were breastfed exclusively for a period of between four to six months, 51.3% of them stopped exclusive breastfeeding at below the age of four months. Those who were breastfed for more than six months constituted 2.2% of the children. No significant difference was observed in the duration of exclusive breastfeeding for male and female children (t test $P=0.111$). Figure 5 shows the age and gender distribution of the duration of exclusive breastfeeding for the children.

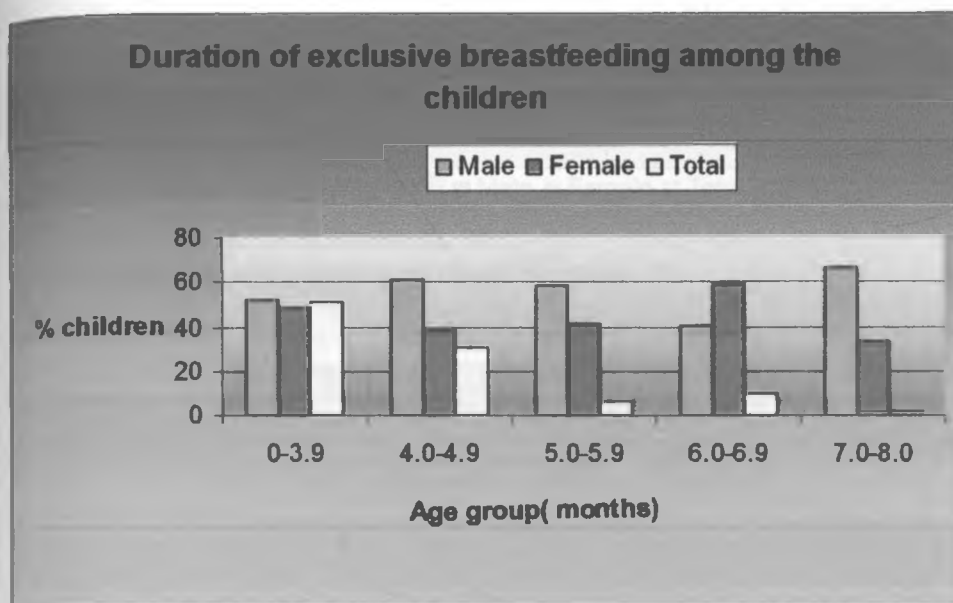


Fig 5 Gender distribution of the exclusive breastfeeding duration

The mean age for breastfeeding was 2.4 years, with a mode of 2 years. All the children were breastfed for at least 12 months of age. Table 6 details the mean age for breastfeeding for male and female children who had stopped breastfeeding. No significance was observed (t test $P=0.717$).

Table 6: Mean duration of breastfeeding for male and female children

Gender	Mean (years)	N	s.d
Male	2.2429	70	0.6108
Female	2.2716	58	0.5263
Total	2.2559	128	0.5720

No significant difference was observed between the age of stopping breastfeeding between the male and female children ($X^2=7.461$, $P=0.113$). Figure 6 shows the percentage of children by gender distributed according to the duration of

breastfeeding.

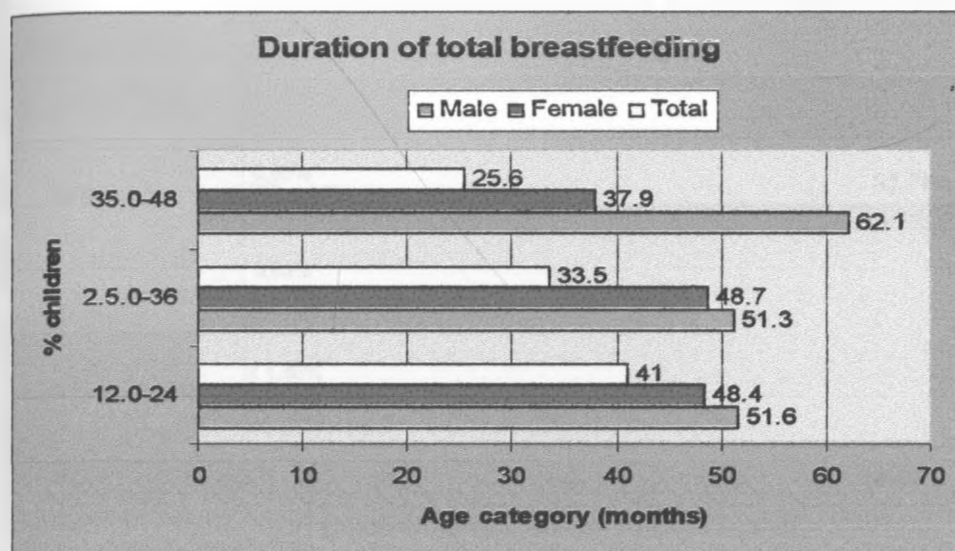


Fig 6: Distribution of children by gender according to duration of breastfeeding

4.2.2 Frequency of breastfeeding between male and female children

During this study, it was found that 93.7% of the mothers breastfed their children on demand, 4.9% partial demand (>3 times) and 1.4% scheduled breastfeeding their children to between 1 – 2 times a day or rarely. There was no significant statistical difference in the frequency of breastfeeding between male and female children ($X=0.12$, $P=0.261$) Gender of the child did not matter, as 52.6% of the boy child compared to 47.4% of the girls were breastfed on demand. Figure 7 summarizes the frequency of breastfeeding.

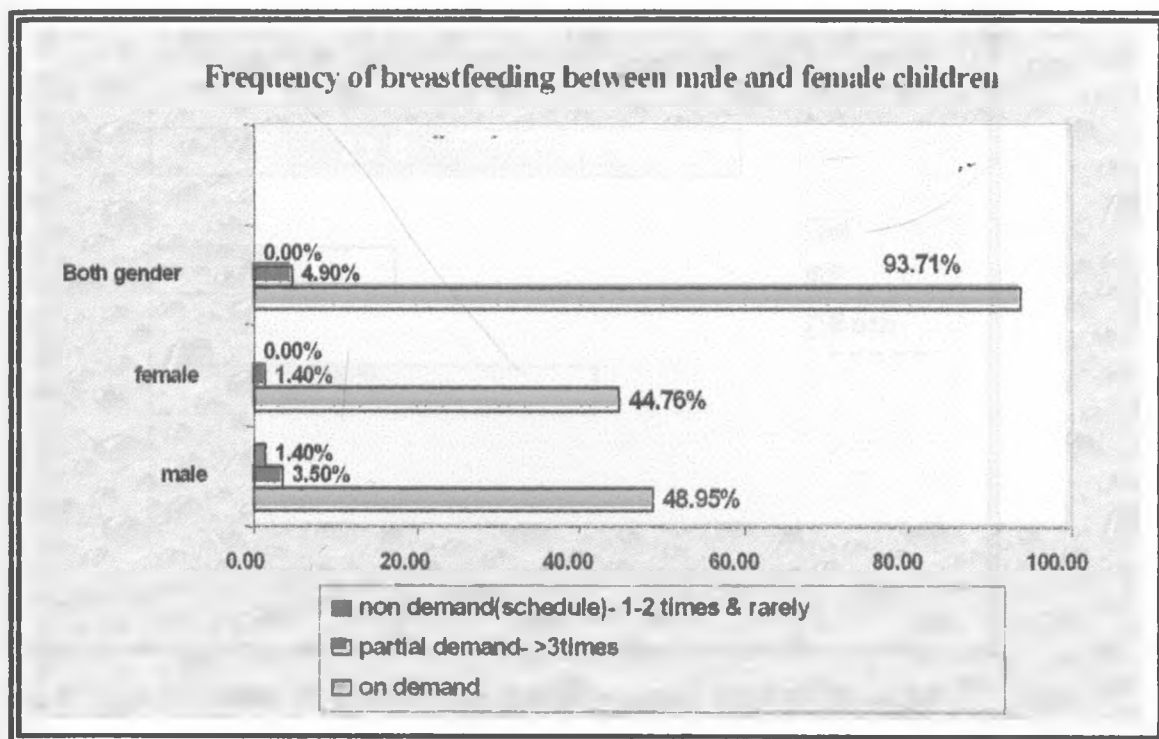


Fig 7: Breastfeeding patterns of male and female children

4.2.3 Complementary Feeding

Forty five point five percent (45.8 %) N=128 of the children who were still breastfeeding were introduced to supplementary food at an age of over 6 months. This signifies a violation of the children's right to adequate food from complementary feeding. The mean age of introduction to complementary foods was 3.0738 months with a mode of 4 and s.d of 0.9399. Those that were introduced to supplementary foodstuff at the age of 4 – 5 month were 34.3% while those that were introduced at their sixth month were 18.9% as shown on figure 8. None of the benchmark ages for introduction of complementary feeding were different for male and female children ($\chi^2=3.387, P=0.336$).

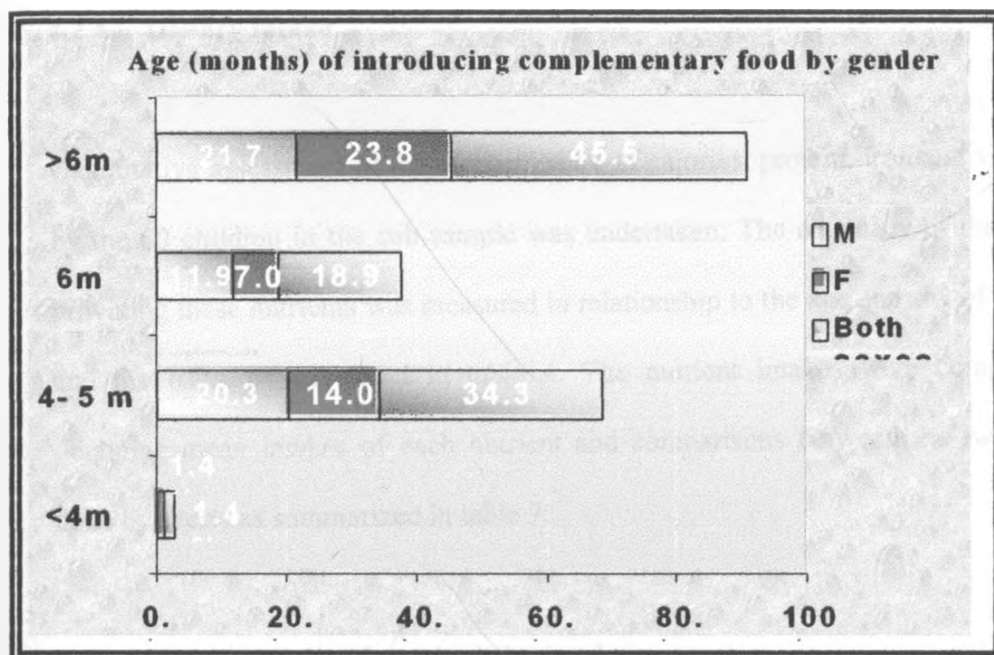


Fig 8: Age (months) of introducing complementary food to the child

No significant difference in the mean age of introducing complementary foods between male and female children was found to exist (t test, $P=0.151$). When asked why they introduced their children to complementary feeding at the cited ages, 4.1% of the mothers indicated that it was because of pregnancy with the next child, 1.8% indicated that they had to go to work, 66.8% cited that the child was not getting satisfied on breast milk alone, while 27.3% indicated that they felt the time was ready to begin introducing supplementary foods. All the children's' initial complementary feed was ghee and cow milk. Ghee was introduced at birth and continued being consumed thereafter. Solid rice was the most common solid food used for weaning (33.7%), then maize meal porridge (28.4%), fruits (20.5%), mashed potatoes (8.9%) and others (8.6%). There was no significant difference in the complementary foods introduced to male and female children ($X^2=0.008$, $P=0.876$).

4.2.4 Dietary intake

Quantitative assessment of the dietary intake of calories, protein, iron and vitamin A by the 60 children in the sub sample was undertaken. The adequacy of the diets in providing these nutrients was measured in relationship to the age and sex of the child and the RDA as stipulated in table 4. The nutrient intakes were computed by obtaining mean intakes of each nutrient and comparisons between the two gender done by t tests as summarized in table 7.

Table 7: Mean intake of nutrients by gender

	Calories	Protein	Iron mg	Vitamin A	N=56
RDA	820- 1550Kcal	13.5-17.5gm	5-10mg	250-550 RE	
Male	1032.8	37.5	22.1	182.8	30
s.d Male	421.6	16.6	10.1	169.5	
Female	1199.4	44.3	18.5	153.8	26
s.d Female	623.3	24.2	8.6	163.5	

4.2.4.1 Calories

The body requires energy (calories), for all bodily functions including maintaining of body temperature and continuous action of the heart and lung and also repair and the building of tissues. Over half of the children in the study (66.1%) consumed diets that were inadequate in calories. Males constituted 62.2% of those inadequately nourished while, 37.8% of the female children studied were found to be deficient in calories.

There was no significant difference in the mean caloric intake of male and female children. (t test $P=0.380$).

4.2.4.2 Protein

Proteins are important for growth and development, repair and maintenance of body tissues. Most of the children were adequately nourished with protein (91.1%) as compared to 8.9% who were consuming inadequate proteins in their diets. Five point three percent of the male children in the study were protein deficient, compared to 3.5% of the females. No statistical difference was found between the sexes. (t test, $P=0.201$).

4.2.4.3 Iron

Iron is present in blood in haemoglobin that carries oxygen from the lungs to the body tissues and returns carbon dioxide to the lungs. Only 1.8% of the children consumed inadequate amounts of iron. Female children were the only ones who had inadequate iron intake, although no significant difference was observed ($t=0.281$). However, 2.8% of the male children were inadequate in their RDA for iron compared to 3.4% of the females in the study. No significant difference was noted. (t test $P=0.281$).

4.2.4.4 Vitamin A

The finding of the study show that the dietary intake of Vitamin A of 92.3% of the study children was below the RDA for Vitamin A. Dietary intake for 88.9% of the

male children and 96.6% of the female children was below the RDA but the difference was not significant (t test $P=0.555$).

4.2.5 Order of serving the children within the households

Nearly half of the households (49.4%) served food to the children after the guests and the fathers have been served. Households that served the children food first before any other household member or guest constituted 41%, while those that served children second after either their fathers or guests were 9.6%. There was no significance between the order in which children were served between households with male and female children ($X^2=0.706$, $P=0.703$). None of the study households served their children last as it was the mothers' duty to ensure that her husband, visitors and children had eaten before she could eat herself.

4.2.6 Alternative caregivers

The daily responsibility of feeding the children was on the mothers (97.4%), Siblings (0.4%) and grandmothers (2.2%). Daily preparation of food for the child was done by mothers (99.7%) and siblings (0.3%). Fathers were not involved in food preparation or feeding of children. Likewise mothers were the main parents taking care of the child during illness and taking them for medical or herbal therapy (77.1%), however, 22.9% of the fathers were involved in care of the child during illness specifically taking the child with or without the company of the mother for therapy.

Although the primary care givers of the child were the mothers, alternative caregivers were instrumental especially when the mother was away. Older children in the neighbourhood and in the home and grandmothers were the main caregivers involved

in feeding the children when the mother was away (35.4% and 32.5%) respectively. Others included co-wives (15.5%), always the child's mother (15.1%), and others 0.7% (neighbours, aunts, fathers and house helps). Children who were being cared for by other children in the absence of their mothers constituted 36.2% (N=98) but was not significant between the gender ($X^2=0.031$, $P= 0.860$). Figure 9 shows the distribution of alternative caregivers according to gender of the child

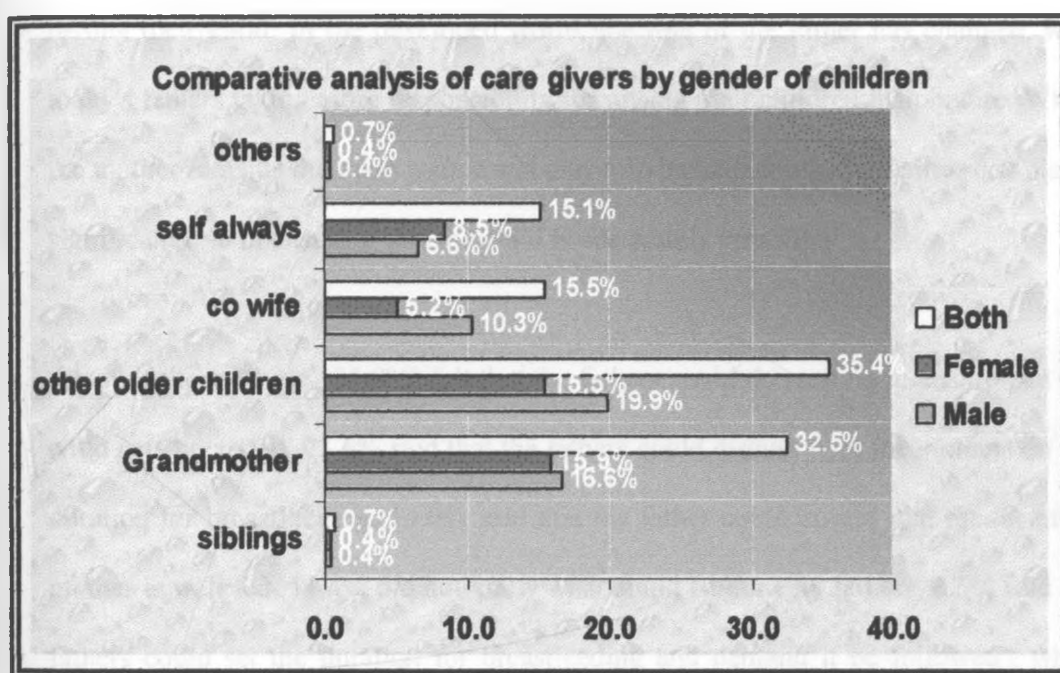


Fig 9: Alternative caregivers

4.2.7 Gender issues in child feeding

The respondents were asked whether they had another child besides the child under study. Up to three quarters (73.1%) of the study households had other children of the opposite sex in the 6 – 59 months age category and 87.4% of them fed both children in the same way, while they were at the same age. Those who fed their children differently mainly in terms of quantity constituted 9.6% and stated their reason as being that they thought boys require more food than girls in order to meet their

additional nutritional requirements while 0.4% felt that girls should be better nourished from early in life in order to prepare them for their reproductive roles in future.

4.2.8 Fathers' role in ensuring the right to breast milk by the child

Fathers can play many roles in caring for their children. Some could be involved in every facet of their child's life while others concentrate on one or two aspects of raising their child. In the developed world, the role of the father has changed, with today's fathers taking more responsibility for raising their children than before. While the mother remains the main source and player in breastfeeding, the fathers can play a significant role in ensuring that the child is adequately breastfed.

Most of the mothers (35.8%) felt that the fathers could do nothing to ensure that the child gets breastfed, 23.6% said that the fathers could discuss with the mothers on the duration for breastfeeding, 14.0% said that the father could ensure that the lactating mother is well fed, 11.4% did not know what could be done by fathers, 8.5% said the fathers could set the duration for breastfeeding and demand it be followed , while 6.6% said the father can ensure that the mother and/or child is free from disease so that breastfeeding can be adequate. Data presented in figure 10 summarizes these findings.

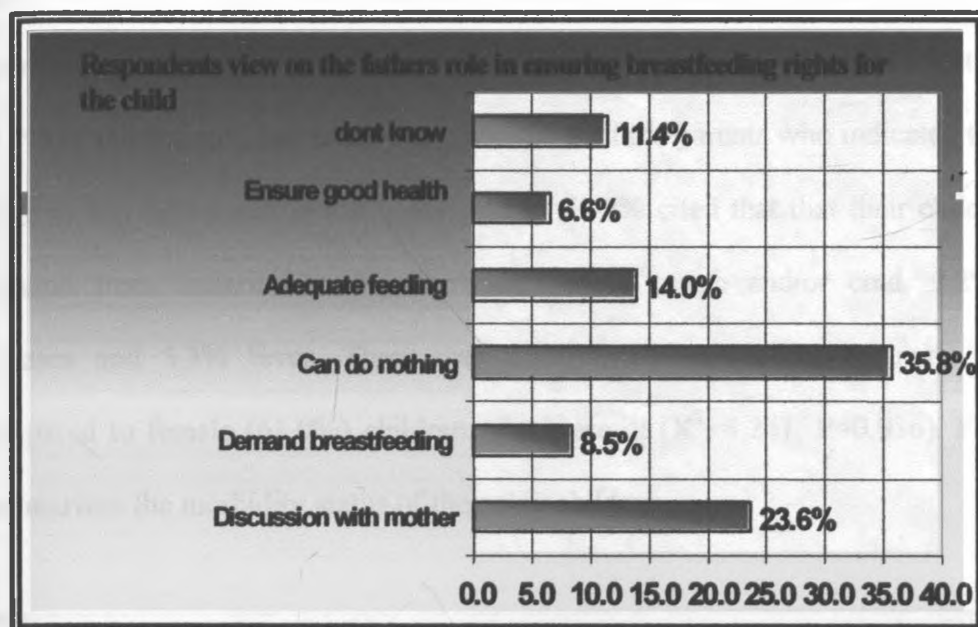


Fig 10: Respondents view on the father's role in ensuring the child's right to breastfeeding

The study sought to established whether the community could act as a key duty bearer in ensuring that the child is adequately breastfed, however over half of the mothers in the study (52.8%) cited that the community had no role in ensuring the same, 25.8% said that they did not know what role the community could play to ensure breastfeeding is done, while 21.4% indicated that the community can organize itself and train as well as encourage mothers to breastfeed adequately.

4.3 Health practices

4.3.1 Morbidity

Lack of proper sanitation, poor hygiene and lack of health education among the community can be termed as the major causes of morbidity. When these are not checked, the rate of infection continues to escalate and the number of people seeking treatment will increase as a result. The frequency of various infections and illnesses

(diarrhoea, cold, cough, fever, scabies, measles, etc.) was determined by questioning the mothers. In the area under study, the findings indicated that in the last 7 days, 57.9% of the children had fallen sick (N= 163). Of the parents who indicated that their children had fallen sick in the 7 day period, 52.8% cited that that their children had suffered from malaria, 21.5% diarrhoea, 11.0% cough and/or cold, 9.2% other diseases and 5.5% fever. There was a significant proportion of male (53.0%) compared to female (61.0%) children who were ill ($X^2=4.241$, $P=0.036$). Figure 11 summarizes the morbidity status of the study children.

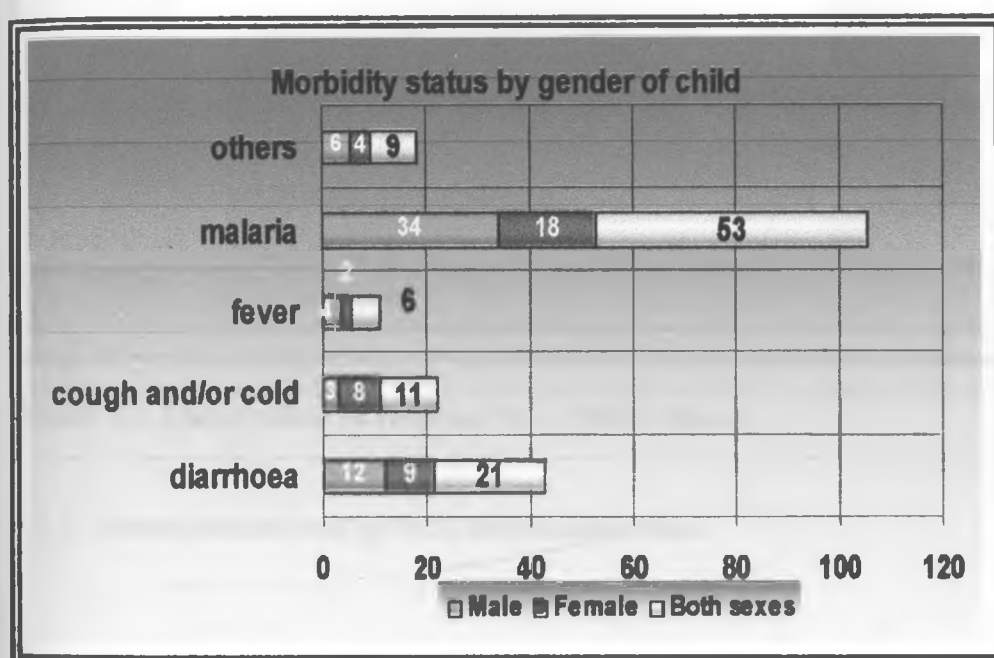


Figure 11: Morbidity status of the study children

4.3.2 Action taken during illness of the child

The study revealed that the majority 51.7% of the mothers take their sick children to health facilities, 6.6 % buys drugs from the chemist without prescriptions, while 41.7% of the mothers indicated that they use traditional herbs for treatment. No significant difference was found in the kind of action taken when a child is unwell between the male and female children ($X^2= 0.300$, $P= 0.300$). It is apparent that the

majority of the respondents are aware of the health facilities around their area where they can get help and that they are using the facilities. Both the male and female children were treated equally when they fell ill as summarized by fig 12.

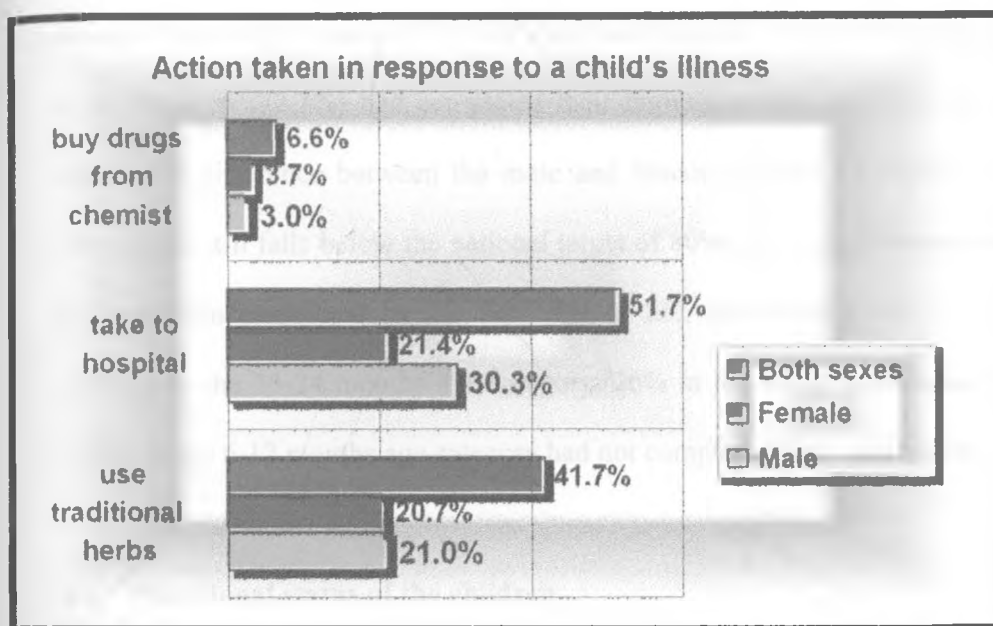


Figure 12: Action taken in response to a child's illness

4.3.3 Immunization and growth monitoring status

In many rural areas, very few parents will take their children for monthly growth monitoring after they complete their immunization schedule that ideally ends at 9 months of age. The study established that 26.9% of the children under five years of age were taken for monthly growth monitoring. Over half (56.2%) of those taken for monthly growth monitoring were male and 43.8% female. However there was no significance in the differences ($X^2=0.056$, $P=0.810$). The main reason for the children not being taken for growth monitoring was that it was seen as not important after

immunization (80.2%), while 19.8% attributed the long distances covered to the clinics as the constraint.

Twelve point five percent of the mothers could not avail their children's clinic cards and the mothers' memory became the source of information on the immunization status of the child. However 87.5% of them had the cards. About three quarters of the study children (72.3%) had completed their immunizations, although there was no significant difference between the male and female children ($X^2=4.037$, $P=0.258$). This figure still falls below the national target of 80% coverage. Immunization ought to have been completed by the first year of life, nevertheless only 33.3% of the children in the 13-24 months age category, 26% in the 37-59 months age category. 54.8% in the 6-12 months age category had not completed their vaccination.

4.4 Nutritional status of the children

Children's weight and height measurements as well as age were used to derive the standard anthropometric indicators: height-for-age, weight-for-age, and weight-for-height. The Z-scores were derived by comparing each child's anthropometric measurements to the CDC/NCHS/WHO reference standards (WHO, 1979) for his/her age and gender.

The findings of the study indicated that 4.4%, of the sampled children were wasted ($N=268$), 14.4% underweight ($N= 270$) and 28.1% ($N=263$) were stunted, using below -2 Z score as the cut off point. Wasting, underweight and stunting are indicators for achievement of adequate food as a child's right. Figure 13 shows the prevalence of malnutrition among the study children.

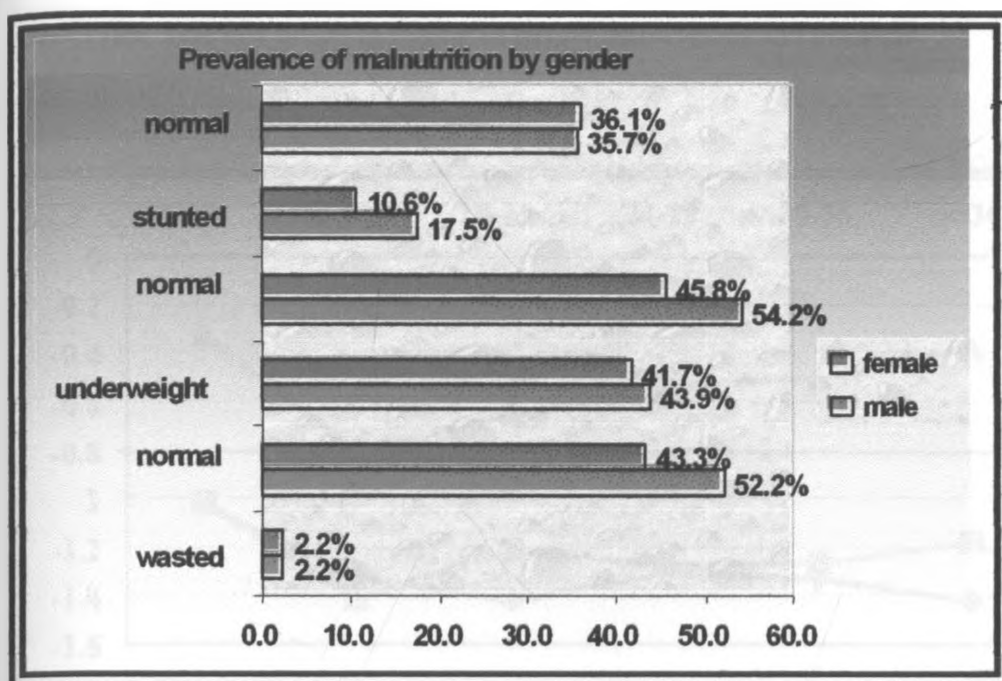


Fig 13: Prevalence of malnutrition among the study children.

4.4.1 Nutritional status by age group

Wasting, underweight and stunting are indicators for achievement of adequate food as a child's right. Overall, 28.1% percent of children in the study were stunted, 14.4% percent were underweight, and 4.4% percent were wasted. The findings of this study shows that most children's nutritional status deteriorates rapidly during the first year of life, and up to 17 months of age, as seen by the steep decline in mean Z-scores for all three indicators (fig 13). Growth faltering (represented by declining mean HAZ) continues until 18-23 months, at which age it tends to rise at relatively low levels. Mean WAZ on the other hand starts within the first year of life and improves as from 12- 17 months of age and remains relatively in the same range until the age of 36 months. WHZ, on the other hand, deteriorates sharply until 17 months of age, but starts to improve gradually with age thereafter. This suggests that children in the study

region are either born underweight or they become malnourished within their first year of life. The line graph in figure 14 below summarizes the findings.

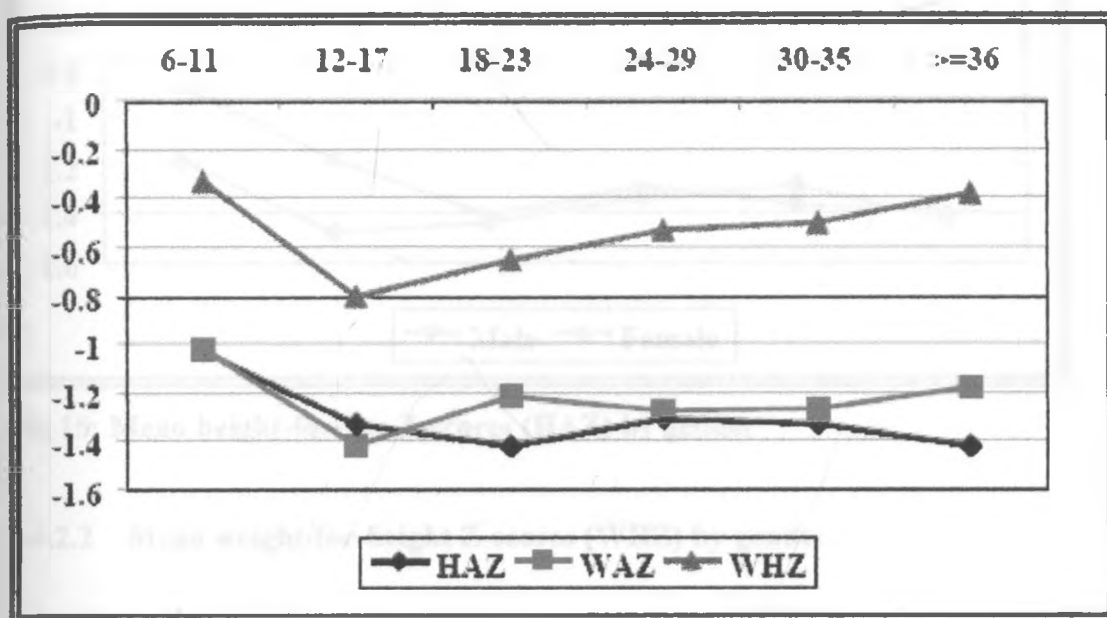


Fig 14: Nutritional status by age groups (mean Z-scores)

4.4.2 Nutritional status by gender of the children

4.4.2.1 Mean height-for-age Z-scores (HAZ), by gender

Figure 15 shows that a significantly higher proportion of males (62.5%, N= 140) were stunted compared to the females (37.5%, N= 123) until the age of 18-23 months ($X^2=0.019$, $P=0.487$).

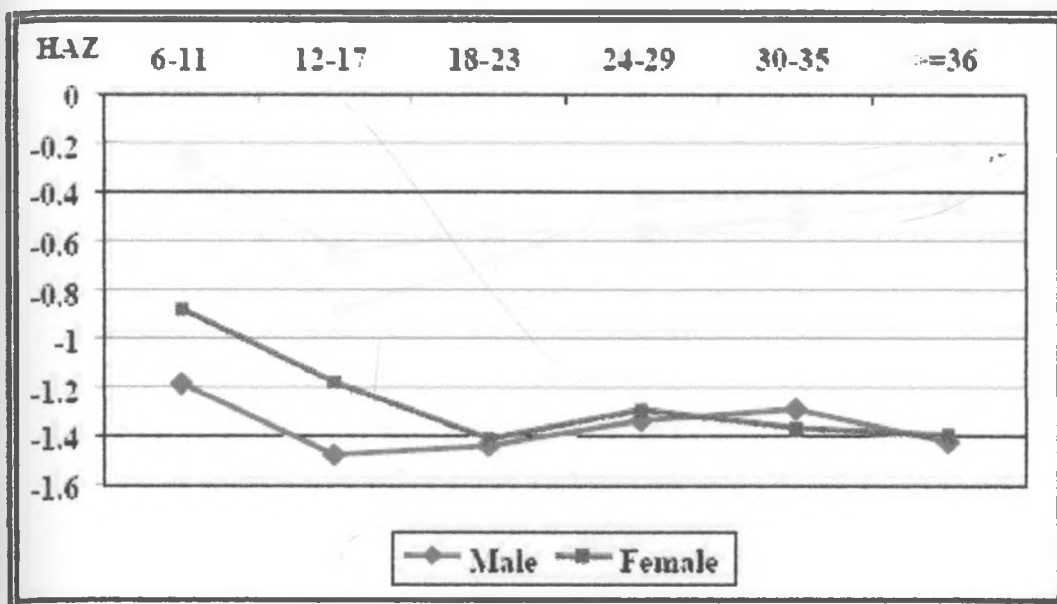


Fig 15: Mean height-for-age Z-scores (HAZ) by gender

4.4.2.2 Mean weight-for-height Z-scores (WHZ) by gender

Prevalence of wasting was the same for male and female children (53.1%), and the chi square test showed that there was no significant difference ($X^2=1.41$, $P=0.813$). The WHZ of girls is more consistent throughout the age range and fluctuated only slightly at around minus 0.6 Z-scores. It could be possible that boys are more affected by infections in their second year of life as depicted in figure 16.

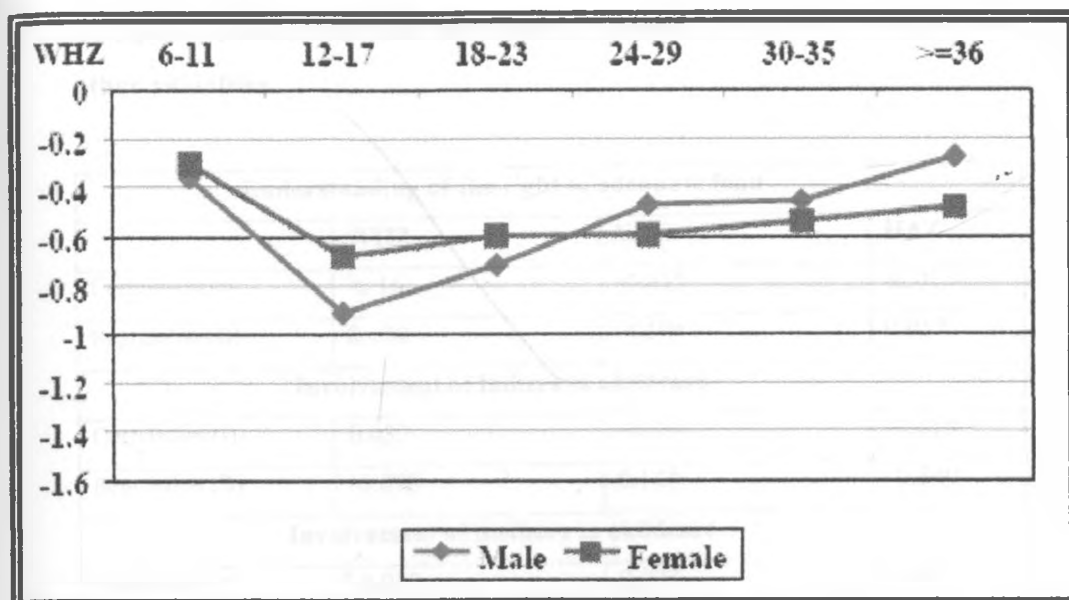


Fig 16: Weight for height Z scores (WHZ) by gender

4.4.2.3 Mean weight-for-age Z-scores (WAZ) by gender

A higher percentage of male children were underweight (71.5%) compared to the female children (28.5%). There was a significant difference in underweight prevalence among the sexes ($X^2=6.472$, $P=0.031$).

4.4.3 Regression and correlations for some variables and nutritional status

A linear regression analysis was done to compare the understanding of the rights to adequate food and the level of the fathers and mothers involvement in childcare against the indices of nutritional status (WHZ, HAZ and WAZ). WHZ was found to have a stronger association with the understanding of adequate food compared to the other indices. Likewise HAZ had a stronger but inverse association with the involvement of the fathers in childcare than WHZ and WAZ. The correlation between WHZ and the understanding to adequate food was strong and positive as shown in table 8.

Table 8: Association and correlation between Nutritional status indices and other variables.

Understanding of the right to adequate food			
	WHZ	WAZ	HAZ
Correlation (r)	-0.16	-0.035	-0.013
Regression (B)	0.100	-0.194	0.057
Involvement of fathers in childcare			
Correlation (r)	0.032	-0.006	-0.013
Regression (B)	-0.098	0.147	-0.140
Involvement of mothers in childcare			
Correlation (r)	-0.033	0.076	0.095
Regression (B)	0.495	-0.558	0.604

This implies that there is a minimal likelihood of getting more children who were wasted from households with some understanding of the right to adequate food. Stunting followed by underweight status were the most closely associated indices with increased involvement of the fathers in childcare.

4.5 Gender roles in childcare

Both women and men have roles in production (of goods and services). However, reproductive tasks (ensuring basic needs at family and house hold level are met, homes and children are maintained and cared for) fall almost entirely on the women. This results in women having longer working days than men. Productive work of women is often seen as an extension of their reproductive work and is undervalued.

The research aimed at establishing the roles played by each parent in reproductive, productive and decision making with regards to childcare. The mothers confirmed that

it was the responsibility of the father to provide money for food and treatment as indicated by a majority 99.6%, while only 0.4% said otherwise. When asked who decides what the children eat and their healthcare, 52% of the mothers indicated that it was the responsibility of the father while 48% of the fathers were reported not to be involved in these decisions. According to a majority (94.1%) it is the fathers who produce food. Only 0.1 %, 21.8% and 0.7% of the fathers were involved in reproductive roles namely meal preparation, taking children for treatment and feeding children respectively. On the other hand 65.3% of the mothers are responsible for providing money for childcare (food and healthcare), 68.3% were also involved in food production, 99.6% prepared the children's meals, and the same percentage daily fed their children and were involved in taking their children for treatment when ill.

A participatory decision making process between parents is important in ensuring that the best possible care is provided to the child. Majority of the mothers (94.5%) reported that some level of discussion by both parents was done in matters relating to childcare, 1.8% of them reiterated that fathers made the decisions solely, while 3.7% indicated that mothers had to make those decisions alone. Much as the majority were involved in joint decision making with regards to childcare, the fathers had the final say in 91.9% of the households as compared to 8.1% of the mothers who were the final say in childcare.

Involvement in decision making, production and reproductive roles by both parents is important if a child is to be adequately cared for. For men to be more involved in reproductive duties, it would not necessarily mean to abandon the cultural and social perceptions of who does what in childcare. Being more involved in making sound and well founded decisions affecting the child or taking the child for treatment or playing

with the child are ways in which fathers can be involved in childcare. The mothers and fathers were scored on a rank of 6 for their involvement in productive, reproductive and decision making with regards to childcare. Each role scored a maximum of 2 points. After analysis of the nature of involvement in childcare by both parents, it was established that none of the fathers were fully involved in all their roles as childcare takers, while over half of the mothers (59.1%) were undertaking all the childcare roles as shown in table 9.

Table 9: Involvement of parents in childcare activities

Involvement in childcare	Fathers	Mothers
Very little (0-1roles)	3(1.1)	0
Little (2-3roles)	221(84.0)	1(0.4)
Fairly (4-5roles)	39(14.8)	104(38.4)
Fully (6roles)		166(61.3)
Total	263	271
<i>N.B figures in parenthesis (%) are percentages.</i> <i>Productive roles- production of food and/or providing money for food/health</i> <i>Reproductive roles- food preparation and/or feeding children and /or taking child to hospital</i> <i>Decision making roles – on what to and how to feed the child and /or when or where to go for health services</i>		

When asked who should be involved in childcare, 60% of the men who participated in the FGD indicated that it was the mothers' responsibility since she spends more time with the child. They however appreciated the fact that production and provision of resources was the fathers' main duty. They also saw men as possibly playing a role in playing with the child and providing room for informed decision making on childcare.

4.5 1 Constraints encountered by parents in providing childcare

As much as the mothers were involved fully in childcare roles, 94.1% of them reported that the workload was overwhelming and could perform better if ways to reduce it were put in place. The fathers' main constraint as perceived by the mothers was the lack of resources especially finances (74.9%). Despite the fact that culture is a major force that determines the lifestyle and behaviour of the community, it was not cited as a significant constraint to childcare either by the mothers (8.9%) or fathers (3%). Only a minority of the mothers felt they had inadequate knowledge on appropriate childcare practices (14.8%), while a higher proportion of the fathers were perceived by the respondents as having inadequate knowledge on childcare (38.8%). The table 10 summarises the constraints encountered by both parents in childcare.

Table 10: Constraints in undertaking childcare roles

Constraint	Mothers	Total	Fathers	Total
Lack of resources	181(66.8)	271	197 (74.9)	263
Lack Knowledge	40(14.8)	271	102 (38.8)	263
Culture	24(8.9)	271	8 (3.0)	263
Disinterest	0	271	39(14.8)	263
Workload	255(94.1)	271	0	263
Lack of support from husband	13(4.8)	271	0	263
N.B figures in parenthesis () are percentages				

Three quarters of the men in the FGD were in agreement that women's work load is a constraint to provision of care for children. They suggested finding ways in which to reduce the workload of women e.g. buy donkeys for water and firewood fetching, buy

water tanks, hiring help for her and paddock the land to reduce women's time spent in herding.

4.6 The right to adequate food

4.6.1 Awareness of human rights

The study revealed that the children are well fed as 97.8% of the respondent indicated that they always had enough food to feed the children. Only 2.2% did not always have enough food for the children. A majority of the mothers (86.7%), had no awareness on what human rights are. Two point two percent understood human rights as having to do with freedoms, while 11.1% understood it to mean having human entitlements (property, life etc). Figure 17 below represents the awareness of human rights among the study population.

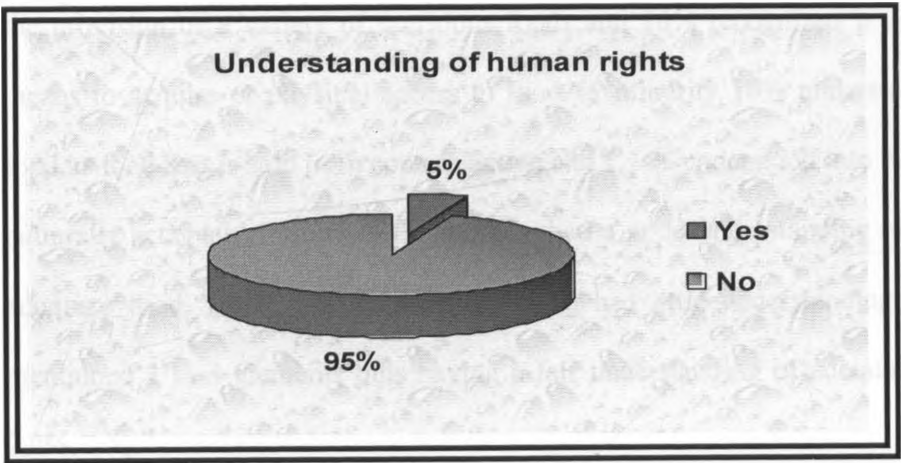


Fig 17: Awareness of human rights

4.6 2 Understanding of the right to adequate food

This study viewed understanding of the right to adequate food as knowledge of the respondents to 5 proxy indicators constituting the right to food i.e. adequate quantity, quality, safety from contamination, physical and economic access and cultural acceptability. For purposes of categorizing the understanding of the respondents to what constitutes adequate food, a scale was devised comprising of the maximum 5 indicators constituting adequate food. Mention of none of the indicators was categorized as lack of understanding, mention of 1 to 2 indicators was little understanding, while mention of 3 to 4 indicators was fair understanding and mention of all the 5 elements was good understanding of adequate food.

More than half of the respondents (61.3%) understood adequate food as the provision of enough food (quantity) to prevent the child from hunger, 35.8% understood it as the provision of a variety of nutritious foods and 10% recognized it as having the means to acquire or physical access to food. A minority 10% understood adequate food as food that is safe from contamination and 1.1 % understood it to be food that is culturally acceptable. None of the mothers had a good understanding of the right to adequate food, while most of them (89.3%), had little understanding. Those who mentioned 3 to 4 elements thus having a fair understanding of adequate food were 2.2%.

4.6.3 Obligations of various duty bearers in ensuring the right to adequate food.

Parents are the first duty bearers for the child; however 1.8% of the mothers in the study did not know what role the fathers could play to ensure adequate food for the child. Almost three quarters (69.7%), said that his role was to provide money for food and health care, while 60.9% said he should produce the food. Care for the children (food preparation, feeding etc) was the sole role of the mother (73.4%). Other roles cited for the mother were production of food (45%) and providing money for food and healthcare (35.8%).

The community can ensure that the child's right to adequate food in various ways. It can do collective work like farming (41.7%), contribute to the needy families (8.5), and appeal to the government, NGOs etc on behalf of the needy (2.3%). However, 28.8% said the community has no role to play, while 18.5% did not know what the community could do to ensure adequate food for the families. Less than half of the mothers (38.4%) said that the government can do nothing to ensure that there is adequate food for the children, 29.2% did not know what it can do, 13.7% said that it should provide food aid when there is an emergency in the community, 16.2% and 2.6% said that the government can support production (credit provision, inputs, extension) and support health care respectively.

4.6.4 Remedial action in case of violation of the Child's right

Most of the mothers who were interviewed (60.1% N=271), recommended that women should be punished when they violate their children's right to adequate food, punishment in the form of beating, taking away the children, cursing and being chased

away from the matrimonial home were suggested as suitable punishments. Other remedial actions recommended for mothers included taking legal action (2.6%) and counselling and/or supporting the mother on how to ensure her children are adequately fed (23.6%). Legal action and pressing of charges in a court of law was the most common remedial action recommended for fathers (38.7%). The table 11 summarises the findings on the remedial actions for mothers and fathers who violate their children right to adequate food.

Table 11: Remedial actions for mothers and fathers who violate children's right to adequate food

Recommended Action	Mothers N=271	Fathers N=271
Punishment	163(60.1)	32(11.8)
Legal action	7(2.6)	105(38.7)
Counselling/support	64(23.6)	79(29.2)
None	19(7)	26(9.6)
Don't Know	18(6.6)	29(10.7)
N.B Figures in parenthesis are percentages		

Over half the mothers in the study (69.4%) had no views of what should be done about a community that does not ensure its children are adequately fed, 23.2% suggested that the community be trained and supported to ensure its residents have adequate food and knowledge on childcare, 1.8% suggested curses, 4.8% said no action can be taken against the community and 0.7% suggested prayers. Three quarters of the mothers (746%) did not have views of what should be done to a government that violates the right to adequate food to the nations children, 15.5% suggested that such governments be voted out by the population, 4.8% said nothing

could be done while 3.7% suggested mass action and demonstrations be held against such a government.

5.0 DISCUSSION

5.1 The right to adequate food.

An explicit human rights approach to nutrition means that mechanisms and procedures are gradually put in place, i.e. incorporated into national laws and thereby having a chance of becoming a reality for greater numbers of people. Human rights should begin at home, therefore, indicators of rights that are pertinent to food and nutrition will help make the human rights approach more real. Indicators include child malnutrition rates, measures of gender discrimination and other human rights violations, (ACC/SCN, 1999). Explicitly stated indicators for the attainment or violation of human rights and specifically to adequate food are lacking in Kenya and in many other countries. Mexico and Ecuador have taken the initiative of developing a children's rights index to measure the degree of fulfilment of the rights to survival, health, adequate nutrition and education.

5.1.1 Understanding of the right to adequate food

Capacity is the key factor determining how well the rights are claimed and duties are fulfilled. A person cannot be held accountable for not fulfilling a duty if he or she lacks the conditions necessary to do so. For a person to be held accountable first, they must accept responsibility for carrying out the duty, secondly they should have authority to carry out the duty and lastly they must have access to and control over resources required to meet the obligation, (Johnson, 2003).

The study shows that 95% of the mothers did not understand what human rights are and majority (89.3%) had little understanding of what the right to adequate food encompasses. To most, adequate food meant adequate quantity. Lack of information and understanding of the right to adequate food limits the capacity of the study population to fulfil their obligations in ensuring that children are well nourished. Holding this community accountable to violating their children's rights to adequate food would therefore be inappropriate.

The study established that the mothers were aware of parents being the duty bearers in ensuring that children were adequately fed, but the role of the community and government in respecting, protecting, facilitating and providing for the same were only realised by a few. It would be difficult to hold the community and government accountable for violating the children's right to adequate food because they lack the knowledge that would enable them to claim these rights.

Despite the little understanding of the right to adequate food, most of the study population felt that punitive action should be taken against the mothers whom were seen to have violated this right. The fathers, it was recommended should mainly be punished through the legal system. In line with the study populations' inability to identify the community and the government as duty bearers in ensuring the right to adequate food, they did not know what action should be taken against these institutions in cases where they were to blame for violation of citizen rights.

5.2 Child feeding practices as indicators of the child's right to adequate food

Poor breastfeeding and infant feeding practices have absolute consequences for the health and nutritional status of children. Malnutrition is usually the result of:

1. Disease
2. Sub optimal breastfeeding practices
3. Poor quality complementary foods
4. Detrimental feeding practices, (Nurture, 1996).

In this study, the children's right to breastfeeding was well observed since they all breastfed at some point in time. With regards to preferential breastfeeding of the male child, no difference was observed, since there was no significant difference in the duration of exclusive breastfeeding. Frequency of breastfeeding was not significantly different and the duration for continued breastfeeding was not different for both gender. Hence the gender dimensions for breastfeeding did not lead to the infringement of the female child's rights.

For optimal growth, it is recommended by WHO that infants be exclusively breastfed for the first six months of life. The study found that 67.6% of the mothers ideally breastfed exclusively i.e. for four to six months, while 2.2% delayed introducing their children to complementary foods after 6 months of age. Over half (51.3%) were early weaners (before 4 months). Only 10% of the children were exclusively breastfed for an ideal 6 months, Central bureau of statistics survey of 2004 established that 13% of Kenyan children were ideally breastfed for 6 months exclusively. Those mothers who put their children at risk of malnutrition either by introducing other foods too early (before 4 months), or too late (after 6 months) constituted 53.5%. Likewise WHO

recommends continued breastfeeding up to the second year of life. In Kenya, 57% of the children are breastfed up to two years (CBS/MOH/ORC, 2004). This compares with the findings of this study where a mean duration of total breastfeeding of 2.4 years. The long duration of breastfeeding could not only be attributed to the fact that most of the study mothers are housewives and therefore spend most of their time with their children, but also to the cultural value attached to breastfeeding.

The complementary foods given to the children were inadequate in calories and vitamin A. Vitamin A is essential for the formation of a protein 'visual purple' which helps the eye adjust to low light. It strengthens the immune system and so fights infection. It also influences growth and repair of cells, growth and development of muscle, tendons, ligaments and bone. Extreme deficiency of vitamin A leads to blindness. Smaller dietary inadequacies are linked to an increased risk of certain diseases e.g. skin and colon cancer. The mean age for the introduction of complementary foods was 3.4 months. Despite the fact that the children had frequent meals, these meals were inadequate in energy content (66.1%) and vitamin A (92.3%) as established from the nutrient intake assessment, which compared their respective nutrient consumption against the RDA for the gender and age of the child. Fresh fruits and vegetables were grossly lacking in these diets hence the inadequacy in Vitamin A. The diet was however excessive in protein and iron. This could be attributed to the high intake of milk especially during favourable season as was during the study. Male and female children were fed on the same diets with no differences in the amounts and types of food. This means that although the children's right to an adequate diet in was violated in vitamin A and caloric contents, no gender-based violation to preferential diets was observed.

Opinions that the mothers gave on the differential feeding of boys and girls showed that most of them fed both children in the same way. Intra household food distribution and cultural value of the boy child in feeding are, therefore, not issues in the nutrition of this study group. This is unlike the situation in South Asia, where social discrimination as a result of culture, against female children has been documented and significantly more girls under five years of age are more severely malnourished than boys, (ACC/SCN, 1991).

5.3 Alternative childcare takers

Mothers are the primary caretakers of children only in early infancy. Older siblings, grandparents and members of the extended family regularly care for pre school children while the mother is outside of the home. According to ACC/SCN, (1990), children's nutrition is often worse with non maternal (particularly sibling) caretakers since the quality of care matters a great deal. In the study population, most of the food preparation and feeding was done by the mothers and no correlation could be established between the alternative child caretaker and the children's nutritional status. However, in her absence, the main childcare takers (feeding and preparing food) were children in the neighbourhood. This implies that children's right to adequate food is at risk of violation due to the inadequacy of childcare skills and inappropriate and/or lack of knowledge of the childcare givers.

5.4 Nutritional status of the children as an indicator of adequate feeding practices

Nutrition rights are articulated in articles 24 of CRC and article 12 of CEDAW, (GOK and UNICEF, 1998). However, moderate and chronic forms of malnutrition are widespread, indicating the failure to attain these rights for children. The prevalence of wasting, underweight and stunting are indicators in meeting the target of eliminating gender inequality in accessing adequate food, (Office of the High Commissioner for Human Rights, 2002). This is in line with the MDGs of eradicating hunger and reducing gender inequality.

Prevalence of stunting (28.1%) in the study was higher than the prevalence of wasting (4.4%) and underweight (14.4%). The situation in Kenya is almost similar, where 30% of the children under five years are stunted, 6% are wasted and 20 % underweight, (CBS /MOH/ORC, 2004).

Stunting is generally associated with long term food deprivation and low socio-economic status. It reflects long term violation of the right to adequate food and cumulative effects of food rights abuses in early childhood. Study results show that stunting levels were slightly lower than national rates, although a higher proportion of male than female children were significantly more stunted. Prevalence of stunting was significantly higher among the children in the 13 – 24 age group categories. These findings concur with those of Muhoozi (1999), in Mbarara slums of Uganda, which revealed that stunting levels were highest in the age group of 12-24 months.

This study established that there was a significantly higher proportion of male children with both long and short-term deprivation of adequate food than girls. Factors other than feeding and health practices could be responsible for this-variance.

Wasting is an indication of short-term deprivation of adequate food for the child. Wasting was not significant to any particular gender. This implies that both gender of children experienced similar deprivation conditions in the recent past. There was a negative and significant relationship between age and wasting and stunting (-0.234 and -0.191, respectively). This implies that age is a factor in weight gain, as the child advances in age, there is less likelihood of becoming wasted or stunted. This may be due to the increase in the base of foods that the child has access to and is able to consume.

5.5 Gender Roles

Women are generally the first caregivers for children. In situations and settings where they are denied access to basic services, essential resources or information, it is the children who suffer greatest, (UNICEF, 2006). According to data collected in the outreach project on economic and social rights of women in 1997, it showed that women are responsible for all the household duties, most of the farm work and undertake community based activities, (Earth care Africa, 1997).

Mothers and fathers are involved in productive work (production of goods and services for consumption and trade) and reproductive work (care and maintenance of the household and its members), which is crucial for human survival. The study shows that with regards to childcare obligations of providing and facilitating, on a scale

of six activities, which included productive, reproductive and decision-making roles, the fathers were not involved fully in all the roles. They mainly concentrated on decision making and productive roles and minimally in reproductive roles. Social perceptions of what a man should engage in still determines the division of labour in this community thus culture still largely dictates the division of labour. Not much of this has changed over time, despite the fact that the community has evolved and changed.

Most of the women were involved in all childcare roles, but were not the final decision makers in actions to do with childcare as dictated by cultural division of roles e.g. whether to take the child to the hospital when sick. On the other hand, fathers, who are not fully involved in childcare, are the ones with a final say on decisions regarding the child. They failed to realise that childcare went beyond feeding, breastfeeding and other woman associated duties.

Women's fatigue is a widespread social disease that is hidden in the barriers of traditional norms and may affect their ability to care for the nutrition of their families. Studies among rural Kenyan women found that mothers labour force participation had negative effects on the nutritional status of young children, (SCN, 1989). The women in the study had many roles to play in productive, reproductive and other functions. As a result their workload was heavy and more assistance from the men in undertaking some of these activities or in acquiring of labour saving devices would be appropriate to ensure they have more free time for rest and for adequately catering for the needs of their children. Suggested roles that men could participate in could include play and psychosocial responsibilities, feeding, baby sitting for the mother while she is occupied and taking the children to hospital when they are unwell.

5.6 Access to adequate health

The right of everyone to the enjoyment of the highest attainable standard of physical and mental health is well articulated in human rights treaties. Morbidity and access to basic health services and a healthy environment are risk factors to the attainment of the right to adequate food and nutrition.

Kenya Expanded Program on Immunization (KEPI) adheres to the WHO vaccination guidelines for children. This stipulates that a child who is considered fully immunized should have received: one dose of BCG, three doses of DPT/hepatitis B/influenza and polio and one dose of measles vaccines, (CBS/MOH/ORC, 2004). Kenya has adopted the WHO goal of ensuring completion of vaccination by 12 months of age. The target being to fully vaccinate 80% of the children in 80% of the districts by the year 2005. Seventy two point three percent of the children in the study had been fully immunized in the study, indicating that the target of vaccinating 80% of the children in Narok is yet to be achieved. Gender discrimination in the right to immunization was absent despite the fact that there was violation of the right to immunization for most of the children. The inability to attain the immunization target could be explained by the long distances to the clinics and a lack of understanding of the importance of immunization.

Over half of the children were ill in the seven days preceding the study, with malaria and diarrhoea being the most common infections. These ailments can easily be prevented by use of mosquito nets and better behavioural practices at the household level. Poor hygiene and poor faecal disposal contribute to the spread of diseases

especially diarrhoea. The prevalence of diarrhoea in the study population could be explained by the high percentage of households using indiscriminate disposal of waste. Pit latrine coverage in the study population was 12.9%.

Half of the study children are routinely taken to health facilities when they fall ill, indicating that 50% of the children are given their right to healthcare by being taken to health facilities for treatment. However 42% and 7% were given traditional herbs and drugs from chemists without prescriptions respectively. They are only taken to health facilities when their conditions deteriorate. Research on the effectiveness and quantities in which traditional herbs should be taken has not been undertaken for the herbs found locally in Narok, this implies that almost half the children are at risk of dying from misdiagnosis and inappropriate treatment of diseases that could have been cured when they fall ill.

Studies done in 1982 in Rajasthan, India, demonstrated that the ratio of male to females coming to government health centres for treatment was 5:1. Health services were used less often by women than by men and parents took sick sons to the health clinics at an earlier stage than daughters, (Gillespie and Mason, 1991). No gender based violation to the access of health care was found in this study as similar action was taken for boys and girls when they fell sick.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

This study investigated the gender dimensions in childcare and nutrition among Maasai children aged 6 – 59 months in Narok in a human rights context. Findings from the study indicate that despite the fact that violations in some of the childcare practices (exclusive breastfeeding duration, time of introduction of complementary foods, vitamin A and caloric adequacy of diets, immunization and growth monitoring) and nutritional status (underweight and stunting), exist, they are not gender based.

Findings from this study have shown that the mean duration for exclusive breastfeeding for both male and female children is below the recommended 6 months, while the mean breastfeeding age for both gender is beyond the recommended 2 years of age. The diets consumed by the children are deficient of calories and vitamin A but adequate in protein and iron content. Since it was established that none of the gender were preferentially fed, the hypothesis that male children have better nutrient intake is thus rejected.

Results from this study indicate that whereas all fathers are involved to some extent in childcare roles either productive, reproductive or decision-making or combinations of these roles, none is fully involved in all their obligations in ensuring that the child is adequately cared for. Parental participation in childcare roles is has no major effect on the growth and development of the child thus refutation of the hypothesis stating that fathers who are more involved in all childcare roles have better nourished children.

This study indicated that the mothers' understanding of the right to adequate food for the child is strongly associated with reduced stunting in the children. Consequently the hypothesis on the mothers' lack of awareness of the right to adequate food resulting in increased malnutrition is not rejected.

6.2 Recommendations

Advocacy focussing on gender balance in childcare should be undertaken by the state, NGOs, CBOs and the community leaders to ensure that both parents are involved in childcare. This should also seek to sustain the non-discrimination of children in care.

Training should be designed or incorporated in all nutrition interventions to create awareness on the ideal caring practices for the children in Narok.

The rights based approach to nutrition is a noble way of ensuring that the community is well nourished, however rights based nutrition programming is a relatively new approach that has not been explored at the household level. It is recommended that the Kenyan government and civil organizations should develop indicators and a child's rights index that can be tools for measuring and tracking the degree of fulfilment of the right to adequate food and health..

The Maasai population in Narok significantly rely on traditional herbs as first line treatment before going to health facilities, research to establish the efficacy of traditional herbs used in the study area, in treatment of ailments is recommended.

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Appendix I

Questionnaire for gender dimensions in child care among Maasai children aged 6 –59 months in Narok.

Questionnaire No. _____ Location _____ Sublocation _____

A. General Questions

Name of Respondent _____ Village _____

Interview date _____ Name of interviewer _____

Name of child _____ Sex _____ Date of birth _____

B. Socio-demographic Characteristics

1. How many people depend on this household for their livelihood?

Indicate the entire household members residing in the household

No.	Name	1. Relation to HH head	2. Sex	3. Age Mnth/yr	4. Marital status	5. Education Level	6. Religion
1.							
2.							
3.							
4.							
5.							
6.							
7.							

<i>Relation to HH head</i>	<i>Sex</i>	<i>Marital status</i>	<i>Education</i>
1. Self	1. Male	1 Married Monogamous	1.Nursey 2.Primary
2. Spouse	2. Female	2. Married polygamous	3.Secondary
3.Son		3. Single	4. College
4. Daughter		4. Separated/Divorced	5. University
5.Grandchild		5. Widowed	6. None
6. Mother		6. Cohabiting	
7. Worker		7. N/A	
8. Other (specify)			

<i>Occupation</i>	<i>Religion</i>
1. Student	1. Christian
2. Formal Employment	2. Muslim
3.Casual	3. Other specify
4.Business	
	5.Housewife
	6.N/A

C. Socio – economic status

7. What is your main source of livelihood for the family?

1. Formal Employment 3.Assets
2. Business 4. Casual labour 5.Other specify _____

8. How do you dispose of human waste?

1. Pit latrine 3. Bush
2. Toilet 4. Other Specify _____

9. Where do you get your drinking water from?

1. Piped water 3.Own Borehole/well 5. Other Specify ____
2. Public Borehole 4. River//Stream

10. What is your main source of fuel? 1. Electricity 2. Gas 3. Firewood

4. Paraffin 5.Charcoal 6. Others specify _____

D. Care Practices – Feeding

11. Is (name of child) being breastfed? 1. Yes 2. No

12. If yes how many times do you breastfeed (name of child) in a day? **If no go to 16**

1. On demand 2. >3 times 3. 1-2 times 4. Rarely

13. Are other foods given to (Name of child) besides breast milk? 1. Yes 2. No

14a. If yes at what age did you start giving the child other foods? _____ **if no go to 15.**

14b. What is the reason for beginning to give other foods at that age?

1. Another pregnancy
2. Baby refused
3. Milk reduced
4. Child /Mother sick
5. Mother went to work
6. Other, specify _____

15. If No at what age will other foods be introduced? _____

16a. Was the child ever breastfed? 1. Yes 2. NO.

16b. If Yes for how long? _____ If No go to 17

16c. At what age were other foods introduced? _____

16d. Why did you introduce the foods at that age? _____

17. Why was the child not breastfed? _____

18. How long should a child be exclusively breastfed? _____

19. For how long should a child be breastfed? _____

20. How long will you continue to breastfeed the child? _____

21. What type of food or drink did you introduce to the child on weaning?

Type of dish	Ingredients

22. How many times do you feed the child? _____

23. Who feeds the child in your absence?

1. Father
2. Grandmother
3. Siblings
4. Other (specify) _____

24. How is food served in the household in order of the first to the last to be served?

1. Father
2. Guests
3. Children
4. Mother
5. Others _____

25 a .Do you have another child of the opposite sex? 1. Yes 2. No.

26a. Did you feed them in the same way as this child? 1. Yes 2. No

26 b. If no, why? _____

27. What is your opinion on the feeding of female and male children?

1. Should be fed the same

2. Girls should be better fed

3. Boys should be better fed

4. Other specify _____

Dietary intake: 24 hour recall

28. Please inform me about the meals you prepared and amount given to (name of child) from the time he/she woke up this morning?

Meal	Name of dish	Ingredients	Amount	Total amount of dish in pot	Amount served to the child	Amount left over by child	Amount consumed by child
Breakfast							
Snack							
Lunch							
Snack							
Supper							
Other							

E. Health Practices

29. Does the child have a clinic card? 1. Yes 2. No

30. Do you take your child for growth monitoring monthly? 1. Yes 2. No.

31. If No why? 1. Distance to clinic 2. Lack of finances 3. Not important 4. Other specify _____

32. What immunizations has the child received?

Immunization	Number of Vaccinations received	Completed vaccination 1. Yes 2. No	Verification source 1. Clinic card 2. Mother
BCG			
DPT			
OPV			
Measles			
VitA Supplementation			

33. During the past 7 days did your child suffer any illness? 1. Yes 2. No.

34. If Yes what was the illness?

- | | |
|--------------|------------------------|
| 1. Diarrhoea | 4. Cough, cold |
| 2. Malaria | 5. Vomiting |
| 3. Fever | 6. Other specify _____ |

35a.. What did you do when the child got sick?

1. Traditional herbs 2. Took to Hospital 3. Gave drugs 4. Other specify _____

35 b. Do you do the same to children of the opposite sex when they are sick?

1. Yes 2. No

35 c. If no why? _____

F. Gender dimensions in child care

36. What are the responsibilities of the father in childcare?

1. Provide money for food/ treatment
2. Makes decision on what child eats / health care
3. Produces the food
4. Preparation of meals
5. Involved in feeding the child and in accessing health care during illness
6. Not involved
7. Other specify _____

37. What are the mother's responsibilities in childcare?

1. Provide money for food/ treatment
2. Makes decision on what child eats / health care
3. Produces the food
4. Preparation of meals
5. Involved in feeding the child and in accessing health care during illness
6. Not involved
7. Other specify _____

38. Who is responsible for feeding the child?

1. Mother 2. Father 3. Siblings 4. Grandmother 5. Other

39. Who cares for the child during illness?

1. Mother 2. Father 3. Siblings 4. Others specify _____

37. Who prepares meals for the child? 1. Mother 2. Father 3. Siblings 4. House help 5. Others specify _____

40. How are decisions made on what the child eats and on action to take when sick?

- | | |
|-------------------------|---------------------------|
| 1. Parents discuss | 4. Other relatives decide |
| 2. Father Decides alone | 5. Other specify _____ |
| 3. Mother decides alone | |

41. Who is the final decision maker on this issue?

- | | |
|-----------|-----------------|
| 1. Father | 3. Relatives |
| 2. Mother | 4. Others _____ |

42. What constraints do fathers encounter in childcare?

- | | |
|----------------------|---------------------|
| 1. Financial | 4. lack of interest |
| 2. Lack Knowledge | 5. Busy |
| 3. Culture prohibits | 6. Other _____ |

43. What constraints do mothers encounter in childcare?

- | | |
|---------------------|---------------------------------------|
| 1. Lack resources | 4. Heavy workload |
| 2. Lack knowledge | 5. No support from husband and others |
| 3. Cultural beliefs | 6. Poor health |
| | 7. Other Specify _____ |

G. Human Rights and Nutrition

44. Do you always have enough food to feed the child? 1. Yes 2. No

45. What do you understand by human rights? _____

46. What do you understand by adequate food for the child?

- | | |
|----------------------------|----------------------------|
| 1. Do not understand | 4. Adequate quantity |
| 2. Physical access to food | 5. Safe from contamination |
| 3. Adequate quality | 6. Cultural acceptability |
| 7. Other (Specify) _____ | |

47. Do you consider it a right for the child to have adequate food? 1. Yes 2. No.

48. What do you understand by the right to adequate food for the child?

49. What are the responsibilities of these people in ensuring the right of the child to adequate food?

Mother	Father	Community	Government

50. What do you recommend should be done when these people fail in meeting their responsibilities in ensuring the child has adequate food?

Mother's _____

Fathers _____

Community _____

Government _____

51a. How would you tell that a child has refused his/her right to be given adequate food? _____

51 b. What would you do in such a case? _____

52. What do you think the father can do to ensure the right of the child to breastfeeding? _____

53. How can the right to breastfeeding by the child be facilitated at the community level? _____

H. Anthropometry

54. Measurements of the child.

Measurement	1 st Reading	2 nd Reading	Average
Weight (kg)			
Height /Length (cm)			
MUAC (cm)			

Appendix II

Focus Group Discussion Guide

What do you categorize as childcare activities?

Who should be involved in childcare?

What are the duties of women, men and other household members in childcare?

Do you think all the responsibilities are well undertaken by the concerned?

How could the concerned groups be assisted to better perform their childcare functions?

Who would best assist them?

Which group of caretakers are not well involved in childcare?

How would this be improved?

Do you think men should be more involved in childcare?

What value would it add if fathers were more involved in childcare?

Appendix III: Field assistants training curriculum

Day	Topic	Learning activity	Method of teaching/learning
1	Climate setting	Introduction to the purpose and objectives of the research, expectations.	Lecture and group discussion
	Data collection techniques	Review of data collection methods specifically personal interviewing and anthropometry	Lecture and group discussion
	Research instruments	Familiarization to the questionnaire, anthropometry and dietary intake measurement equipment.	Group discussion
	Data collection procedures	Use of the instruments (questionnaire, Child welfare card) and measurement procedures for height, weight and dietary intake.	Experimentation and demonstration
2	Interview techniques	Interviewing procedure and techniques e.g. probing, paraphrasing, focussing etc	Demonstration and experimentation
	Ethical considerations	Consent and confidentiality	Lecture, group discussion, question and answer
	Data quality assurance	Pretesting, standardization of equipment, working modalities, storage etc	Demonstration, and group discussion

Appendix IV:

Data analysis matrix

Objective	Variables	Data Format	Analytic tools/statistics	Computer software
To determine the socio economic and demographic characteristics of the households.	<ul style="list-style-type: none"> Population distribution by sex, age Household size Education level Occupation of household members Water source Human waste disposal mode 	Quantitative (discrete) Quantitative (discrete) Qualitative (categorical) Qualitative (categorical) Qualitative (nominal) Qualitative (nominal)	Descriptives, cross tabulations, chi square	SPSS
To assess and compare the breastfeeding and complementary feeding practices as well as the nutrient adequacy of diets given to male and female children aged 6 – 59 months in Narok.	<ul style="list-style-type: none"> Duration of exclusive breastfeeding Duration of total breastfeeding Reasons for introducing Age of introducing complementary food Foods introduced to child 	Quantitative (continuous) Quantitative (continuous) Qualitative (nominal) Quantitative (discrete) Qualitative (nominal) Quantitative	Descriptives (means, frequencies, percentages etc), cross tabulation chi square, t test	SPSS

	<ul style="list-style-type: none"> • Amount of Calories, protein, Iron and Vitamin A consumed by child • Opinion on Feeding practices of boys compared to girls • Alternative child caretaker • Intrahousehold food distribution 	(continuous) Qualitative (categorical) Qualitative (nominal) Qualitative (nominal)		
To determine the growth monitoring attendance, immunization status and the action taken during illness of male and female children aged 6 – 59 months in Narok	<ul style="list-style-type: none"> • Growth monitoring attendance • Reasons for non attendance • Immunization status • Morbidity status • Action taken when child is ill • Treatment of child of the opposite sex when ill 	Qualitative (categorical) Qualitative (nominal) Qualitative (categorical) Qualitative (categorical & nominal) Qualitative (nominal) Qualitative (categorical)	Descriptives, cross tabulation, chi square	SPSS
To assess and compare the nutritional status of female and male children	<ul style="list-style-type: none"> • Sex of child • Age in months of child • Weight • Height 	Qualitative (categorical) Quantitative (discrete) Quantitative (continuous)	Z scores (WAZ, WHZ, HAZ) Cross tabulation,	EPINUT of EPI INFO and SPSS

aged 6 – 59 months in Narok.	<ul style="list-style-type: none"> • MUAC 	Quantitative (continuous)	descriptives, correlation, chi square	
To determine the roles played by mothers and fathers in child care of children and to establish whether they influence nutritional status of children aged 6 – 59 months in Narok.	<ul style="list-style-type: none"> • Mothers and fathers roles (productive, reproductive and decision making) • Decision making process • Constraints encountered in childcare • Fathers role in ensuring adequate breastfeeding 	Qualitative (ordinal) Qualitative (categorical) Qualitative (categorical) Qualitative (categorical)	Descriptives, correlations, cross tabulations, chi square	SPSS
To assess the households awareness of adequate food as a human right for the children between 6 – 59 months	<ul style="list-style-type: none"> • Awareness of human rights • Understanding of the right to adequate food • Obligations of duty bearers • Remedial actions in cases of violations • Indicators of refusal to claim rights • Corrective actions 	Qualitative (categorical) Qualitative (ordinal) Qualitative (categorical) Qualitative (categorical) Qualitative (categorical)	Descriptives, chi-square, cross tabulations, correlations	SPSS