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Participation and the focus of nutrition education in a rural child growth monitoring program in Kenya

Elizabeth N. Kuria
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**PARTICIPATION AND THE FOCUS OF NUTRITION EDUCATION IN A
RURAL CHILD GROWTH MONITORING PROGRAM IN KENYA**

By

Elizabeth N. Kuria

M. Ed. (Kenya)

A Thesis Submitted in Fulfilment of the Requirements for the Award of

Doctor of Philosophy

**At the Faculty of Community Services, Education and Social Sciences
Edith Cowan University, Mount Lawley Campus**

December 1999

USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.

ABSTRACT

Nutrition education is one of the strategies that addresses high levels of malnutrition in the world. Since independence in 1963, Kenya has instituted socio-economic, food security, nutrition and health policies to improve the nutrition and quality of life of its people. In spite of these policies, one third of the Kenyan population is undernourished. This study was planned to establish how nutrition education is conducted in the Ministry of Health Thika District through a rural child growth monitoring program and to generate and reflect on women's participation in decision making in the program.

Open-ended interviews were conducted with 21 women from the program, 4 community health workers and 16 nutrition staff from Thika District. Focus groups, in-depth interviews and eight observations of the child growth monitoring sessions over nine months of fieldwork, provide data for this study. Participants were engaged actively in the entire research process. A participatory process was introduced by asking participants to contribute to the research agenda and make suggestions on what they wanted the program to address and how to do so. The process was developed through continuous dialogue and decision making. Reliability of data was ensured by conducting the research in the natural environment of the program and for an extended period of time. Triangulation of data and data collection methods and providing feedback to participants as a way to crosscheck the findings, validated data. Descriptive statistics analysed the data from the open-ended interviews whereas qualitative data were coded and analysed according to emerging themes and issues and synthesised to address the research questions. Results are presented by use of narrative to exemplify the concepts.

The findings of this study show that nutrition education is important but what makes it work are the economic and food security concerns of the people. Findings reveal that although government nutrition staff and participants of the program identify a wide spectrum of causes and solutions to nutrition problems, implementation of nutrition education narrowly focuses on provision of nutrition information. This narrow focus is emphasised by government nutrition staff who focus more on curative than preventive nutrition. Nutrition staff have minimal training in primary health care and none in participatory approaches although they are expected to promote community participation. On the other hand, volunteer community health workers once trained, are left to plan and implement the program with minimal supervision, motivation or visible recognition. Findings show that there are no written nutrition education plans and that once nutrition programs are set in place, the programs are left to go on without reflection on their achievements. This study revealed that grassroot personnel have not accessed government policies on nutrition and community participation that they are supposed to implement and that there are limited resources set aside for nutrition within the Ministry of Health.

Participation was promoted in the growth monitoring program by planning the research together with and progressing according to the expressed needs of participants. Women's participation in the program identified the realities of food accessibility and lack of money that influence nutrition. Empowerment was evidenced by diversifying the program to include an income activity and development of a curriculum based on the knowledge women wanted. Selection of a separate committee for the income activity,

evidence of interdependent decision making and criticism of dependency are some of the outcomes of participation. Findings show that participation demands commitment and time from all actors. Participants are willing to make that commitment when they perceive individual benefits for them as a result of their participation. This research reveals that motivation and supervision are considered important for the community health workers. These findings show that there is potential for a nutrition program to respond to the realities of people such as appropriate nutrition knowledge, food accessibility and incomes by negotiating program priorities between the participants and nutrition facilitators through participation.

A model of participation that I recommend in this study is one that has clear reasons for participation and incorporates an outsider's perspective to catalyse the process. This enables local participants to see possibilities which they have not seen due to familiarity with their circumstances. Participation strategy should be able to link with research in order to contribute to publicity and advocacy. Linkage with policy ensures that the process may be addressed practically by current government policies. Participants should engage in a continuous process of assessing the program goals, design, action and analysis.



This research recommends nutrition education strategies that explore training in participatory approaches for facilitators. Training should extend to work with community health workers in the community to design and clarify monitoring and evaluation at the community level. Participants in the program should have a voice to decide how the

program functions. For effectiveness, an analysis of the resources required to implement participatory approaches is essential.

Research that focuses on non-participating mothers, that analyses measures and cost-effectiveness of participation and studies that compare the process in different contexts in order to make positive decisions that can influence policy are recommended.

The ultimate outcome of this research is that although government policies that promote nutrition and participation in health are in existence in Kenya, grassroot nutrition staff do not access these policies. Promotion of nutrition is worsened by the weak link between the growth monitoring program, the health sector and collaborating non-governmental organisations at the grassroot level on the one hand and between nutrition staff at different government levels. This research recommends that what is required to address the broad nature of nutrition problems are not only policies on nutrition and participation but ensuring the practice of these policies that will bring about a more realistic manner of solving complex nutrition problems. This thesis explains how policy on food security and nutrition at the government level is useless unless those at all relevant levels especially grassroot government personnel and the community are actively engaged in planning and implementing such policies.

DECLARATION

I certify that this thesis does not, to the best of my knowledge and belief:

- (i) incorporate without acknowledgment any material previously submitted for a degree or diploma in any institution of higher education;
- (ii) contain any material previously published or written by another person except where due reference is made in the text; or
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Elizabeth N. Kuria
Perth, Western Australia

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LIST OF ACRONYMS

CGMP	Child growth monitoring programme
CHANIS	Child Health and Nutrition Information System
CHW	Community health workers
NFW	Nutrition field workers
PHC	Primary Health Care
SACDEP	Sustainable Agricultural Community Development Programme
UNICEF	United Nations Children's Fund
WHO	World Health Organisation

DEFINITIONS USED IN THIS STUDY

Community

A community is defined as a social entity of people who feel that they belong together. It is any group of persons sharing a common set of practices. In this study, the community referred specifically to participants who attended Ngoliba child growth monitoring program between June 1998 and February 1999.

Empowerment

A process by which individuals and groups become able to have a right in their program, make decisions, take control of their circumstances and achieve their own goals.

Involvement

This is when people take part in only some aspects of a program or activity as decided for them from outside and they have limited decision making powers in the program.

Participation

Actively engaging participants in this research in making decisions and acting on them in the program and the research.

Participatory research

A process through which women and community health workers in Ngoliba child growth monitoring program facilitated by the researcher and government nutrition workers identified the problems relevant to nutrition promotion through the child growth monitoring program, collected and analysed information, and acted in order to find solutions and promote social change for the women themselves in regard to nutrition. This was a systematic inquiry with the mothers of children aged five years and below who attended the program during the research period.

CHAPTER ONE

INTRODUCTION

Nutrition problems are experienced in different intensities and degrees in a community. Malnutrition is detrimental to the population because it diminishes physical and mental capabilities, reduces work output, makes people less able to learn and causes complications for girls later in life during child bearing (Winarno, 1994, p. 129; Grange, 1994, p. 662). Child mortality rate is high. It was noted that of about 125 million children born each year, 18 million, about 14.5% will not see their fifth birthday and 97% of these are from what is called the 'third world' or the 'South' (George, 1985).

According to George (1985, p. 24), "the number of people who die as a direct result of malnutrition is equivalent to dropping a Hiroshima bomb every three days". Approximately 700 million people in the world are undernourished (Oliveria, 1994). Acute and chronic protein-energy malnutrition affects over 192 million children under five years of age (Winarno, 1994, p. 129). Iodine deficiency affects about 1.5 billion people (Oliveria, 1994). Vitamin A deficiency affects 40 million people and about 350,000 people become blind annually from this deficiency (Scrimshaw, 1994, p. 119; Winarno, 1994, p. 129). About 190 million preschool children in the world live in areas at risk of vitamin A deficiency (Ramalingaswami, 1994). It is estimated that one million preschool children worldwide develop severe ophthalmic disease annually and of these 25% go totally blind and about 50-60% remain partially blind throughout life due to vitamin A deficiency (Grange, 1994, p. 664). Iron deficiency anaemia is the commonest nutrition disorder in the world affecting between 700-800 million persons (Scrimshaw, 1994, p. 118). The degree of nutrition problems varies in different regions.

Nutrition problems are part of the total social complex involving socio-political and economic structure, technological development, education, religious and traditional beliefs, population density and growth and ecological factors of a people (Raw, 1980, p. 81). Nutrition problems have their roots deeply in the cultural, social and physical environment of people (Puska, 1989, p. 5). These separate facets of nutrition problems are, unfortunately, not easy to isolate. Hunger is a leading contributor to poor nutrition worldwide. Although rural people produce most of the food, they do not control it. George (1985, p.6) states that "it is paradoxical that those who produce food, or who *could* be producing food, are the first to suffer from the lack of it".

Nutrition situation in Africa

Nutrition problems are not well documented on the African continent. The limited data available indicate that rates of malnutrition have increased since the 1980's. "In 1985, 30 million Africans were hungry because of the drought. In a normal year, 100 million Africans are malnourished and severely hungry" (Timberlake, 1985, p.15). Under-nutrition is the main nutrition problem facing the majority of the population with diseases related to over nutrition becoming a common feature among the few affluent in the continent. About 25% of the estimated 628.5 million people in Africa are undernourished (United Nations Children's Fund, 1990). An estimated one third of the children below 5 years suffer from chronic malnutrition in the region (Tagwireyi & Siandwazi, 1994). The nutrition situation in Africa has been characterized by high rates of maternal and child malnutrition, morbidity and deaths related to poor nutrition (Tagwireyi & Siandwazi, 1994, p. 97). It is estimated that 4 million children die per year in the region with

malnutrition of different types directly causing 40% of child deaths. Protein energy deficiency tends to be high due to the food insecurity situation caused by drought and famine and worsened by political instability in some parts of the continent.

Iodine deficiency disorders affect an estimated 227 million people with about 39 million having goitre (Tagwireyi, & Siandwazi, 1994, p. 97). Vitamin A deficiency affects between 50-103 million people, while the preschool children at risk of vitamin A deficiency is estimated at 18 million (Tagwireyi, & Siandwazi, 1994; and Ramalingaswami, 1994). Vitamin A and iodine deficiency disorders are seen to be of public health concern in 13 and 43 countries in the region respectively. Nutrition anaemia is a public health problem in all sub-Saharan countries affecting between 20-80% of preschool children in different countries (International decade on food and nutrition for Africa, 1991, p. 8). Under nutrition in these countries is a reflection of deterioration in general social, economic and environmental infrastructure (Ziglio, 1997, p. 31).

Causes of nutrition problems in Africa are many, complex and inter-related. These include, high population growth rate, low per capita food production, rapid environmental degradation, poverty, low education levels, health related causes and a general inadequate political will to deal with the problems of poor nutrition (Foster, 1992).

Nutrition situation in Kenya

Data on the nutrition status of the Kenyan population, though unique to the country, displays a scenario similar to that of the rest Africa. Kenya with an estimated 28.6 million people is situated on the east coast of Africa (Central Bureau of Statistics, 1997). The main source of data on nutrition in the country is the cross sectional surveys conducted periodically by the Central Bureau of Statistics. Since independence in 1963, there have been five nutrition surveys. These were conducted in 1977, 1978/79, 1982, 1987 and in 1994 (Republic of Kenya, 1996, p. 236). Data on nutrition status in localised areas is obtained from hospital-based studies, government ministries, universities and regional and international organisations in the country.

According to the Fifth Nutrition Survey of 1994 carried out in Kenya among children aged 6-60 months, about 34% of these children were moderately and severely stunted (Republic of Kenya, 1996, p. 8). The same survey found that 8% of the children were moderately and severely wasted and 22.6% were underweight for their age. Information on micronutrient deficiencies indicates that deficiencies of vitamin A, vitamin D, iodine and nutritional anaemia are of public health concern throughout the country. Malnutrition has been stated to accompany most of the child deaths as it is reported in the national surveys.

The trend of nutrition status in Thika District, where the current study was conducted, as reflected in three previous national surveys is indicated in Table 1.1.

Table 1.1 Trend of nutrition status of children 6-60 months in Kiambu District compared to the national status

Location	% stunted ¹ <-2SD HA Median			% wasted ² <-2SD WH Median		
	1982	1987	1994	1982	1987	1994
National	37.1	32.1	33.6	4.5	4.0	7.8
Kiambu	31.0	17.9	32.1	1.9	1.1	5.6

Source: Republic of Kenya, 1996. *Fifth Nutrition Survey* 1994 p.11.

Note: The three villages of Duk, Iriguini and Thogoto that participated in this study, were in Kiambu District during the survey before they were carved off to belong to Thika District.

-2SD HA refers to minus 2 standard deviations from the median of the reference population for height-for-age index.

-2SD WH refers to minus 2 standard deviations from the median of the reference population for weight-for-height index.

Above data indicate that malnutrition is high in this area. Nutrition surveys done in Kenya have consistently confirmed that the major type of malnutrition in the country is protein energy malnutrition which is mainly as a result of poor food intake followed by diseases that cause malabsorption of food such as diarrhoea (Ochoro & Omoro, 1989, Republic of Kenya, 1996). The nutrition related mortality and morbidity patterns in Thika district are shown in Table 1.2.

The magnitude of nutrition related health problems in the district necessitates nutrition promotion that can influence food and lifestyle behaviour towards better nutrition.

Several environmental issues may play a role in nutrition status of this community.

¹ Stunting is defined as height for age below 90% of the United States National Centre for Health Statistics (NHCS) standards and is considered as an indication of chronic malnutrition.

² Wasting is defined as weight for height below 90% of the United States National Centre for Health Statistics (NHCS) standards and is considered as an indication of onset of recent malnutrition. It is generally related to seasonal changes as a result of inadequate food intake, incorrect feeding practices and ill health.

Table 1.2 Nutrition related morbidity and mortality patterns in Thika District in 1997

Morbidity	Number of persons affected
Diarrhoea	18,297
Worms	18,015
Malnutrition	1,494
Anaemia	1,290
Measles	201
Xerophthalmia	40
Mortality	
Anaemia	140
Malnutrition	41
Hypertension	27

Source: Ministry of Health, Thika District Hospital records, 1998.

Factors affecting nutrition status in Kenya

Poverty, food access and distribution at the household level, breast feeding and weaning practices, child care and nurturing activities and incidence of disease influence child nutrition in the country (Government of Kenya & United Nations Children's Fund, 1992, p. 79; Office of the Vice President and Ministry of Planning and National Development, 1994, p. 50). The Kenyan population has tripled since independence in 1963 from 9 million to an estimated 28.3 million in 1996 (Central Bureau of Statistics, 1996_a). The estimated infant mortality rate is 65 per 100,000 children born, while the under five mortality rate is 90 and about 4% of the babies are born with low birth weight (Central Bureau of Statistics, 1996_b). The population growth rate is over 3% per year and food production in the country has declined in the recent past. These statistics give a very gloomy picture of the nutrition situation in the country. This is a big challenge for all those concerned with promoting nutrition of the population.

The 1992 Situation Analysis of women and children in Kenya notes that, "the single greatest cause of malnutrition in Kenya is ignorance" (Government of Kenya & United Nations Children's Fund, 1992, p. 79). As to whether nutrition knowledge alone or both the knowledge and the strategies of implementing such education foster good nutrition is not stated and this will be the focus of this study. The feeding habits of the Kenya population are changing at a fast rate both in the urban and rural setting. This is partly due to the liberalisation of the global economy which has affected not only food prices but also prices of agricultural inputs which the majority of the Kenyans depend upon for food production. Lack of food, consumption of foods that are nutritionally inadequate, inadequate time and skills to prepare nutritious food, state of health and changes in lifestyle may lead to poor nutrition.

About 46% of the Kenyan population live below the absolute poverty line with an annual income of below Kenya shillings 22,500 equivalent to 300 US dollars according to the participatory poverty assessment of 1996 (Government of Kenya, 1996). It has been observed that in developing nations such as Kenya, poverty and a general lack of resources will continue for a long time (Agarwal, 1996, p. 15). This necessitates a search for low cost measures to combat problems such as malnutrition which affect both a large number of people especially young children and adversely affect productivity of its people. Participation of the community in initiatives such as nutrition education is not only necessary but a prerequisite that may lead to improved well-being of the population.

Context of nutrition situation in Kenya

In order to comprehend the nutrition situation in Kenya, an understanding of the historical development of the country is necessary. Kenya became independent in 1963. The colonial government fostered a dependency mentality and foreign influences affected many areas of life including what was erroneously termed "good" food or eating habits. Dependent persons tend not to deal effectively with their problems as they are likely to wait for solutions to come in from the outside. This mentality seems to have remained in some sections of the community even now, almost four decades after independence.

The subsistence economy in Kenya is rapidly being replaced by an ever-growing cash economy. Whereas previously, most food consumed in the households were from food produced on family farms, increasingly households are depending on food purchased from the market. Furthermore, people have little control over the food available on the market nor the food prices. This has resulted in shifts in the food consumption patterns. The money economy results in people selling the food produced to get incomes for their various needs including purchasing more expensive foods which may be less nutritious than their own home grown food that may be sold.

Other complications that worsen nutrition status are due to malabsorption of nutrients, and incidence of typhoid, cholera and worm infestations due to poor hygiene, sanitation and lack of or unsafe water sources (Government of Kenya & United Nations Children's Fund, 1992). The introduction of structural adjustment programs have had a negative

impact on the overall well being of the poor; this includes their nutrition status according to the Kenya Human Resources Report (Mukui, Abagi & Gondi, 1997, p. 46).

In order to address complex nutrition problems, nutrition programs have been put in place by the Kenya government and non-governmental organisations in the country. The government has initiated programs in different ministries. These include school feeding programs, food security, famine relief and nutrition education in the formal education system and at the community level. Although inter-sectoral collaboration is advocated to address food security and nutrition concerns, different ministries undertake their own nutrition programs.

In the Ministry of Health, child survival is the main focus of nutrition promotion. This is promoted in line with the primary health care³ concept to ensure 'Health for All by the year 2000'. This focuses on child immunisation, maternal and child health at health facility level and child growth monitoring at the health facility and community levels. The aim of the primary health care concept is participation of communities in the identification, designing and implementation of their own health care concerns at the community level.

The focus on the Ministry of Health for nutrition promotion is important because it is the one sector that has access to the vulnerable groups. These are the young children and

³ Primary health care refers to the World Health Organisation (1978) definition of: Essential health care made universally accessible to individuals and families in the community by means acceptable to them through their full participation and at a cost that the community and the country can afford".

their mothers. Children are brought to the health facilities regularly for immunisations and to monitor their growth and also when they are sick. At the community level, the Ministry of Health has concentrated on the child growth monitoring program as a child survival strategy to improve child nutrition. This is through promotion of health and nutrition education to mothers with children aged below five years and weighing of these children once a month to monitor their growth.

Although child growth monitoring promotion was initiated globally as a low cost, low technology means of dealing with preschool malnutrition, the implementation process had minimal focus at inception (Kennedy, 1991, p. 27). There is, therefore, a need to focus on both the process in addition to outcomes in nutrition education through the program. It can be argued that the way nutrition education is implemented does not foster nutrition well-being.

Participatory approaches

The issues of nutrition improvement at the community and household level have been recent topics for discussion in different forums. Most nutrition education programs at the community level tend to measure outcomes in terms of knowledge and behavior and sometimes attitudes (Gillespie & Yarbrough, 1984). Participatory education methods have been promoted recently as empowering communities for decision making that improves their quality of life by focusing on problems identified by the people themselves (Wallerstein, 1992; Young, 1992). However, there is an absence of

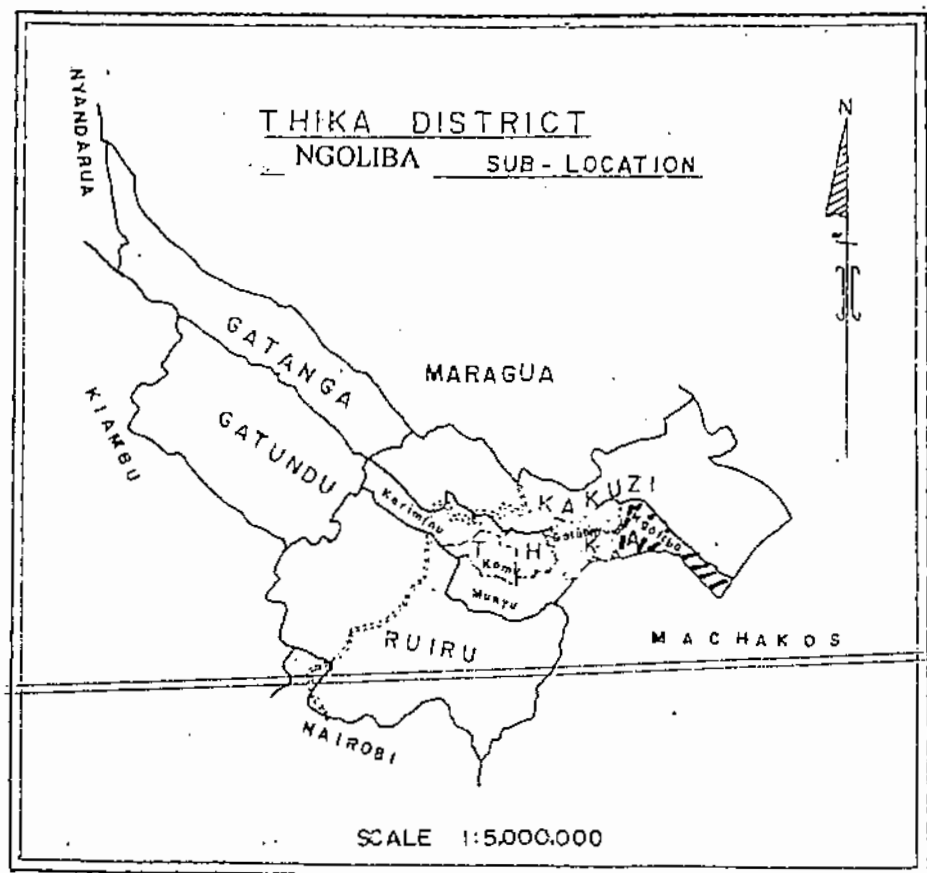
comprehensive examination of the processes of nutrition education at the community level and on the participants. Such analysis is likely to lead to facilitating more effective strategy formulation and improvement on the ability to predict nutrition program outcomes. In order to understand the mediating factors in this program, analysis of the facilitators, their roles and commitment to work and the women's participation, their perceptions, and reasons for participating in a program are important.

Often research is planned and implemented by professionals to facilitate centralised decision making (Rody, 1988, p.137). Such research fails to have people make decisions that are relevant for their situations. The participatory research process adopted in this study was meant to enable women to participate in making their own analysis and decisions regarding their child growth monitoring program and specifically nutrition education. Participation of women in decision making in the entire research process was likely to lead to meaningful change by and for them.

Area of study

The study reported in this thesis was carried out in Ngoliba sub-location, Thika District, in Kenya. The district borders Nairobi province, Kiambu, Murang'a and Machakos districts. The district was carved out of Kiambu and Murang'a districts in August 1994. Thika District covers an area of 2,024 square kilometres and Thika Municipal division covers an area of 272 square kilometres (Office of the Vice-President and Ministry of Planning and National Development, 1997). The map of Thika District is shown in Table 1.3.

Table 1.3 Map of Thika District indicating Ngoliba sub-location where this research was conducted.



Refers to Ngoliba sub-location where the study was undertaken.

The three villages have a well-established communication road network with the all weather road of Thika Garissa highway. The villages on the eastern part of the district border Machakos District. These villages are semi-arid and receive not only low but also unreliable rainfall. The area therefore favours production of drought resistant crops. There are two rainy seasons in a year. During the data collection period, there were long rains in May 1998 and the short rains in November 1998. The short rains were less than in normal years and caused the crops grown during the short rains to dry up. The temperatures in Thika are cool to warm averaging about 30°C but varies during the year (Office of the Vice-President and Ministry of Planning and National Development, 1997). During the fieldwork, the coldest month was in June 1998 and the hottest was February 1999. In 1998, the population profile of Thika district was estimated at 636,667 with the age group one to four years estimated at 100,707 (Office of the Vice-President and Ministry of Planning and National Development, 1997). The population is mainly young with a dependency ratio of about 100:104. In comparison to the other parts of the district, the three villages are sparsely populated.

Location and economic activities of the study villages

The villages of Duk, Iriguini and Thogoto are situated between two major perennial rivers of Thika and Athi. The rivers are polluted with agricultural pollutants such as pesticides, fertilizers and coffee wastes from the upper zones of Thika and Kiambu districts and the industrial wastes from the factories in Thika and Ruiru towns (Office of the Vice-President and Ministry of Planning and National Development, 1997). These rivers are the major sources of water for the households in the area. Only one homestead among the women who participated in the open-ended interviews had roof harvested

water. The water from the river sources is adequate, however, its safety is questionable. The cost of getting water is very high in terms of time spent on fetching water.

Firewood is the main source of cooking fuel with charcoal used by fewer households. The nearby bushes and forests next to the rivers provide this firewood or trees used to produce charcoal. The firewood has to be cut and carried to the homes by household members. Although the fuel is available, time is spent to cut and carry it to the households which makes it expensive.

As in other parts of Kenya, agriculture is the major activity in the three study villages. The main food crops grown by a majority of the households are maize, a variety of legumes like beans, green grams, cowpeas, pigeon peas, and potatoes. Fruits produced in the area include bananas, mangoes, pawpaws, lemons and oranges and vegetables such as tomatoes, kales, traditional vegetables and pumpkins. Most of these foods are grown for household consumption, however, french beans, kales and tomatoes are also grown by a few persons and groups for sale. Some of the food crops grown are sold to earn incomes for the families. Goats and poultry are kept in the area but these are few, mainly due to the unreliable rains in the area.

Maize and maize products and legumes form the major staple foods eaten in this area. These are consumed with other accompaniments made from vegetable sauces. Fish from the two rivers are also consumed in the area. Fruits are normally eaten as snacks. There are no cash crops in the three villages. A flower and a coffee estate in the neighbourhood

provide casual employment for some of the community members although not on a consistent basis. Quarries owned by individuals, where natural stones used for construction are produced, offer employment for some community members.

Historical background of the child growth monitoring program

Child growth monitoring is an international initiative advocated by United Nation's Children's Fund (UNICEF) and supported by other development agencies (Nabarro & Chinnock, 1988, p. 941). It started in the 1960's but became regular in the 1970's in most developing countries where it has been promoted as part of primary health care. The purpose of the program is to promote satisfactory nutrition of children. In Kenya, the program developed initially in the maternal and child health clinics and has grown to encompass some communities in the country. Although the program has been in operation in the country since the 1970's, there is no comprehensive data available on how it functions and its achievements.

Ideally, it would have been useful to compare the program before and during this study. Unfortunately, there was not much documentary evidence in Ngoliba to do so. Apart from the records kept on children's attendance, there were no written records on the history of the program. The history, therefore, recorded here is based on the memories of the community health workers and the women.

In order to reduce malnutrition in this area, the community started a child growth monitoring program in 1994 with support from a non-governmental organisation, Plan

International in Kenya. The child growth monitoring program was meant to help mothers with underweight babies improve feeding their children. Before this study was undertaken, there was no documented information on the program or how the women participated in solving their nutrition related problems through the program. Two of the community health workers joined the program in 1994 and the other two in 1997. An international non-governmental organisation, Plan International Kenya (throughout the research, the participants referred to this organisation as Plan) trained selected community health workers for one week. After this training, community health workers started to implement the program based on their training.

One day in a child growth monitoring session

A normal day in the child growth monitoring program starts with community health workers arriving with the weighing scales, bags and books. They open the room where the weighing and education is to take place and arrange it. The women and children come in and the sessions start by consensus of all present. This is when a majority of those present think the attendance is adequate to start the sessions. Other women and their children come in as the session progresses. Table 1.4 provides the normal procedure followed during these sessions.

Table 1. 4 Procedure of a day in a child growth monitoring program

Activity
Arrival
Organise the venue
Prayer
Education session
Weighing and counselling
Community concerns
Set date and time for next session
Prayer

Note: There are no set time limits for each activity

Each session starts with prayer, normally led by one community health worker or any other willing person. This was because a majority of the women were Christians as shown in Table 5.1. At the beginning of the session there is a brief talk on what the session is to cover and then a talk or discussion on a selected topic. Questions and answers are normal during this session from both the women and the community health workers. After the talk, children are weighed.

Weighing of the children and counselling occurs simultaneously. One community health worker weighs the children, another one records in the card while a third one records in their community notebook. Counselling is normally provided for those mothers whose children are underweight on an individual basis but not in privacy. Normally all mothers wait until all the children are weighed. Discussions on issues within the community are generally entertained at this point. For example they talked about the coming events in their villages. These included issues of the school and the chief's meetings. It was also at this point in the growth monitoring sessions that issues related to this research were

discussed. Agreement is normally reached by consensus on the date of the next session. The session formally ends with prayer and then mothers leave. The community health workers close the community hall and leave. These sessions normally take from about one and half to two hours. Towards the end of the research, these sessions took between three to four hours.

Problem statement

Comprehensive analysis of how the child growth monitoring program functions and the effect it has on the participants is lacking. The nutrition staff within the Ministry of Health are responsible for overseeing how nutrition is promoted through the child growth monitoring and in the government health facilities. How they carry out their duties has not been assessed. At the community level, the community health workers are selected through the chief's *baraza*⁴ to undertake all primary health care activities in their villages. They are the ones responsible for organising and implementing child growth monitoring. What the community health workers do, the resources they use and the challenges they face in their work is not clearly known.

Primary health care is promoted as a way to enhance community participation in health. Most of the participatory initiatives focus on everybody in the community. However, the degree of participation in an already existing child growth monitoring program has not been looked into. The nutrition staff of various government ministries and non-

⁴ *Baraza* refers to a public meeting organised by the local chief or assistant chief in the location for members of the community to discuss and make decisions on matters pertaining to their community.

governmental organizations (NGOs) are responsible for reaching the rural people with new technologies, innovations and interventions pertaining to nutrition. Their commitment and perceptions towards work and their knowledge, attitudes and practices are likely to contribute significantly in the adoption of messages by the rural people.

At the community level, the community health workers who are village volunteers, are selected by the community to carry out all tasks pertaining to primary health care where nutrition education is a major component. There is information on what community health workers are supposed to do. Nevertheless, what these community health workers perceive to be doing, how they perform their duties, the resources they use and effectiveness of their work is not stated. Of importance is that the perceptions of women participants about the program has received no attention. The issue is, to what extent do women make decisions on what takes place in the child growth monitoring program?

Purpose

The aim of this study was to provide insight on how nutrition education was implemented in the Ministry of Health through one child growth monitoring program from the perspective of the women, community health workers and government nutrition field workers. The study was designed to examine nutrition education through the child growth monitoring program to better understand the way in which the program and participation can be enhanced. The key participants in the research were the mothers

who attend the program, the community health workers and the nutrition staff from the Ministry of Health.

Throughout the study, decision making strategies and problem solving skills were encouraged by the researcher. The focus was for the participants to create practical knowledge about participation in the program that is appropriate for them. The aim was to use the information generated to initiate change.

Research objectives

The specific objectives of the study were to:

1. Describe the roles, responsibilities and activities of nutrition staff, community health workers and women participants in a rural child growth monitoring program.
2. Identify the training nutrition staff and community health workers have received to prepare them to undertake their duties.
3. Identify the perceptions of nutrition staff, mothers and community health workers about solving nutrition problems through the program.
4. Explain how nutrition education through the child growth monitoring program is conducted.
5. Determine the nutrition messages promoted in a rural child growth monitoring program.
6. Establish the communication strategies employed in the program.

7. Establish the collaboration that exists at the community level on nutrition education.
8. Describe the process and the results of strengthening participation in the growth monitoring program.

Research questions

The guiding research questions investigated were:

1. How is nutrition education undertaken by the Ministry of Health, through a rural child growth monitoring program?
2. What is achieved by strengthening participation of women in making decisions on what goes on in program?
3. What would be required to promote participatory strategies in the program?

Scope

This study was carried out in a rural child growth monitoring program. The key participants for the study were government nutrition staff in Thika District, community health workers and women participants of the program. The women attend the program on a voluntary basis. These women are persons who are likely to seek information to improve their nutrition knowledge even from other sources. This study, therefore, addresses people with some motivation or interest for improving the nutrition status of their children. The study did not address persons who do not come to the child growth-

monitoring. Findings and interpretations of the study are specific to this group but have implications for similar settings.

Limitations

The child growth monitoring sessions are held once in a month. Eight sessions were observed in this study. These are relatively few to make overall conclusions on all aspects of nutrition education that has been promoted through the program. One observation was made in each of the twenty-one households that participated in the open-ended interviews and over a period of about two hours. This meant the actual feeding and other related practices that may have been taught in the community nutrition education sessions could not be observed.

During the nutrition education sessions, I recorded what was happening according to the selected behaviours. Since I was one person, there may have been some behaviour which went unnoticed. In addition, my presence was not neutral and there was potential for influencing the process under investigation. Selection of the participants relied on information from the nutrition staff working in the area. The participants selected are unique in their own way and the results are interpreted in this light.

Significance

Nutrition education is an important question for health in all countries, but it is of more significance to Kenya given its socio-economic situation. It is expected that nutrition education and monitoring children's weight will lead to better nutrition status of children

aged below five years. According to the primary health care concept of which nutrition is a part, participation of communities in making decisions in their program is an essential ingredient in such a program being utilised by them. Often times, the term participation is used to mean different ideas.

This research study set out to provide understanding of how participation in nutrition education promoted through a child growth monitoring program may empower actors to make decisions in their program. This was by addressing participants' expectations in the program, participating in decision making and implementation strategies. In order to facilitate effective participation, it was necessary to understand the context in which nutrition education is promoted. This necessitated understanding how nutrition education is undertaken in the Ministry of Health at the district level and through a child growth monitoring program.

Results of this research are likely to contribute to understanding how active participation may be brought about in the program and research process. This understanding include how participants identify their needs in the program, make and act on the decisions they make. This includes setting the agenda in the research, planning and conducting the study and implementing decisions in their program based on reflection. Findings may contribute to competencies in nutrition promotion that are sensitive to both the individuals and the community on matters affecting nutrition policy, research and practice.

Consciousness raising that may strengthen commitment to participation of nutrition improvement for nutrition education facilitators and the participants may well be achieved. Observations of the nutrition education process as well as the effects produced by the participatory decision making are likely to facilitate more effective strategy formulation that may improve ability to predict program outcomes. Findings of this study may be of use to communities, government nutrition planners and organisations interested in improving the nutrition status of rural communities given Kenya's economic position. Knowledge generated through the participatory process in this study is likely to be relevant to other situations within this community and may be applicable in similar programs and contexts.

Approach of thesis presentation

In order to address the research questions, a participatory approach was adopted for the study. The participatory process is interactive such that as the study progressed, the results were being realised. This means that the conventional way of having a 'strict' methods and results section as it is the case in some theses is not practical in my case. I have chosen to place the findings of the study in appropriate contexts throughout the thesis. Although there is a methods chapter in this thesis, this is not exhaustive on all aspects of the methods. Relevant aspects of the methods spill over in other sections of the thesis. The participatory process was substantive in this research and is presented as a separate chapter. This is to contribute to clarity of the process adopted for the study. Presentation approach of this thesis is intended to minimise repetition of information.

Summary

Nutrition problems are multi-faceted and are experienced globally in varying intensities and degrees in different communities. Causes of poor nutrition are many, complex and inter-related. In order to address nutritional problems, the Kenya government undertakes several programs. Different government ministries and non-governmental organisations handle these programs. In the Ministry of Health, nutrition promotion at the community level is undertaken through the child growth monitoring program in line with the primary health care concept once in a month. During these sessions, health and nutrition education is promoted and the weight of children aged 6 months to 5 years monitored. Comprehensive analysis on how nutrition education is promoted through the program is, however, lacking. The roles and functions of the community health workers and nutrition staff who oversee the program are also negligible. Information on participation of women in nutrition education through the program in line with the primary health care concept is also minimal.

It can be argued that the promotion of nutrition education does not foster nutrition improvement. Hence, the purpose of this study was to provide insight on how nutrition education is promoted through the child growth monitoring program. The study set out to determine the results of participation of women in making decisions in the program. In order to do so, analysis of the policies that influence nutrition education in Kenya and the concept of participation need to be understood. These, together with the primary health concept that has shaped nutrition education through the child growth monitoring program are discussed in Chapter Two.

CHAPTER TWO

POLICIES AND STRATEGIES RELATED TO NUTRITION IN KENYA

The Kenya Government has, since independence in 1963, instituted various policies and strategies to address food security and improve the quality of life of its people (nutrition well-being implied). These policies address different facets of the socio-economic development in Kenya. It has been observed that the problem of malnutrition is the promotion of government policies that create hunger (George, 1987, p. 13). This chapter tries to ascertain the policies in operation and the awareness and implementation of these policies by grassroot personnel in the Ministry of Health dealing with nutrition and the community in Kenya.

Policies

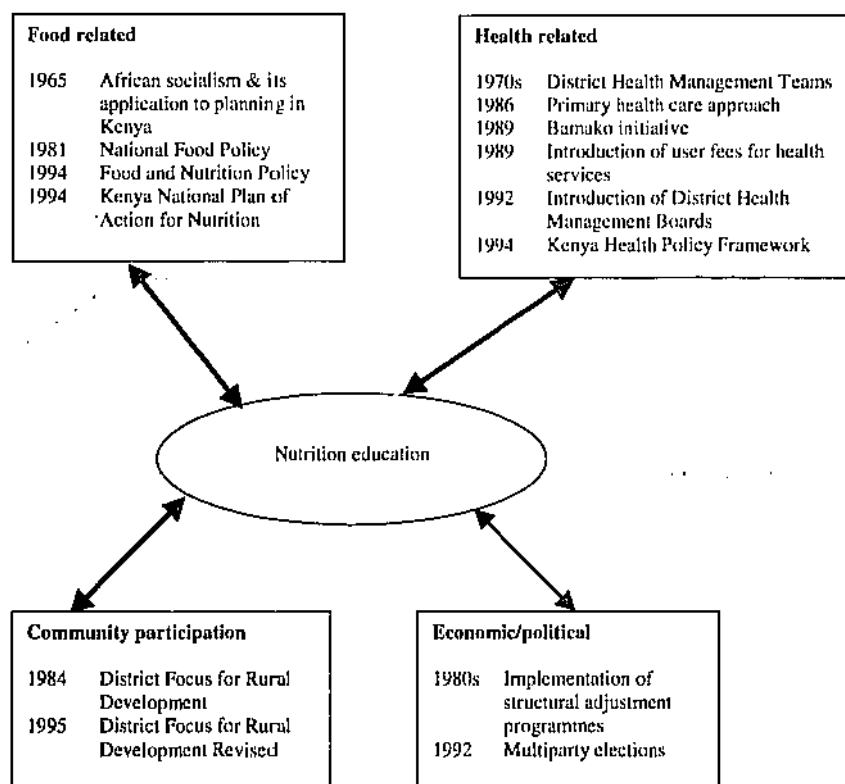
Policies that impact on nutrition in Kenya can be categorised to relate to food security, health, community participation and economic/political situation. The main policies that have influenced nutrition education at the community level are shown in Figure 2.1.

Food related policies

The Sessional Paper Number 10 on African Socialism and its Application to Planning in Kenya focused on the eradication of "hunger, ignorance and disease" (Government of Kenya, 1965, p. 2). Various strategies at this early stage centered on food production. Before 1978, minimal attention was paid by the government to the issues of food security and nutrition. The government first acknowledged that 30% of the Kenyan population was malnourished in the 1978-83 Development Plan (Government of Kenya,

1978). The severe drought in 1979-80 led to the development of the first policy on food security as it is indicated in the Sessional Paper Number 4 of 1981 on National Food Policy (Government of Kenya, 1981). This policy focused on food security and minimal nutrition concerns were stated within it.

Figure 2.1 Policies that have influenced nutrition and community participation in Kenya since 1963



Following the liberalisation of the economy, the 1981 policy was rendered obsolete. Review of this policy resulted in developing the Sessional Paper Number 2 of 1994 on National Food and Nutrition Policy (Government of Kenya, 1994_b). Government's commitment to improve food security and address issues of hunger and poor nutrition by incorporating inter-sectoral strategies in the development agenda are also reflected in the Kenya National Plan of Action for Nutrition of 1994 (Government of Kenya, 1994_c). The development plans from the 1978-83 Plan have also carried elements which address how to solve food security problems in the country.

In spite of these government efforts, the food and nutrition situation in Kenya is still poor. Most of the planned interventions in the Nutrition Plan of Action of 1994 (Government of Kenya, 1994_b) have not been implemented and the nutrition status of Kenyans continues to deteriorate. This is indicated in the Fifth Nutrition Survey of 1994 which shows that over one third of children aged between 6 months and 5 years are stunted and 8% of the children are wasted (Republic of Kenya, 1996). The current National Development Plan 1997-2001 makes it even more difficult for the implementation of suggested strategies to be realized as nutrition does not feature strongly in the plan (Republic of Kenya, 1997). The government currently is reviewing the food and nutrition policy. This has been necessitated by the fast-changing global economy and a failure to achieve the goals anticipated at the onset of liberalisation.

Most of these policies imply that people will make required lifestyle changes and that these changes will bring about nutrition well-being. How individual Kenyans, however,

make decisions that affect their nutrition and general lifestyle is an area that has not been explored.

Community participation in decision making

At the international level, policies have progressively focused on community participation and individual empowerment. Additionally, the Ottawa Charter of 1986 identifies three basic strategies for health promotion. These are advocacy, enabling and mediating (World Health Organisation, 1986). According to the Charter these strategies are supported by five priority action areas which include “to strengthen community action for health”. The Alma-Ata Declaration of 1978 states that people have a right and duty to participate individually and collectively in the planning and implementation of their health care. According to Alma-Ata, primary health care encompasses the following key components: equity, community participation, intersectorality, appropriateness of technology and affordable costs. Furthermore, the Jarkata Declaration on leading health promotion into the 21st Century includes participation as essential to sustain efforts that ensure health for all. The Declaration notes that “People have to be at the centre of health promotion action and decision making processes for them to be affective” (World Health Organisation, 1997). It further notes that access to education and information is essential to achieve effective participation and the empowerment of people and communities.

In Kenya, the concept of participation is entwined in the philosophy of “*harambee*”⁵ which is a self-help slogan meaning to work or pull together. The “*harambee*”

⁵ *Harambee* refers to Kenya’s philosophy of working together and is a self-help slogan which literally means to “to work or pull together”.

philosophy seeks to establish the basis for participation in development issues at the community level. Participation has been interpreted by the government ministries and non-governmental organisations as decentralising their activities and decision making to the community. This is especially so with the introduction of the district focus for rural development strategy adopted by the government in 1984 and revised in 1995 (Republic of Kenya, 1995).

The district focus for rural development strategy aims to have the community participate in making decisions that affect them. One of its objectives is to "encourage local participation in order to improve problem identification, resource mobilization and utilization, project design and implementation" (Republic of Kenya, 1995, p.1). The planning of projects is supposed to be initiated and implemented at the community level. Approval of all projects and allocation of resources is, however, done at the national level. This results in implementation depending heavily on decisions beyond the local community level. The implementation of nutrition education by the various government ministries functions in line with this strategy. The programs may be planned at the district level but the local community does not participate in the planning process. This may be one reason why participation has not worked so well.

Participation is seen by the government as a means of achieving predetermined goals and objectives. In the past, the community has been mobilised and involved in making contributions towards construction of health facilities at the community level. This may be termed as economic contribution. Participating in making decisions related to tasks

such as how health is promoted in these facilities and improvement of nutrition status of the under fives has been planned for the people by the government and non-governmental organisations and brought to the community to implement. The community is, therefore, involved in making decisions on how to implement an already pre-determined plan.

The district focus for rural development strategy has not wholly succeeded in empowering local communities, especially women at the village level, because the process allows the priorities of the Central Government to prevail over those of the community. It tends to perpetuate the notion that the community is a passive receptor of decisions and information coming in from the outside even if this is not actually stated (Cardaci, 1997).

Health Policies

Policies that impact on health at the national level are influenced by international political, health and economic policies in operation. The international health policies that influence Kenyan health policy include the Ottawa Charter, the Alma-Ata Declaration, the Jarkarta Declaration and the International Conferences of Nutrition. Since independence in 1963, policy developments have influenced the health sector. District Health Management Teams were in operation at independence. However, it was not until the 1970s that they took on a central role in health service management (Cohen, Mwanzia, Omeri & Ong'ayo, 1995, p.16). Functions of this team include supporting community based health activities and maintaining health information systems at the district levels. This team is responsible

for primary health care of which nutrition is a part. The primary health care approach was adopted in Kenya in 1986, while user fees were introduced in 1989 for health care as a result of global economic pressure to reduce public spending. In the same year, 1989, the Bamako initiative was introduced to strengthen the financial aspects of primary health care at the community level (Liambila, Maneno & Hill, 1994). Under this initiative, the community health workers selected by the community are trained and sell medicine and carry out other primary health care duties including, sanitation, hygiene and child growth monitoring promotion. The District Health Management Boards were formed in 1992 with the main purpose to oversee cost-sharing funds.

The Kenya Health Policy Framework of 1994 states how the government plans to operationalise the health services in the country (Government of Kenya, 1995). These health services are available at national, provincial, district and community levels. The services provided by the health facilities are curative, preventive and promotive (Koinange, 1996). According to the Kenya Health Policy Framework of 1994, the government plans to focus on policy planning, promotion of disease control and prevention, whereas, the private sector is to focus on curative services.

According to the primary health care approach in Kenya, the District Health Management Team is responsible for primary health care in the district (Bennett & Maneno, 1986). The team comprises all section heads in the Ministry of Health at the district level with the Medical Officer of Health as head of the team. It was noted by the District Nutrition Officer that: *"The team is supposed to meet monthly but we meet once*



in 2-3 months" [2/9/98]. Training of the community health workers is the responsibility of this team. Of the cost-sharing money in the district, 25% goes to primary health care activities within the district of which nutrition is a part (Cohen, Mwanzia, Omeri & Ong'ayo, 1995, p. 47).

These policies are useful but they tend to assume that people will make desired lifestyles to bring about good health such as in nutrition (Caraher, 1994). They fail to address the role of the educator, decision making, power and control issues and to focus on the economic and social factors that significantly affect health and nutrition.

Economic and political policies

Global economic and political policies influence policies in any nation. At the international level, the rich nations determine the prices of agricultural inputs to poor countries and prices of food from poor countries in addition to ensuring this income to poor nations services the international debt (George, 1985). However, at the national level, George (1985) argues that the problem of hunger is compounded by policies that disfavour the rural farmer. At the individual level, such policies favour money lenders (George, 1985). There are also problems of lack of access to credits and cheap prices of crops produced. However how rural people, in particular, women are enabled to handle issues related to hunger and poor nutrition through the Ministry of Health has not been explored.

At independence, Kenya became a one party State. All parliamentary and civic leaders belonged to one party until 1992 when the country became a multi-party State. Pressure from international and donor agencies to institute political and economic reforms especially in the late 1980s and 1990s affected the way in which health care was financed including the Structural Adjustment Programmes (Cohen, Mwanzia, Omeri & Onga'yo, 1995, p. 17). Indeed these changes in policies have led to focus of the limited resources in health being directed more to curative than preventive health care such as nutrition education.

Policies affect how a child growth monitoring program functions in relation to decision making and accessing resources. Participation is proclaimed by the Kenya government to be a critical element in which the community takes part. What takes place, however, in a rural setting in the everyday life of an individual program has not been explored. Implications of ongoing policies on food security and nutrition is an area that needs attention.

It has been observed that bad policies are the cause of Africa's crisis (Timberlake, 1985, p.10). Dilemma in policies and implementation strategies in Kenya as in most of Africa is that: "the colonial era brought centralised decision-making and frequently, coercive implementation of policies. Rural communities played no role in making decisions that affected important aspects of the political, socio-economic and ecological systems that sustained them" (National Secretariat ..., 1991, p.1). Following independence, "top-down" approaches were used to design programmes without consulting intended

beneficiaries (National Secretariat...,1991). Although governments have of late discouraged top-down" approaches, the attitudes still tend to persist/linger on. It has been noted that unless policies are altered in Africa, development will continue to be frustrated leading to political, social and economic disaster as is experienced in many nations in the continent (Timberlake, 1994).

Approaches to reduce malnutrition

Strategies to combat and reduce malnutrition include, policy, food security, group feeding in emergencies, education, food fortification, supplementation and dietary changes through nutrition education (Scrimshaw, 1994, p. 120). Nutrition education is seen as important in addressing the dietary changes essential for good nutrition. The type of nutrition education depends on the nutrition problems of specific communities and their social-cultural context. In industrialised countries such as Australia, the major nutrition disorders linked to health are due to excesses of various dietary components and inadequate exercise. Illnesses due to under nutrition in sub-groups of the population such as the Aborigines and people from low income groups in Australia are also present (Nutrition WA, 1995-2000). In developing countries on the other hand, under-nutrition is the main problem facing the majority of the population. Diseases related to over nutrition are becoming a common feature among the few affluent in these countries.

Approaches to under-nutrition focus on policy, practice and research (Foster, 1992). The approaches vary according to whether they are implemented at the international, regional, national, community, family/household or individual level depending on the

magnitude and intensity of the problem. Policy may address issues of food security, socio-economic, population, agriculture and health related concerns. Practice, on the other hand, focuses on solving nutrition problems through community approaches, food industry, and education through the school system and training institutions. Research normally cuts across policy and practice singly or in combination.

There is an argument that if governments concentrated their efforts on improving the economics and education standards of poor nations, nutrition status, especially under-nutrition, would be reduced. Although education and economics play a key role in solving nutrition problems, issues of nutrition in relation to education, ignorance and income are complex. Communities still need to address malnutrition even as the debates on strategies that are most appropriate are deliberated. Nutrition education is one of the approaches to reduce poor nutrition. In the past, nutrition education has focused on coping behaviour and to show people how to adapt to their deprivation (Kent, 1988, p. 193). According to Kent (1988), malnutrition is not only due to poverty but powerlessness and, therefore, to solve nutrition problems requires empowerment strategies.

Viable measures to combat malnutrition

It has been argued that improvements in nutrition situation can only occur as part and parcel of overall socio-economic development and not through isolated programs of nutrition. Overall, economic development and even increase in national food production does not necessarily lead to eradication of poverty or increased food access at the

household level due to disparities in distribution at this level. Effective strategies are those that involve the majority of the people in productive economic activities that raise their socio-economic status, lead to eradication of poverty and elimination of malnutrition and increase capacity in decision making in what affects them (Golapan, 1980, p. 39). Participatory approaches are promoted on the principle that they allow nutrition improvement to be based on the people's perceptions of their health and nutrition priorities in the light of their culture, beliefs and values and what they perceive to be good for them.

Participation in nutrition education is one strategy that is likely to enable people to make decisions that contribute to empowering themselves in improving nutrition as this orientation allows the development of local solutions appropriate for their problems. The approach fosters solutions that go beyond technical nutrition to encompass the social, political and economic realities that affect people's nutrition through analysis and reflection (Kent, 1988, p. 194). Many nutrition programs that have involved communities in implementation have had little impact after the initiating agents have left (Kent, 1988, p. 195). This may be due to such programs being planned for the community and the beneficiaries had very little input to the plan. The community may not perceive the program as theirs.

Development of nutrition education

Nutrition education started in the environmental movements of the 1800's. The roots of nutrition education have its tradition in the ecological work of Ellen Swallow Richards

(Kolasa, 1981; Travers, 1997). At this early period, nutrition was implemented as a component of home economics. Richards explains the nature of home economics in 1902 as all comprehensive efforts with the aim of improving the quality of life of individuals and families. This education focused on the interdependencies and interrelationships of families and the environment with the aim of improvement in the quality of life of families (Kolasa, 1981). Nutrition education has had different emphases and approaches since then.

Studies in nutrition education began in the early 1900's although most available studies have been conducted from 1960's (Nutrition education: A model for effectiveness, 1985, p. S9). A meta analysis of nutrition education research that was carried out in 1985 indicated that nutrition education is effective in promoting informed consumers who value good nutrition and consume nutritious foods (Nutrition education: A model for effectiveness, 1985). Until the 1980's, most health promotion paradigms focused on individuals, exhorting them to change their behaviour and lifestyle in ways that were more likely to leave them healthy (Baum, 1996, p. 184; Kennedy, Hunt & Hodgson, 1998, p. 89). This included encouraging people to exercise, eat low fat, high fibre diets and fruits and vegetables. The individual was blamed for the poor state of nutrition. Victim blaming focusing on individual behaviour is unfair as it leaves out other factors in the system, for example, food access and economics that contribute to nutrition (Green & Kreuter, 1991, p. 4).

Another view was that regardless of people's knowledge about nutrition, they are not able to maintain a healthy diet when household resources are limited (Kennedy, Hunt & Hodgson, 1998, p. 89). This viewpoint promoted the food-aid mentality. It fostered the dependency and powerlessness mentality. Nutrition promotion has since then shifted to being viewed as a social matter with households and communities required to take a more active role for proper dietary decisions (Baum, 1996).

Nutrition education has continued to gain prominence and nutrition educators have focused on seeking the most effective and efficient ways of education that may lead to changes in individuals' attitudes and dietary practices that enhance good nutrition (Melville, 1992, p. 64). Nonetheless, the process of nutrition education remains a challenge for nutrition educators. Focus of nutrition education has been more on providing information rather than on the decision making processes that influence nutrition behaviour.

Nutrition education process

Nutrition education as part of health education should be an interactive process in which populations are active participants (Dhillon & Tolsma, 1988). It attempts to solve nutrition problems by empowering people to make informed decisions that ultimately lead to improvement of their health and well being (Travers, 1997, p. 58). The primary focus of nutrition education has been improvement of nutrition knowledge, attitudes and practices (Prehm, 1991, p. 13). Nutrition education functions on the premise that

sufficient food is available and accessible, but knowledge and cultural practices preclude selection of nutritionally efficient diets (Prehm, 1991). On the contrary, there is evidence that the majority of the population in some countries still lack sufficient food. In order to ascertain what influences nutrition education, a participatory approach in an existing program may help understand what the people themselves perceive to be hindrances and solutions to nutrition well-being.

Nutrition education programs are designed in various ways to address specific problems. It has been observed that at times today's nutrition knowledge becomes tomorrow's misinformation (Greenberg, 1989, p. 20). Educators in nutrition, therefore, need to communicate to people the process of making nutrition-related decisions rather than telling them what decisions to make (Greenberg, 1989, p. 20). Previously, nutrition education promotion has been based on objectives identified by nutrition professionals or other professionals other than the people themselves (Baum, 1996; Greenberg, 1989, p. 20). Women need to be an integral part of the planning process for meaningful nutrition education. Furthermore, nutrition education has been promoted with minimal attention paid on the social context, traditions and values that influence nutrition decisions (Contento, et al., 1995). Although factual nutrition information regarding food choice is important, other factors not related to knowledge and attitude influence food choices and these are likely to be revealed through active participation.

Nutrition programs in Kenya

Nutrition programs are handled by several government and non-governmental organizations in Kenya. These include the school feeding programs by the Ministries of

Education and Office of the President and supplementary feeding programs of the Ministries of Health and Culture and Social Services and food security and nutrition education by the Ministries of Education, Agriculture and Health among others (Oniang'o, 1992). Most of these programs have been successful in feeding those affected by food insecurity. Nevertheless, they seem to have had little sustained results after external support of the activities cease. This may be partly due to a lack of community participation in the whole process of such interventions and/or the lack of a strong nutrition education component of such well-intentioned programs.

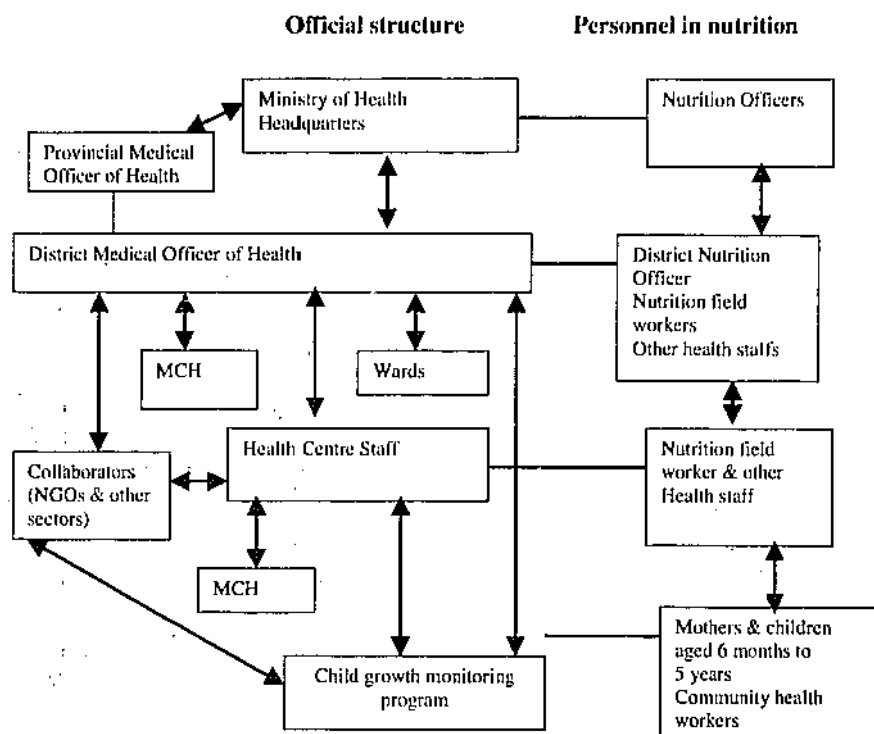
Most of the nutrition education at the community level is aimed at mothers of young children. At the community level, the Ministry of Agriculture focuses on the promotion of food security and good feeding practices. The Ministry of Education on the other hand, incorporates nutrition education in the primary school curriculum and provides school feeding programs in schools which are in chronically food deficit areas. Issues regarding weather forecasting, disaster management like drought and floods, and famine that affect the food security situation in the country are the responsibility of the Office of the President in Kenya. Rehabilitation of the severely malnourished is carried out in the Ministry of Health and in some rehabilitation centres run by the Ministry of Culture and Social Services. In addition, the Ministry of Health focuses on malnourished persons or those with nutrition related disorders in the health facilities. Special attention is paid to the children 0-5 years. This is through the maternal and child health clinics at the health facility level and the child growth monitoring program at the community level. The structure of nutrition promotion at the community level according to the primary health

care approach within the Ministry of Health is supposed to function as it is reflected in Figure 2.2. It shows how the Ministry of Health is supposed to promote nutrition education through the child growth monitoring program and the facilitators of nutrition education. However the extent to which this functions in practice is not known.

Nutrition education staff

The Ministry of Health appoints nutrition staff and attaches them to health facilities to promote improved nutrition among the patients and in the communities. At the community level, these staff are supposed to assist in identifying the needs of the communities and set in place projects depending on individual community priorities. The roles these staff play vary based on how they perceive their functions. Government employees are not "community based" but merely "community oriented" (Bennett & Maneno, 1986, p. 6). In order to enhance the community oriented participation in health and nutrition, the primary health care policy in Kenya determined that, "active participation of the communities in decision making regarding their priorities in health promotion and disease prevention is essential" (Bennett & Maneno, 1986, p. 10). For effective participation, community personnel are appropriate. Community health workers are, therefore, selected by the community and reside in the community. Their work and functions are central to the success of the primary health care strategy.

Figure 2.2 Official structure of nutrition education in the Ministry of Health in Kenya



Notes:

NGO: refers to non-governmental organisations

MCH: maternal and child health clinic

Other sectors: refers to government ministries other than the Ministry of Health

Source: Ministry of Health, Kenya 1998

Community health workers

Community health workers are village volunteers. In each village, volunteers are selected by the community in a chief's *baraza*. They are given short term training in all the elements of primary health care after they are selected. Training, technical support

and supervision in their work is the responsibility of the Ministry of Health. These persons are responsible for all primary health care promotion activities in their specific villages. Nutrition education in the community through the child growth monitoring program is one of their responsibilities. They work on a voluntary basis and do not perceive themselves as 'experts' but as facilitators of primary health concerns in their community.

Perceptions of community health workers on what they do and their role in nutrition promotion is an important ingredient of formulating viable nutrition promotion initiatives. What participants consider to be desirable nutrition education and strengths that the community has may be achieved in a participatory research strategy. Participation of the community health workers in this study was not only as a source of valuable information, but this was likely to lead to the results of the study being applied in the program.

Collaborators

Collaboration is viewed as a key feature in strengthening community systems and programs (Potapchuk, 1998, p. 332). Collaboration is believed to be central to enhance activity at the local community level. It involves organising initiatives in which all stakeholders surrender some sovereignty while retaining some power (Potapchuk, 1998, p. 333). Due to the multifactorial nature of nutrition problems, nutrition education leans towards a collaborative approach in order to achieve significant results. However, the

way collaborators work depends on the nature and purpose of the alliance (Delaney, 1996).

Collaboration may occur at different levels, for different reasons and the quality may vary. At one level, this study intended to assess the magnitude of existing collaboration, how such collaboration came into existence and the outcomes experienced. On another level, this study looked at the collaboration between the women and community health workers in the program, the nutrition field workers and myself. Collaboration throughout the research process was promoted through continuous dialogue. This was necessary to build trust, acceptance and verify the research results.

Nutrition education through the child growth monitoring program

The child growth and monitoring program serves as a basis for nutrition education at the community level, in most developing nations (Serimshaw & Hurtado, 1987). Government's expectations of the program are to promote better health and nutrition in the community. Child growth monitoring programs have been operating in Kenya under the Ministry of Health since the 1970's. The program targets mothers with children aged five years and below. Participants attend monthly weighing sessions during which nutrition education is supposedly taught (Kennedy, 1991, p. 36). Each child who attends the child growth-monitoring program is issued with an individual child health card from the health facility at birth (Appendix X). On the card is recorded the age and weight of the child at each visit to the maternal and child clinics and when attending sessions of weighing children in the community. The growth chart is used to assess the growth of

individual children aged 0-5 years (Gracey, 1987). How the charts are recorded and used at the community level is an area where there is little information.

The aim of the child growth monitoring program is to monitor the weight gain of the child and encourage breast feeding and sound weaning practices by introducing the appropriate foods for the child at the appropriate times. The program fosters hygienic food preparation methods and provides information on health, nutrition and childcare. During the weighing sessions, nutrition education and other relevant health components are addressed. Mothers are also counselled on appropriate measures to be taken according to the weight status of their children.

The program has been reported to contribute to some changes in knowledge, attitudes and behaviour of rural communities in some aspects of diet, sanitation and hygiene (Ministry of Health, 1995). Reasons for positive contribution are due in part to its focus. Mothers with children aged six months to five years are the focus in the program. This focus at the local village level is a non-threatening environment as the mothers know each other. The program targets all children in this age group at the community and not the sick as is the routine in health facilities. The program, therefore, makes a contribution towards preventive health. How the program is tailored to meet the needs of the women and their children by using the community health workers needs to be understood. In this study, this program was selected because it is existing, addresses children who are vulnerable and is a community setting that is likely to provide data that may fit into nutrition policy, practice and research.

Understanding the context of nutrition promotion through the child growth monitoring initiatives is necessary in order to foster better programs. Meaning of nutrition education and behaviour by community health workers, nutrition staff and women participants may not necessarily be the same. Understanding what different groups of participants perceive to be the causes and solutions to poor nutrition and their expectations of the program provides a framework for better program formulation. This research was conducted in an existing context of the child growth monitoring program. It provides an existing structure for participation by women in nutrition promotion activities at the community level. Accomplishments of women in promotion of health in this program can be appreciated by actively letting women make decisions about what goes on in their program.

Concept of participation

The concept of people's participation has come to have a major influence upon development thinking (Kahssay & Oakley, 1999). However, there is little consensus on the definition of participation. Several terms are used to refer to the phenomenon of participation. These include community participation, participatory approach/process, community empowerment and involvement. Although the terms tend to be used interchangeably, they do not always mean the same thing. Emphasis is on different aspects of participation. For the purpose of this study, there is need to clarify the concepts of involvement and participation

Involvement may be explained as the inclusion of people in some aspects of a program. This is based on invitation or consultation. This may be to have persons implement

programs that have already been pre-designed for them based on what facilitators or planners perceive to be causes and solutions to the problems. People in such cases do not set the objectives of the program neither do they determine the strategies for implementation. According to the work of Stacy (1984) people can be very involved but have no status in the program. They may actually be involved for different reasons contrary to the facilitators objectives. In such cases, the facilitators may wrongfully judge program success by the active involvement of people whereas the health status of people remains the same or even worsens. In the case of Stacy's (1984) work with the Aborigines, it was later found that the community took part in the study for social reasons not improvement of their health status.

Participation according to Oakley et al., (1991, p. 13-14) has been seen as occurring within a particular context and is influenced by the social economic set up of the context. Participation is seen as both a means and an end. As a means, it facilitates effective implementation and as an end it is expressed in empowerment of people in terms of acquisition of skills, knowledge and experiences and as an instrument of change (Kahssay & Oakley, 1999). However these explanations of participation fail to indicate different people's contribution in the program. Although there is no consensus on the concept of participation, most people see it as an active process that seeks to make contact with people and engage them in making decisions on issues that affect them.

It is argued that participation is a fundamental ingredient in project planning and ensures that truly sustainable initiatives will incorporate approaches that local communities

themselves can manage and control (National Secretariat ..., 1991). Most governments are said to aim to progressively increase people's participation to plan and implement programs that affect their lives. The concept of community participation is accepted globally in policy. This, however, does not seem to be the case in practice. What is termed participation appears to be involvement of the community in programs set out by others including the government and the local people are informed and told how to implement such programs. Community participation is often misused and misunderstood. Local participation has tended to emphasise the economic contributions of the people in the programs (Thompson & Kinne, 1990, p. 56). Sometimes participation is used to mean cost sharing by funders and governments tend to use it as a synonym for local level government involvement (Kennedy, 1991, p. 13). In health promotion in Kenya, community participation has been in the form of contributions from people for construction of health facilities and cost sharing which has been promoted by the structural adjustment policies. This may be termed as involvement and not necessarily participation.

Community participation has been defined as:

"a social process whereby specific groups with shared needs living in a defined geographic area actively pursue identification of their needs, take decisions and establish mechanisms to meet these needs. In the context of PHC (primary health care), this process is one which focuses on the ability of these groups to improve their health and health care and by exercising effective decisions to force the shift in resources" (Rifkin, Muller & Bichmann, 1988, p. 933).

Kennedy (1991, p. 13), defines community participation as "active participation (fiscal responsibility, program design, selection of personnel and/or local level evaluation by intended recipients) in the planning and implementation of programs". Kennedy notes that this type of active participation is associated with program success. However, what is termed as active participation is not explained or stated.

Active participation of the community has been a goal of health promotion for a long time (Rifkin, 1990). The current emphasis on community participation has a background based on social learning theory and critical consciousness raising and trends in health that emerged after the Second World War. This was due mainly to dissatisfaction with curative based health. In Africa, interest in community participation did not begin with the primary health concept but had been used in the 1950's as community development (Rifkin, 1990, p. 4). Community participation functions on the premise that the processes by which goals are achieved are more important than the actual goals (Rifkin, 1990, p. 4). Participation is a multi-dimensional concept (Kreuter, Lezin, Kreuter & Green, 1998, p. 106). It is used in reference to communities and this even makes its definition difficult as community is also a multi-dimensional concept. Participation is only a matter of degree. In an assessment of measuring participation, Rifkin, Muller & Bichmann, (1988) put forward a methodology that defines process indicators of participation. These were noted as needs assessment, leadership, organisation, resource mobilisation and management. However, the indicators identified did not look at the potential for them indicating social change of the participation process.

In this study I look at participation as the people's right to make decisions about their nutrition education in a growth monitoring program. In so doing, the women define what the causes of their nutrition problems are and how to solve them. They, therefore, have a right to shape how the program functions. This decision making is likely to translate into power and a feeling by the people that the program is theirs, therefore, they have a status in the program. Generation of participation in the research was promoted through continuous reflection and dialogue with all actors.

Development of primary health care

In order to focus on participation as applied in this thesis, it is important to understand nutrition in the context of primary health care and the context of decision making in Kenya. The World Health Organisation defined health in 1946 as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (Green & Raeburn, 1990, p. 33). The Declaration of Alma-Ata⁶ on primary health care affirmed this definition by emphasising the social dimension of health. The concept of primary health care was adopted by the World Health Organisation and United Nations Children's Fund in 1978 by the Declaration of Alma-Ata (Rifkin, 1990, p. 2). Later, in the Riga Conference, the Alma-Ata Revisited of 1988 emphasised the importance of community participation and ultimate self-reliance of individuals, families and communities about their health (Green & Raeburn, 1990, p. 34). According to Alma-Ata Declaration, "Primary health care is essential health care made accessible at a cost a

⁶ The Declaration of Alma-Ata is the outcome of the International Conference on primary health care held in Alma-Ata USSR in 1978. This gives the content and design of health so that there would be equity in health services through primary care to achieve Health for All by the year 2000.

country and community can afford, with methods that are practical, scientifically sound and socially acceptable" (World Health Organisation, 1978).

A shift promoted by primary health care is preventive community based health which involves people in planning about their health services. This approach realises that public health policy is an integral part of a country's development (Rifkin, 1990, p. 1-2). At the community level, nutrition is promoted as an element of primary health care. Community participation is seen as key to the primary health care approach.

Participation is central to community based approaches to health (Shediac-Rizkallah & Bone, 1998, p. 96). The concept of participation in health is due to the focus of primary health care at the community level. Primary health care includes at least education on prevailing health problems, and the methods of preventing and controlling them, promotion of food supply and proper nutrition (World Health Organisation, 1988, p. 8). The Declaration of Alma-Ata in 1978 stated that: "people have the right and duty to participate individually and collectively in the planning and implementation of their health care" (World Health Organisation, 1988, p. 7). As a follow up of the Alma Ata Conference, the Riga: Alma-Ata Revisited in 1988 examined what had transpired since Alma-Ata. Among strategies, that the 1988 conference came up with was that the "community should be actively involved in the entire process of defining health problems and needs, developing solutions, and implementing and evaluating programs" (World Health Organisation, 1988, p.16).

Since the Declaration of Alma-Ata, governments and organisations have tried to foster community participation in health concerns at the community level. There is a recognition that changes are more likely to occur when people are involved in making decisions on issues which affect their lives and environments (Shediac-Rizkallah & Bnne, 1998, p. 96). Since the Health for All strategy, there is an increasing recognition of the potential for community participation in planning, implementation and evaluation of their health programs (Baum, 1996, p. 196). Participation has been seen as a means and also an end in achieving goals of different governments.

According to the Alma-Ata Conference held at Riga, Statement five about empowering people says: "Empower people by providing information, technical support and decision-making possibilities, so as to enable them to share in opportunities and responsibilities for action in the interest of their own health. Give special attention to the role of women in health and development" (World Health Organisation, 1988, p.79). Empowerment of women is, therefore, seen as a necessary component in health promotion. However, the way in which participation of women functions in health is unique to the individual countries and their communities' structural development and decision making processes. Indeed, it may be argued that from observation, women may be involved in implementing programs but rarely do they participate in making decisions about their health in these programs.

Community participation in primary health care in Kenya

Primary health care approach emphasises that everyone should have access to primary health care, and that everyone should be involved in it. In 'third' world countries, people voluntarily or as a result of some persuasion or incentive agree to be involved in a project. Community participation is a major cornerstone in the primary health care strategy in Kenya. The concept of community participation as it applies to health in Kenya is defined as "the process by which a community mobilises its resources, initiating and taking responsibility for its own development activities and sharing in decision making for, and implementation of all other development programmes for overall improvement of its health status" (Bennett & Maneno, 1986, p. 67).

Primary health care is seen as the strategy for achieving Health for All by the Year 2000. In Kenya, the District Medical Officer for health in particular and the District Health Management Team in general are charged with the responsibility of coordinating primary health care activities in the district (Bennett & Maneno, 1986, p.3). In the primary health care approach, emphasis is given to community participation in health activities where nutrition education is a major component. From personal experience most community participation in Kenya is limited to resource and manpower contributions but little participation in decision making in the design and implementation processes.

Although the primary health care strategy refers to statements such as 'women's participation in health', the strategy of empowering women at the rural community level

remains more on paper than in practice. Much has been written about the benefits of participation, but actual examples of research in nutrition education that is participatory in an existing child growth monitoring program are lacking.

My approach to nutrition education

How nutrition education is promoted at the community level has been a challenge in my work. This is based on my work experience in extension for twelve years in the Kenya government and teaching at the university. I worked in the ministries of Agriculture 1977-1978 and Co-operative Development in 1978-1988 (including a four-year break for studies) and in teaching and research at the university from 1989 until I started my doctorate studies. The philosophy of Freire's pedagogy has relevancy in my work. Paulo Freire's work led to success in education in Brazil (Freire, 1970). Paulo Freire's basic assumption is that individuals can transform their environment by acting upon it. This comes about as one critically analyses one's environment and takes action. The person gains new insights and experiences and a more fulfilling life for the individual and others that interact with. This critical analysis is achieved through dialogue. Freire's method was with teaching illiterates in Latin America. His purpose was for people not just to accept their circumstances but to be critical of their circumstances.

Freire looks at education as either banking or problem solving education. According to Freire (1993, p. 53), "In the banking concept of education, knowledge is a gift bestowed by those who consider themselves knowledgeable upon those whom they consider to know nothing ... negates education and knowledge as processes of inquiry". This is

education where the teacher gives knowledge and the students receive. On the other hand, problem solving education is one that engages people in critical thinking about their education, trusts people and their creative power and works together with them in a partnership relationship. This is achieved through dialogue. According to Freire, dialogue is two way where each person has a right to listen and hear and a right to speak and be heard. This dialogue is one of mutual trust among those that dialogue. As dialogue, critical thinking on what is said and heard leads to action that actors relate to and see it as action they have collectively created. In the process of dialogue, themes are generated which are decoded during reflection. In this process, people are aware of their actions and their environment. This reflection and action result in transformation of reality and this becomes the source of knowledge creation.

Since Freire's work in Brazil, his work has been instrumental in health education with success (Tones, 1996). The central focus of Freire's work is that the social context of education, in this case nutrition education, is not neutral and that people have knowledge and experiences of their own. This necessitates listening to people and working with them to address their problem. Freire's work encouraged an education that addresses people's social realities. This enables people to be conscious of their realities so that they take collective action to address the relevant issues facing them with capacity to learn from their environments (hooks⁷ 1994).

⁷ hooks is published in lower case.

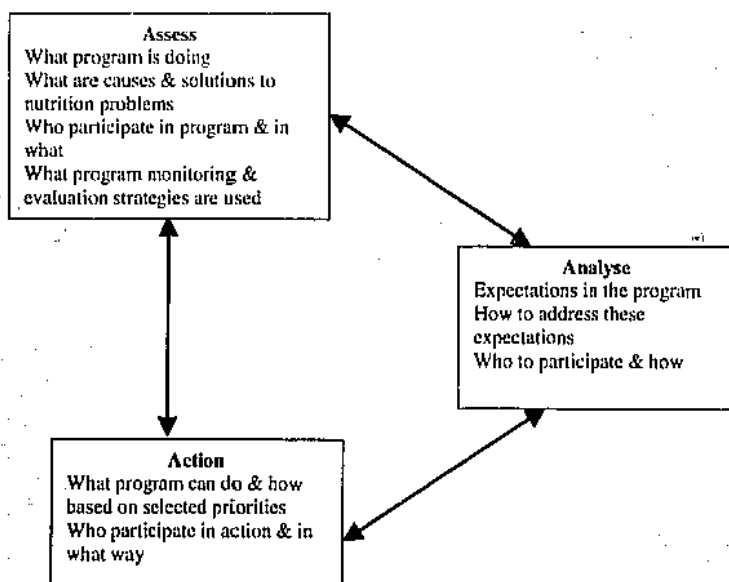
Freire's work is widely accepted as fostering empowerment education in health as it focuses on reflection and analysis of the experiences of people in their settings so that they take appropriate action (Wallerstein, 1992, 2003). At the community level, nutrition education approaches have been based on Paulo Freire's approach on the analysis and problem solving method (Manoff, 1983, p. 75). Normally this action is on the system or structure of governance (social) more than on the individual. This view fosters raised awareness, knowledge and a change in policies that promote good health and nutrition in practice. Raised awareness, knowledge and policies alone may, however, not have tangible influences on health behaviour especially in nutrition where individual choices must be made on a daily basis (Tones, 1996, p. 16).

Continuous dialogue on perceptions on the issues raised by participants leads to critical analysis of the existing situations. According to Freire, this critical analysis leads to identifying the root causes of a problem. Freire's outlook allows examination of motives and contributions of participants, facilitators and researcher in the education process. Due to the reflective nature, this provides insight into the causes and feasible solutions to nutrition problems. The central focus of Freire's pedagogy is that the social context, in this case of nutrition education, is not neutral and plays a significant role in the achievements of education promoted through the program. Freire's work applied to literacy education. Although nutrition education at the community level in Kenya is not carried out as a literacy program, Freire's pedagogy has application. The concept of community participation policy in the country applies the views of Freire.

Policies are necessary but are not sufficient to bring about healthy nutrition behaviour in individuals. How the policies are implemented, however, determine to a large extent what they achieve. Kenya's policy on participation is promoted through the district focus for rural development strategy (Republic of Kenya, 1995). The way participation occurs in an existing child growth monitoring program has, however, not been addressed.

A framework aimed at solving nutrition problems in a growth monitoring program that I used in this study engaged participants of the program in critical thinking through dialogue as it is reflected in Figure 2.3.

Figure 2.3 Framework in a child growth monitoring program used in this research.



In my work, I see myself as sharing knowledge and experiences about nutrition and lifestyle with people in communities and especially women in a manner that prepares them to face and undertake action that affects the realities in their daily lives. For this to have positive results, the process should be undertaken in a manner that promotes participants' decision making from their own perspective as shown in Figure 2.3. This is promoted through dialogue. Assessing what the program does and who are involved leads to create awareness and reflection on this results in action. This occurs in continuous cyclic manner. Of importance is not only what is done and how but who participate at all these stages.

The standpoint of Freire (1993) identifies people as critical thinkers and not passive consumers. Participatory nature of this study strengthens this standpoint. I acknowledge that people may find it difficult to shift their ways of thinking and doing things when they are made to reflect on their actions and take steps to influence their situations. In order to make such decisions takes time. This study was influenced by the critical consciousness raising of Freire (1970). This was by reflection upon the expectations of women in their growth monitoring program.

Summary

The Kenya government has instituted policies and strategies to address food security, nutrition and to improve the quality of life of its people. Participatory decision making in Kenya is inherent in the country's philosophy of "harambee". Participation of communities in making decisions in what affects them is outlined in the country's

economic strategy on district focus for rural development. Health policies in Kenya currently focus on cost-sharing as a way to have the community contribute financially to health care. The primary health care approach at the community level centres on the community health workers. Economic and health policies in Kenya voice participation as a central element, however, participation that occurs in a rural setting in a child growth monitoring program has not been explored.

Focus in nutrition education in the past has been on nutrition outcomes but these have not had satisfactory results. Shifts are now being focused on the process of nutrition education. A participatory process is likely to make nutrition education meaningful and satisfying to women and facilitators of nutrition promotion at the rural community. Participatory research has developed as a way of empowering all participants in the research to take action that improves their well-being. Although it emphasises equal relationships of the researcher and the participants in the entire research process actual examples in nutrition education in a child growth monitoring program where this is experienced is lacking. Policies in Kenya accept the concept of participation in theory. The undertaking of this thesis research was, therefore, in line with the governments' stated policy which facilitated the process of research. However, what is termed participation in programs and policies appears to be more of involvement than participation.

My approach to nutrition education is influenced by Freire's (1970) pedagogy. This is because, based on my life and work experience, I see myself as sharing knowledge and

experiences about nutrition that prepares participants to face and undertake action that affect the realities in their daily lives. For positive results, participants' decision making from their own perspectives is important. There are a few studies that have been conducted to address nutrition education at the community level. These studies provide a base that energised the need for this research and are addressed in Chapter Three.

CHAPTER THREE

NUTRITION EDUCATION AND PARTICIPATORY RESEARCH

Approaches that focus on reducing malnutrition are many and varied. This chapter focuses on participation and nutrition education at the rural community level. The aim of nutrition education is to create understanding and new ways of analyzing facts and information that may result in a conscious change in dietary related behavior. Education through the school system is important for both the young and the old and is the education that the majority of the population at risk generally receives (Raw, 1980, p. 85). Non-formal nutrition education on the other hand is what takes place outside formal education. This is what is promoted at the community level. The child growth monitoring program is an example of non-formal education with a focus on women with young children aged 6 months to 5 years.

Formal education

It has been shown that in some poor communities who subsist on uniformly inadequate diets, only a relatively small proportion of their population is malnourished. This cannot be explained on the basis of income, living conditions or socio-economic status. As shown in a study carried out by the National Institute of Nutrition, Hyderabad, India in communities living on uniformly inadequate diets, it was found that it was only the children of mothers who lacked knowledge, resourcefulness and motivation who developed extreme cases of malnutrition (Golapan, 1980, p. 39). Other data from two states in India, Kerala and Uttar Pradesh showed that there were marked differences in neonatal and infant mortality, life expectancy and deaths in children below five years.

This could not be explained on the basis of socio-economic differences or food availability as the two states were similar in these respects, the major difference was in the literacy rates of females in the two states (Golapan, 1980, p. 40).

Formal education is, therefore, a crucial factor in the improvement of nutrition status. In a rural community where children are suffering from malnutrition, however, this does not provide an immediate solution to those already affected. This requires adapting strategies that can effectively mobilize the community to address their current concerns and this gives a lot of hope for nutrition education at the community level.

Education outside the formal school system

Non-formal education may involve the in-service training of those who pass on nutrition advice and information. It includes education of the communities, the political and economic leaders and persuading them to engage in priorities in economic development that promote good nutrition for the population (Raw, 1980, p. 85-86). This is important for the better health of the population because the priorities in economic development generally do not include nutrition.

Education that improves nutrition is normally tailored to a specific environment as it seeks to change the negative nutrition habits formed in past generations and to prevent acquisition of irrational attitudes towards nutrition which result from new pseudo-scientific information (Raw, 1980, p. 85). Most of these habits are culturally oriented and in-built within the community. To improve the nutrition status of a people calls for

community education that favors promotion of better nutrition. This is especially critical to a people who have strong community bonds. Their behaviors including those of food consumption and general way of life are very much influenced by the immediate community. This is the case in most of the rural parts of Kenya.

Most of the education that promotes nutrition well-being in the community has been transmitted with the nutrition workers as the 'experts' and the beneficiaries as passive receptors. A study about the extension services in nutrition provided to rural women in Kenya, found that women were minimally involved in the planning of their nutrition education (Kuria, Wefwafwa & Munyasi, 1997). Their involvement was in terms of provision of demonstration materials for food preparation or sites for meetings. Such approaches which pay minimal focus on people's needs and expectations in the program have led to failures of well intentioned nutrition interventions. The process of planning and implementation that determines effectiveness of nutrition education were not investigated but are the focus of this thesis.

An education that is likely to lead to behavior change is one that people can relate to. It will not only look at the beliefs, values and feeding practices of a people, but will actively engage the people in the decision making processes. The present study used such a strategy. Women participating in a child growth monitoring program that promotes nutrition education in the community, made decisions in the program as a way to enhance their decision-making potential.

The type of nutrition education should be geared ideally towards specific nutrition problems. According to the 159 countries that met in Rome in 1992, the plan of action of the International Conference of Nutrition to address vitamin A deficiency was through nutrition education for the public communicated creatively by a variety of methods (Simmersbach, 1994, p. 271). The conference noted that such education messages should be conveyed through simple well-tested media, have only a few simple realistic messages and be sensitive to, and aware of, the culture and food habits of the population of interest. The approaches of such messages at the community level have, however, not received much attention. There are no studies found that have focused on the process of setting goals together with the people in a child growth monitoring program. A process that engages mothers of under fives in determining their own priorities for nutrition promotion and the process of attaining their set goals is likely to be successful.

Nutrition knowledge

Previous studies indicate that nutrition knowledge is a complex and multidimensional construct (Suter & Burton, 1996, p. 133, Moxley & Wimberley, 1982, p. 41). As in many aspects of nutrition, the ability to implement the knowledge people have on nutrition may be a major barrier to nutrition behavior change. In a study of adolescent mothers it was found that although they knew the dietary practices they did not effectively apply that knowledge (Auld & Morris, 1994, p. 123). Although knowledge is an important aspect of nutrition, it is not a sufficient element for effective nutrition/health behavior promotion (Contento, et al., 1995, p. 347-354). Increased knowledge alone is not enough to influence change in dietary behavior. Even though nutrition knowledge is no

guarantee of appropriate eating habits it is believed to be an important contributor towards that end (Moxley & Wimberley, 1982, p. 41). There is considerable research indicating that nutrition knowledge is effective in promoting informed consumers who value good nutrition and consume nutritious foods (Nutrition Education: A model for effectiveness, 1985, p. S23). What is lacking is knowledge of how this effectiveness is brought about.

Nutrition knowledge is normally presented in a message. This message creates awareness, leads to interest, evaluation of the idea, trial of the idea and adoption or rejection of such a message (Yarbrough, 1981). Concepts and ideas in a nutrition message should provide enough information for decision making (Gillespie & Yarbrough, 1984, p. 169). Most nutrition messages tend to reinforce behavior (Gillespie, 1981). Many repeated messages overtime are therefore important for behavior change. The type of messages and behaviors promoted and the frequency of such messages are important for nutrition improvement. Understanding the messages provides room to reinforce and complement such messages. Being informed on nutrition alone does not mean people will act intelligently to promote health (Nutrition Education: A model for effectiveness, 1985). Information is often disregarded, altered and used to justify current behavior rather than to stimulate behavior change. When nutrition promoters tell people what to do, sometimes people feel guilty if they are unable to apply the messages and sometimes they have limited freedom of choice (Ewles & Simnett, 1996, p. 35). Attention in this thesis is not only on the nutrition messages but also on the frequency of such messages and how such messages are decided upon.

Effective communication of nutrition knowledge provides information in understandable terms. It relates the information to the needs of the audience. Exposure of a message through many channels of communication over a period of time is required to move a person from awareness to adoption of a desired behavior (Gillespie & Yarbrough, 1984). Communication is interactive. Good communication skills are fundamental for a successful nutrition education program. In a study in Bungoma, Kenya, it was observed that the knowledge transfer by nutrition field workers is mainly a one way flow of information from the facilitators to women (Kuria, Wefwafwa & Munyasi, 1997). The women did not participate in the education process but were recipients of nutrition knowledge. Active participation of women in making decisions about the nutrition knowledge they want the program to promote is more likely to lead to success.

Instances when nutrition knowledge is important

Simple technologies that have been shown to improve nutrition without affecting the economic state of people include, the judicious combinations of locally available foods (Golapan, 1980, p. 40). Such technology can be provided through a nutrition education strategy that focuses on learning. It has also been shown that food contamination due to poor preservation and storage of already inadequate foods leads to diseases that worsen the nutrition state of individuals (Golapan, 1980, p. 41). This includes contamination of foods with fungus such as *aspergillus flavus* due to development of moulds in foods like groundnuts during storage under moist conditions. This can be eliminated or reduced by simple improvements in food preservation and storage practices which can be attained through nutrition education.

Food poisoning due to consumption of some foods such as some varieties of cassava has also been reported in parts of Kenya (Kuria, Wefwafwa & Munyasi, 1997). It is noted that this situation can be reversed by soaking the cassava for a period of time in water to dissolve the harmful substances before cooking. These simple techniques can be promoted through an existing program that engages women and nutrition facilitators in a participatory experience.

In a study that sought to determine the needs of nutrition staff for in-service training in selected subject matter areas in Kiambu District, Kenya (part of Thika District that took part in this thesis research previously belonged to Kiambu District then), it was found that different areas of nutrition knowledge and skills were important for nutrition staff (Miring'u & Munaw, 1993). However, the work nutrition staff do and how was not assessed. In addition, the in-service training needs were identified in already pre-determined subject matter areas. Although the perceptions of nutrition staff on in-service training on subject matter is important, neither the context of nutrition implementation nor the designing and evaluation of programs that ensures effectiveness were not done.

Education materials and sources of nutrition information

The type of materials available and in use, their selection, relevancy, appropriateness to the cultural context, how well they are designed and developed are important elements in contributing to the success of nutrition programs (Rainey & Lindsay, 1994). The selection of education materials that recognize factors most likely to contribute to achieving the goals and that are adaptable to the local environment, are more likely to

achieve the intended nutrition aims. There is, however, no information on education materials that are used in the child growth monitoring program in Kenya. Knowing the sources of nutrition information is critical to strengthening the nutrition initiatives in any community. Sources of nutrition information used are likely to give an indication of the reliability and validity of the information and suggest the reasons for the outcome of the program. Sources perceived as credible are more persuasive (Clift & Freimuth, 1995)

The role of a nutrition educator is to help consumers identify reliable sources of information because different sources operate under a different set of assumptions (Strychar & Schwartz, 1991, p. 117). What sources of nutrition information do women use? Identifying the sources of information that influence behaviour change in women attending a child growth monitoring program is necessary for promotion of education that both the women and those who influence their nutrition behaviour change can relate to. In order to assist nutrition staff, community health workers and women participants determine and select reliable and credible sources of nutrition information, it is important to examine what sources of information influence their behaviour.

Nutrition behaviour

Nutrition education has often been promoted to bring about change. Sometimes this change is desirable but there are also instances when change may not be warranted. When change is desirable, it is likely to occur when people perceive their problems and are willing to undergo changes for a generally better quality of life (Simmersbach, 1994, p. 272). How can people view and comprehend their problems? One of the ways is to

provide facts which they can easily identify with and allow people to analyze the situation and draw up viable action plans which they are willing to implement. This is better if it is promoted through a participatory process where both the educator and the target group of people work together in an empowering environment to bring about desired change.

For knowledge to be of use, it must be supplemented by a process of critical consciousness raising that addresses critical awareness and concern for social issues (Tones, 1996). As in many aspects of health, inability to implement what is known may be a major barrier to applying knowledge for behaviour change (Auld & Morris, 1994, p. 132). This calls for inclusion of participants in the processes of designing and management of promotion initiatives and development as a whole.

Most health promotion initiatives in countries such as Kenya are initiated by international organisations such as UNICEF and World Health Organisation and sold to these countries. These countries are involved in forums that draw up such policies and are even signatories to the resolutions that emerge. This includes in relation to primary health care, the Declaration of the Alma Ata in 1978 (World Health Organisation, 1988) and in relation to nutrition the International Conference on Nutrition in 1992 (International decade on food and nutrition for Africa, 1991). The countries then agree to implement the resolutions passed in line with their government policies. Normally a process follows whereby these countries develop very impressive policies with the financial and technical support of the International Organisations. In Kenya, the Plan of

Action for Nutrition (Government of Kenya, 1994_a) was developed in a similar manner. The cream within the government and health sector may, therefore, be conversant with what these policies say and mean because they participate in developing them and have access to these policy documents. However, how these policies are translated to reach the grassroot personnel that implement them or how the policies are interpreted by grassroot personnel is an area that has not been investigated.

The child growth monitoring is one initiative that was identified as an important component of the child survival strategy and is advocated by UNICEF and supported by several development agencies (Nabarro & Chinnoek, 1988). However, how the community participates in growth monitoring based on their beliefs and social cultural perceptions is an area that is not looked into.

The grassroot personnel are expected to implement these policies and programmes in which they have not participated. Their perceptions of these policies and programmes and how the community they work with interpret what is promoted is not known. Initiatives that minimally engage people concerned to participate in designing them are likely to fail. People can view and comprehend their problems and be motivated to act more effectively in a participatory education approach than other education methods. This is because the interactive nature of the approach allows for the sensitivity of peoples' beliefs and reasons for their actions. Such an approach is, therefore, able to stimulate change. The strengthening of participation in the growth monitoring program

in this research aimed to reduce the knowledge-behavior gap that may be as a result of non-participation of women in shaping how their program functions.

Participatory research

Participatory research is one that engages and liberates and is not only research with the people but people's research (Arnst, 1996, 119; Mardiros, 1994, p. 135; Fals-Borda, 1991). The research engages people in analysing their situation as well as gaining the confidence and understanding to address it (Arnst, 1996, p. 120). The idea is that the skills, insights, confidence and power gained by all the participants in the process are more important than meeting the set goals of the program (Arnst, 1996, 9. 111). Participatory research emphasises integration of research, education and action (University of British Columbia, 1995, p. 3). The research purpose is linked to the action and social change that comes about and both the researcher and participants gain some learning experiences that results in taking action (University of British Columbia, 1995, p. 3; Selener, 1997). A distinct feature of participatory research is that all actors take an active part in all the stages of the process.

Participatory research can be an educational process for the people and the researcher. It involves people actively in conducting a systematic assessment of a social phenomenon by identifying specific problems in order to solve them (Selener, 1997, p.17). Both the researcher and participants, together, analyse the situation and deduce possible solutions which they prioritise and take practical action. It is a research process where there is no secrecy of information and research participants have a right to information (Jack, 1995,

p. 23). Participants and the researcher are engaged in defining and investigating the problem, undertaking group analysis and group action (Arnst, 1996, p. 121; Mardiros, 1994.). It is a continuous process of study, reflection, and action (Arnst, 1996, p. 122). It provides for participants to express their needs and to design the program with the needs of the main beneficiaries in mind.

The approach improves participants' self-esteem and acknowledges that the decision making process is more important than the decision (Greenberg, 1989, p. 23). Identifying the process of nutrition promotion initiatives can help target the relevant objectives. An approach that identifies the content and the methods by the people is likely to help them set their own agenda and make their own decisions and choices that they can practically implement (Ewles & Simnett, 1996, p. 38-39). Such an approach enables people to take control of their own food and nutrition concerns by addressing what they want rather than what the researcher thinks the participants need (Jack, 1995, p. 38).

A study describing a participatory process employed by three collaborating universities engaged rural women in developing culturally desirable weaning foods in Kenya. This study found that involvement of women with the project led women to acquire knowledge and skills and have opportunity to generate incomes for themselves and their households (Muroki, et al., 1997). The aim of that study was to engage women in development of recipes for culturally appropriate weaning foods processed on a small scale. In that case, however, the goal for women's participation was pre-determined by a set agenda. However, studies that seek to engage women in needs identification, decision

making, to identify implementation strategies and shaping how the program functions are rare.

The degree to which women's needs and perceptions of meeting these needs in a child growth monitoring program are addressed in research is unavailable. In essence, how women participate in such an education experience has not been explored. How women's expressed needs are identified and consequently steps taken to address them needs to be understood. The participatory process in this study was, therefore, planned to enhance the capacity of women to deal with their nutrition problems.

Development of participatory research

Participatory research has its roots in the field of social science and other related fields (University of British Columbia, 1995, p. 5). Early influences on participatory research approaches came from Paulo Freire's (1970) work on empowerment in Brazil and Chile as well as Orlando Fals-Borda's work in Colombia (University of British Columbia, 1995; Arnst, 1996, p. 120; Selener, 1997, p.14). "The use of the term participatory research, first used in Tanzania ... covers a variety of experiences in which those people who are experiencing a social situation identify, analyse, and act upon their problems" (Hall, 1981, p. 449). The term Participatory research differs from participatory action research in that the latter focuses on the process in the way in which it brings about what is expected action whereas the former pays attention to the process and the outcomes are not the central focus.

Participatory research started as a trend towards democratisation of research. It was developed during the period of reflection and questioning on the purpose and objectivity of social research, relationship between the researcher and the researched, ownership of research results, ethics of data collection and reporting (Hall, 1981; University of British Columbia, 1995; Young, 1992). The challenge was to develop research approaches that emerge, liberate and that change the social situations or practice (University of British Columbia, 1995, p. 9). Such an approach would have the researcher and researched in equal relationship in knowledge creation, education and action at the same time. The aim was to combine both research and practice. The "early developers of participatory research (Freire, 1970) proposed a process by which everyone participated as equals to create social knowledge" (Hall, 1981; University of British Columbia, 1995, p. 13).

Participatory research has since emerged as a way of empowering people to take action towards improving conditions in their own lives (University of British Columbia, 1995, p. 18; Rahman, 1993, p. 81; Selener, 1997, p. 12). Participatory research functions on the understanding that the participants in the research have insights about not only the problem but also the solutions to the problems they experience. The research, therefore, emphasises the equal relationship between the researcher and the participants. Participatory research that has a direct social purpose, engages people actively in their own research throughout the research process (Arnst, 1996, p. 118; Selener, 1997, p.16). On the contrary it has been observed that, most projects and research claiming to be participatory appear to pay only lip service to the phenomenon of participation (Arnst, 1996, p. 119; Eide, 1982, p.15; Rifkin, 1990).

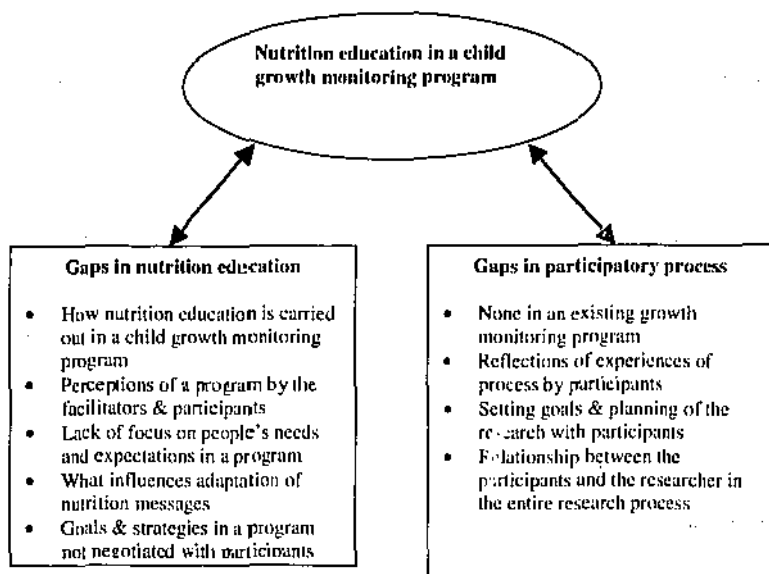
Research on participation generates knowledge and it identifies the problems and the reasons to generate knowledge are to guide action to solve the identified problems (Selener, 1997, p. 15). The process involves dialogue in bringing together theory and practice (Selener, 1997). This process is affected by the structural policies in operation in a country or specific community. Participatory research combines research, education and action (Selener, 1997, p.17). In contrast, most interventions focus on some elements of the concept but not in a holistic manner.

In the area of health and nutrition, participatory approaches emerged in the late 1970's but became of age in 1980's (Chambers, 1992). In assessing successful nutrition programs in Africa, however, it was noted that there is not much documented evidence that community participation is associated with success (Kennedy, 1991). However, what in reality was referred to as community participation was not articulated. Consequently, there was need to address the process of participation in this study.

Gaps in participatory research experiences

The gaps identified in the literature in this research are related to nutrition education and to the participatory process. These gaps are reflected in Figure 3.1. A study conducted by Kuria, Wefwafwa and Munyasi (1997) to investigate nutrition education provided to women in Kenya involved nutrition staff and women in carrying out the study. However, no effort was made for the women to design the study or identify their nutrition problems or solutions.

Figure 3.1 Gaps identified in nutrition education and participatory process



In a review of community participation experiences in maternal child and health/family planning programs, it was found that there were no studies on the views of community members on the participation process (Risfin, 1990). Such an analysis is important in order to draw on the participants' satisfaction and so as to plan future programs or strengthen existing ones. A process of inquiry, that provides understanding of the situation as it is leads to exploration of things as they might be and with this understanding comes confidence, empowerment and action (Arnst, 1996, p. 121).

Studies that are participatory at community level on nutrition in a child growth monitoring program do not appear in the literature. There is little literature on specific

aspects of participation as a strategy for promoting nutrition education in Kenya. Research on how participation occurs in an already existing structure like the child growth monitoring has not been recorded. This setting targets voluntary program participants who are therefore motivated to learn and are appropriate for a participatory process as they are likely to be a willing learning audience. How the process of participation unfolds and how it influences decision making and the limitations of the process within a child growth monitoring program has not been much researched.

This study set out to enable participants of the child growth monitoring program to reflect upon the nutrition education promoted through their program. Women were to make decisions in what they wanted the program to address and how based on their perceptions. It was to focus on the decision making process as more important than the decisions. The goal was to encourage people to employ appropriate decision making strategies and problem solving skills to arrive at desired behaviour.

Literature in participatory research indicates that the relationship between the researcher and the participants should be equal (University of British Columbia, 1995, p. 8; Selener, 1997, p. 36). In contrast to this, there may be shared decision making and power in the research process but not necessarily equal as all actors do not necessarily give the same contributions. There is, however, minimal data that indicate the shared partnership in the process. The contribution by all actors should be evident in the entire research process. A shared relationship in the process strengthens the knowledge generated and such research findings are relevant to the community concerns. How participation occurs and the

challenges inherent in the process are not much documented in the literature but are addressed in this study.

Process of nutrition education at the community level

Effective programs are designed based on specific interests and needs of the community and on an awareness of the social and health problems associated with poor nutrition (McGaffey & Murray, 1996, p. 11; Mothibe, 1990; Kris-Etherton & Engelland, 1986). Unfortunately, it has been observed that most of what is assessed for planning purposes focuses on problems, needs, barriers and weaknesses with minimal reference to the strengths and assets of communities (Parks & Straker, 1996, p. 321). In addition, the goals of the program are rarely negotiated with the participants.

Well planned programs are useless, unless they are well implemented (Rainey & Lindsay, 1994, p. 311). The implementation process depends on the human resources available, their skills and commitment to do the work, the financial resources and time available for the program. Although effective nutrition education cannot solve every nutrition problem, careful planning and implementation are essential components of responsible nutrition promotion. Time available for the program and a full understanding of the social system and existing infrastructure are important during implementation (Clift & Freimuth, 1995, p. 69).

It has been observed that implementation problems are many. These include, time and workload constraints, inappropriate training of personnel in content and more so in education methodologies, an increased focus on the knowledge rather than attitude development and behavior and a lack of provision for active participation of the learners (Nutrition Education: A model for effectiveness, 1985, S8). It has also been noted that most nutrition education research and evaluation has consistently focused on the outcomes in terms of knowledge, attitude and behavior while the implementation process itself is given minimal focus. How nutrition education is carried out, the resources used and the constraints faced to a large degree determine the nutrition outcomes. A focus on the planning and implementation process in this study is to identify the mediating factors that play a role in the nutrition education program in this community. Understanding how the planning and implementation processes occur is needed to design nutrition promotion strategies that are likely to work.

Effective community nutrition education is one which is carefully planned, allows for selection and design of appropriate intervention strategies for specific populations and establishes measurable indicators of program progress and evaluates program effects. To do so, such an evaluation analyses the design and nutrition education process, program outcomes and examines the life experiences of participants. In addition, it obtains a critical assessment of the program from the perspectives of the nutrition educators and participants and evaluates the facilitators and participants of the program (Edwards, Mullis & Clarke, 1986; Rinke, 1986). In essence, the evaluation should try to make decisions on cost-effectiveness, roles of facilitators and participants, identify training

needs of personnel in addition to issues of sustainability. The participants should therefore be given a chance to evaluate the activities in the program. Participatory research adopted in this study is meant to allow for monitoring and evaluation to take place in the research process. It does so by engaging women in making decisions on how they want their growth monitoring program to function and what they would like the program to address.

Summary

Studies on nutrition at the community level have focused mainly on outcomes in terms of improved nutrition status. Studies that pay attention to the approaches and process that promote nutrition through the growth monitoring program are lacking. Strategies that focus on knowledge and empowerment to make decisions are considered favourable for nutrition education at the community level. Studies that assess changes that are likely to be brought about through women participating in making decisions in their child growth monitoring program are, however, lacking.

Experiences of participatory research process show that this research is linked to action and social change. Not much has, however, been explored about how such research works in an existing child growth monitoring program. There is minimal information on the reflections of participants on the participation process or achievement of the process. Additionally, the relationship between the researcher and the participants has not been examined in detail.

In summary, literature fail to address perceptions of participants and women's decision making in their nutrition programs. This study was planned to address these gaps. The methods employed in carrying out this study sought to provide a holistic view of nutrition education through the program and to actively engage participants in the program and research process. To do so, a multi-instrument approach was employed.

How the study was conducted is discussed in Chapter Four.

CHAPTER FOUR

METHOD

This section focuses on the data collection in the field. It does so by explaining the research site and context, the data collection instruments and approaches adopted and how data were analysed. The setting of this study was in Duk, Thogoto and Iruguni villages in Ngoliba Sub-location of Gatwanyaga location, Thika District in Kenya. Data from the fifth nutrition survey of 1994 in the country indicate that malnutrition in this area is high. These data suggest that environmental issues may be playing a role in nutrition status of this community. Nutrition education through the child monitoring program has been promoted in Ngoliba since 1994. However, how the child growth monitoring is conducted has not been assessed. The participatory nature of this study was expected to reveal how nutrition education takes place in the child growth monitoring program and to examine the participation of women in making decisions about the program.

Research setting

In order to capture the participatory nutrition education process, the child growth monitoring promotion at the community was an appropriate setting for this study. The child growth monitoring activity takes place once in a month. It is carried out in a building on a one-acre piece of land that is used by the community for different functions. The building is roofed with corrugated iron sheets, has two rooms; one is used for community functions and another as a storage area. The walls are painted white with

one door and two windows made of wood. The storeroom had shelves all around which were empty and there was no window in it.

The room used for nutrition education had four benches along three walls each seating about seven persons. The room can hold up to six such benches. There was one table used for recording during the child weighing sessions and for writing. Two empty shelves were in this room. On the wall was one poster and a wall calendar. A rope was tied onto the roofing post to hold the salter scales used to weigh the children in the centre of this room.

Open-ended interviews were held in the homes of the women participants. The community health workers, the nutrition field worker plus myself went to the homes of the twenty-one women who responded to the open-ended interviews. Time taken walking from the participants' homes to the child growth monitoring centre ranged between 10 to 45 minutes. During the data collection, I drove and parked conveniently close to the homes of the participants and then we walked to their homes.

Period of data collection

Data from the nutrition staff was collected during normal working hours in their work stations, whereas, data from the women participants were collected during the child growth monitoring sessions and in their homes. These were twenty-one of the women who had been taking part in the program between 1995 and 1998. Ngoliba is a farming area where women are involved in activities on their farms or other people's farms so as

to earn income. The period between June 1998 and early October 1998, was a season for harvesting different varieties of legumes and maize as the weather was dry. I noted in my field notes during the open-ended interviews with the women: *"The drought has now started, it is a bit hot as we walk to the homes. People are harvesting peas and beans on their farms. Ploughing of land in preparation for planting during the anticipated short rains is in progress"* [21/9/1998].

There was some rain during the months of October and November 1998 when the families in the area were busy ploughing and planting maize and beans for the short rainy season. However, the rains stopped in December and by January and February 1999 the crops, which had germinated, had dried up.

Open-ended interviews for the women in their homes were held during September 1998 when there was relatively minimal farm work. These interviews were held after 10:00am so that time was allowed for the women to collect water early in the day before it became too hot. As stated by one community health worker during the planning for the fieldwork: *"Let us go to the homes of the mothers at 10:00am. At this time, mothers will have collected water and done some cleaning"* [8/9/1998]. The interviews ended about 3:00pm to allow time for the women to attend to other responsibilities.

The child growth monitoring sessions also were announced to start between 10:00am and 11:00am on the days on which they were conducted although they always started later than this time. There was low turn out in the child growth monitoring sessions

during busy farming seasons. Data collection was organised in a collaborative manner so that the times of the child growth monitoring sessions, open-ended interviews in the homes and in-depth interviews were convenient for the women and community health workers. Data were also collected during the official working hours of the government nutrition staff so that no extra demands were made on their time.

Research design

A descriptive research design using a multi-instrument approach was considered most appropriate to describe and understand the participatory process. This allowed for triangulation of methods that contributed to trustworthiness of the data. This was appropriate for the research questions under investigation. The open-ended interviews provided information on the history and background of the participants and the program and the perceptions of nutrition education promoted through the program. Observations portrayed the participatory process by describing how it occurred. The qualitative methods used were appropriate in accessing individual's perceptions. The way this research was conducted helped to minimise the gap between research and practice.

The purpose of this study was to provide an understanding of how nutrition education is provided through the child growth monitoring program and to examine the effect of increasing participation of women in making decisions in the program. Repeated observations described the education process. It has been noted that "through participant observation, it is possible to describe what goes on, who or what is involved, when and where things happen, how they occur, and why - at least from the standpoint of

participants – why things happen as they do in particular situations” (Jorgensen, 1989, p.12). Additionally, Jorgensen (1989) states that participant observation is “exceptional for studying processes, relationships among people and events ... patterns, as well as the immediate socio-cultural contexts”. Focus groups were used to gather data. Focus groups are carefully planned discussions designed to obtain perceptions on a defined area of interest in a permissive non-threatening environment (Kreuger, 1988). In focus group interviews, participants are selected because they have certain characteristics in common that relate to the topic of the focus group (Kreuger, 1988).

The initial research agenda was made by myself. At the community level, the participants were engaged in refining the research problem so that it addressed their needs. Both the participants and myself agreed upon the research process through the initial discussions. I, the nutrition staff and the community health workers collected data. Continuous discussions and dialogue directed the flow of the research process.

Open-ended interviews, focus group interviews, meetings, conversations, observations and in-depth interviews were used to collect data. Triangulation of methods was used to obtain data that were rich, appropriate to answer the research questions and sensitive to the social culture of the participants. It also contributed to cross-checking data. The study sought to describe the development and outcomes of the participatory process. This design allowed to obtain the background of nutrition education program and to assess the participatory experience. It also allowed for detailed analysis of data. The methods allowed me and the participants to play an active part in the research. Data were

collected as it is shown in Table 4.1 while a detailed research biography is given in Appendix O.

Research instruments

Several instruments were developed by myself and reviewed by my supervisors and a panel of researchers before going to the field. Discussions together with the community health workers and nutrition field workers refined the interview schedules and incorporated what the participants felt were important for them to be addressed in the research. The open-ended interview schedules were pre-tested before they were used to collect data. Participants also contributed to the focus group agenda.

Triangulation of data collection tools contributed to validity of data. The appropriateness, ease of administration and practical use of the research instruments were considered in the selection of the research tools. Timing of the research activities was looked into to ensure convenience for the participants. Data were collected in such a way that they could be interpreted with ease.

Open-ended interview schedules were suitable for obtaining data on the demographic and socio-economic characteristics of the research participants and the historical background of the nutrition education undertaken during the child growth monitoring promotion sessions at the community level. This was necessary because there were no documented records in form of plans, implementation activities or reports from which

Table 4.1 Data Collection

Time period	Activities
April-May 1998	Clearance, official permission from authorities at national, district and community levels
June	Consent from nutrition fieldworkers and community health workers Pre-test Focus group interviews with nutrition fieldworkers and community health workers Open-ended interviews with nutrition field workers
July	Consent from participants of Ngoliba child growth monitoring program Observations of growth monitoring activities Focus group interviews with community health workers Open-ended interviews with nutrition fieldworkers
August	Observations in monitoring activity
September	Observations Focus group interviews with participants and community health workers Open-ended interviews with participants
October	Observations Open-ended interviews with community health workers In-depth interviews with SACDEP* Meeting with participants to discuss increasing participation in the program
November	Observations In-depth interview SACDEP* In-depth interviews with two participants Meeting with participants to discuss increasing their incomes
December	Meeting with participants Starting income generating activity Observations in monitoring activity In-depth interviews with two participants Focus group interviews to discuss findings with the nutrition field workers
January 1999	Observations of child monitoring activity Market search for income generating activity In-depth interviews with two community health workers
February	Observations of child monitoring activity Planning for income generating activity One day workshop to develop curriculum Planning for implementation of developed curriculum

Note:

* SACDEP stands for Sustainable Agriculture Community Development Program, a non-governmental organisation in Kenya.

such data would have been retrieved. These schedules are indicated in Appendices D, E, E* and F. In-depth interview guides were appropriate to collect detailed information from a few participants and one collaborating organisation. The guides developed and used are in Appendices K and L.

Focus group interview guides set the agenda for group discussions (Stewart & Shamdasani, 1990). The focus group interview guides were developed to assist in conducting the focus group interviews. These provided information and perceptions about nutrition education promoted during the child growth monitoring sessions. Guides were adjusted as the research progressed. The final focus group interview guides are indicated in Appendices G, H, H*, J and J*. Observation guides are used to make sure all relevant areas of a study are covered (Touliatos & Compton, 1988; Hedrick, Bickman & Rog, 1993). Observation guides were considered appropriate for studying the implementation of the participatory process and to capture the actual experience. They indicated the nature of events to be observed. These were headings that led to several sub-headings during the research process. The observation guides used are indicated in Appendices M and N.

Field notes were written in a notebook on a continuous basis during the fieldwork. These described the setting, actions and reactions of the women, nutrition field workers and community health workers and gave details of events that took place during the entire research process. My interpretations and reflections were also noted in the field notes.

Pre-test of open-ended interview schedules

Pre-testing provided an opportunity to improve the design, research procedure and increased my confidence to proceed with the study. Pre-testing was done to ascertain that the research instruments for collecting data would capture the information required to respond to the research questions. The initially developed open-ended interview schedules were pre-tested on a group consisting of two community health workers and five participants of a child growth monitoring program in an area that was not selected for the study.

During the pre-test, the questions were made clear and proper terminology in *Kiswahili* and *Kikuyu* obtained. Some items from the original schedules were omitted when they were found to be redundant. Other items were found necessary and included. The aim of the pre-test was to refine the instruments and establish the approximate time required for each interview.

The nutrition staff and community health worker accompanied me to the participants' homes. The latter helped identify the participants, build trust and rapport and contributed to openness of the research. It is not easy for a person who is not from the community to get to the community and conduct the interviews in people's homes without such support. Participants are likely to be unwilling to provide relevant information to a lone researcher. The plan of how to carry out the fieldwork was established at the start of the study but was flexible and altered as the research progressed. Planning was an interactive process during the fieldwork.

Entry into the field

Ethical responsibility is essential at all levels of the research process (Kimmel, 1988, Dane, 1990). From the research design stage to the fieldwork, ethical decisions were made. Authority to conduct the research was obtained at all levels of the University and Government and the community of study. Clearance from the ethics committee of Edith Cowan University to conduct research was obtained in March 1998. In order to conduct research in Kenya, written clearance was obtained from the Office of the President and the District Commissioner Thika between May and June 1998 (Appendices A, B and C). Permission was obtained from the District Medical Officer of Health Thika and the Division Officer Thika Municipality before going to the community.

A summary of the process of ethics clearance is shown in Table 4.2

Table 4.2 Summary of ethics clearance process

Date 1998	Activity
March	Clearance from Ethics committee of Edith Cowan University
May	Application for research authorisation from the Office of the President, Kenya Application for research authorisation from the District Commissioner, Thika Permission from the Medical Officer of Health Thika Permission from the District Officer of division Permission from the District Nutrition Officer
June	Research authorisation from Office of the President, Nairobi Research authorisation from Office of the President, Thika Consent from nutrition fieldworkers Consent from community health workers Consent from participants of Ngoliba program
July	Consent from participants of Ngoliba program

Note:

Once consent was obtained from the nutrition staff, data were collected from them while the process of obtaining consent from the community participants was still in progress.

Consent

One meeting with the District Nutrition Officer and the nutrition staff was held to seek consent. During a meeting with two community health workers together with two government nutrition staff, the aim, research process and duration of the research were explained. Based on this meeting, a subsequent meeting with another six community health workers was planned. The two community health workers took the initiative to inform the other seven community health workers and organised for this meeting that was held at Ngoliba Health Centre.

During the meeting with six community health workers, the purpose of the research was clearly explained and a consensus was reached on the expectations of the researcher and the community health workers. Verbal consent was obtained from the community health workers in this meeting where the District Nutrition Officer and the nutrition field worker attached to Ngoliba Health Centre where the research community is attached were present. This meeting planned for another meeting with the women participants of the child growth monitoring program where consent was sought from the participants to take part in the research.

A meeting with the participants of the child growth monitoring was organised by the community health workers and held in the community hall whereby details of the research were articulated. Specifically, the purpose and intended procedure of the research were explained and participants were advised that their participation was voluntary. Individuals were informed that they may cease to participate in the research at

any time if they so desired. The persons were also informed that withdrawal from the research did not mean that they should stop to participate in the child growth monitoring program.

Participants in this research were reluctant to sign informed consent forms due to fear of why such forms were necessary. They were afraid of the legal implications of a written agreement although this was clearly explained to them in *Kiswahili*, *Kikamba* and *Kikuyu*. Some members said they did not know how to read or write, therefore, they could not sign them. The literacy level of some of the participants was a few years of primary education as it was indicated by the findings of the study later on. This meant that even if they signed the documents they were not certain of the contents. This was no surprise to me as the communities in Kenya are accustomed to decision-making by a show of hands. This is done even in cases of preliminary parliamentary elections. This means that verbal consent is satisfactory both to the individuals and the government.

The community participants were satisfied to participate in the research as long as the government approved it. The Ministry of Health nutrition staff were present during all these discussions and served as an assurance of government approval for the research. Based on the above, verbal consent was, therefore, obtained from the participants to carry out the research. The method for collecting information was also discussed at length. During these meetings we came to a consensus about having the interviews for participants take place in individual households. The nutrition field worker and at least one community health worker were to be present during these interviews. Interviews for

the community health workers were to take place at the community hall where the child growth monitoring sessions are carried out. Focus group interviews and observations took place also in this hall. It was accepted that focus group interviews could be tape recorded.

Confidentiality

Confidentiality pertaining to the information collected was also addressed. Participants agreed that information was to be collected and stored by myself. This meant an earlier plan to have research assistants was dropped at this stage. Collecting data from the nutrition staff was agreed upon by myself and the District Nutrition Officer who informed the staff when I would go to their places of work (Appendix C).

The uses of the research results were also discussed in the initial meetings with participants and in the meetings to discuss preliminary findings. Apart from the thesis and publications, participants agreed to have the findings passed on to the government and non-governmental organisations and to be discussed at the community level so that appropriate projects as a result of the research findings would be implemented in the area.

Safety and identification of participants

This study took place in the natural setting of an already existing program. Efforts were made to make sure that participants did not suffer from psychological harm such as embarrassment concerning the nutrition status of themselves or their children. This was

done by informing members that if they felt anything in the research process was unpleasant, they may point it out so that it could be taken care of or that they could refuse to take part in such an activity. The above ethical considerations were looked into before or at the start of the data collection and consciously maintained during the fieldwork.

During the entire research process, I had to keep confidences. This was especially important as I was dealing with different groups of people. This was made clear from the start but I had to remind myself and the others that I was to keep confidence. There were instances when I was expected to give my opinion about a member of the group or staff but I always declined this and eventually nobody expected me to give my views on personalities. This helped in building trust during the research process.

The participants were unwilling to adopt pseudonyms in reference to their verbatim quotes. This was on the basis that it was false. They preferred to be identified as themselves. However, due to the collective nature of the research, they did not want some individuals to stand out because only a few of them could be noted in the report. We came to a consensus to have participants referred to according to their role in the research and the program. Ethical clearance procedures took about four months (March to June 1998), before the main fieldwork commenced. However, the process of getting consent to undertake the study provided essential data on the community processes essential for understanding decision making processes that also influence nutrition education activities at this level.

During the fieldwork I clearly identified myself. I informed the people that I was carrying out research, that I was studying at Edith Cowan University Western Australia and that I was on study leave from Kenyatta University in Kenya where I work. In the course of the research, participants were debriefed on the information collected during the focus groups, open-ended interviews and meetings. Discussions on the preliminary findings of data collected at the end of my fieldwork gave opportunity for participants to give their input on the findings. Participants will also discuss the detailed findings of this thesis through a dissemination workshop which will be planned for together with them.

Building trust and rapport

Building rapport and trust at the initial stages of the research and sustaining it was important in obtaining cooperation and useful responses from the participants (Touliatos & Compton, 1988; Jorgensen, 1989). It was important to gain rapport and trust with people in this research setting so that I could collect accurate and truthful information together with the participants. This was critical for the participatory nature of this study. Five meetings were held to seek consent, discuss the research purposes and procedures before detailed data were collected. A summary of these meetings is shown in Table 4.2, whereas, a detail of the data collection biography is in Appendix O.

I handled clearance from the Office of the President and Thika District Commissioners officers alone. After permission was granted by the Medical Officer of Health Thika, consent was sought together with the District Nutrition Officer. She introduced me at all the stages. This gave me credibility with the research participants. I explained the

purpose of the study and the benefits for myself and what I thought were likely to be benefits for the participants. At this stage, I explained that participants include their own agenda into the study. I also negotiated the use of the study findings and confidentiality at this point.

During this early stage, I clearly explained the study's limitations. In particular, that this was purely a study and did not guarantee any monetary support. This was necessary so that the expectations of the participants were clear from the start. The negotiations related to entering the field helped me know how decisions were made at various levels of government and community and therefore how to collect data in a manner that was culturally acceptable to the community. Multiple negotiations were required at each level of government and the community participants. The essence of this negotiation was for me to get co-operation to collect data that were relevant. Apart from one non-governmental organisation that I did not access, all the other research participants were willing to participate in the study.

Harmful effects of the participatory approach may be that participatory approaches yield results that change the orientation of the familiar program. Members were, therefore, requested to consider deeply any perceived changes into which they ventured. Reflection on suggestions during the study was to ensure that participants' expectations remained realistic. Data were collected without identifying the respondents during the group discussions, observations or conversations. Open-ended interview schedules were coded to avoid them having names in order to keep confidentiality. Data analysis was done in a

way that is both appropriate for data collected, and represents the findings accurately for the benefit of the participants but also other researchers who may use the findings.

Data collection

Data collection and some of the data analysis were carried out concurrently in a cyclic manner during the fieldwork. They are, however, described separately to show how each aspect was conducted. Triangulation of data collection methods was necessary due to the fact that the study was to provide insight into the participatory nutrition education in the program. The primary data sources were the participants of the child growth monitoring program, community health workers and nutrition field workers. Observations of the nutrition education activity during the child growth monitoring sessions were among the primary data sources. Data were also obtained from one of the collaborating non-governmental organisations. Records kept by the community health workers and child health and nutrition information systems by the nutrition staff were the only secondary sources of data in this study.

Data were collected on the process of the growth monitoring sessions and on the interactions in the process. Both verbal and nonverbal communications were observed and noted as field notes. Information from the participants in the child growth monitoring promotion and facilitators of nutrition education in the three villages and from the records kept by the community health workers were collected.

The fieldwork was carried out over a period of nine months from June 1998 up to February 1999. Observations formed the major source of field data. The community health workers and the nutrition staff were present at all the stages of data collection and I recorded all the data. The process of the data collection period is indicated in Table 4:1. Throughout the fieldwork, participants were informed of key emerging issues through feedback during each group contact and letters during further data analysis and thesis writing.

The nutrition staff and community health worker accompanied me to the participants' homes. The latter helped identify the participants, build trust and rapport and for openness of the research. The plan on how to carry out the fieldwork was established at the start of the study but was flexible and altered as the research progressed. Interactive research planning was promoted during the field research process.

Strategy of selection of participants

A purposive selection of participants was found appropriate for this study. This allows for selection of information rich participants who were likely to provide data to answer the research questions (Fisher, Laing & Stoeckel, 1983; Patton, 1990). The study participants comprised nutrition staff from Thika District, community health workers and women with children aged below 5 years. In order to identify appropriate study participants, information was gathered through informal discussions. This was with the government nutrition staff of the Ministry of Health in Thika District. The discussions

were about how nutrition education is promoted at the community level. Based on these discussions, Ngoliba community was selected.

In most studies, the persons that take part in the study are referred to as the sample. In this thesis, I preferred to refer to them as participants. This was because the persons who took part in the study were participating in the entire research process and referring to them as a sample would be demeaning their major role. In addition, the women who come to child growth monitoring program are not consistently the same. The program, therefore, interacts with a variety of persons.

Child growth monitoring program in the community through the Ministry of Health is undertaken only in Thika Municipal Division in the district. The selection of the participants was based on information from the government nutrition staff working in the district who are knowledgeable on the nutrition education activities and could therefore help identify a typical group of this activity. Ngoliba child growth monitoring was considered one of the active groups as indicated by their frequent reports to the Ministry of Health. This was a group where the nutrition staff felt if the participatory approach promoted by the research could not work, then it may not easily work in other places in the district. Another reason was that the community health workers of Ngoliba were considered self-motivated. This was an important aspect for me as I needed to collect data within a specific time and such a group was also ideal for encouraging participation.

f)

The participants were selected on the basis of their involvement in the nutrition education activities. The twenty-one women participants interviewed in their homes

were those who had taken part in the child growth monitoring activity in the community at least once since its inception. This was likely to yield data relevant for the nutrition education process. A list of women participants who responded to the open-ended interviews is in Appendix Q.

Participants of the in-depth interviews were selected to provide diversity in the data. These included two persons who had been involved in the growth monitoring activity in the preceding year. Others were one 'drop out' person who had participated for some time, stopped and rejoined the program again during the study period and one person who joined in the program during the research period. These were likely to provide data that describe the variations in the group, understand the variations in experiences and at the same time identify core elements and common patterns. Such a sample was likely to provide for variation and important common patterns.

The persons for the in-depth interviews were randomly selected from their subgroup. That was, among the active participants of the program, two were randomly selected, among the dropouts one and among the new attendants one. The random selection was from the records kept by the community health workers. Random selection contributed to credibility of the research findings. One person from one of the collaborating organisations, SACDEP, was interviewed. This non-governmental organisation was among the two who were involved in the food security and nutrition education promotion in Ngoliba community.

Sixteen government nutrition staff who facilitate nutrition promotion efforts in the district responded to an open-ended interview and focus group. They were important as they are responsible for the government nutrition efforts in the district through the Ministry of Health. Although a total of eight community health workers participated in the focus groups, I worked closely with four during the research as these were those who were responsible for the program that took part in this study. A list of the community health workers that participated in the focus groups is shown in Appendix R whereas those who participated in the open-ended interviews is given in Appendix S.

All participants who turned up on the days for the focus group interviews formed the participants for the focus groups. These included mothers who attended child growth monitoring promotion activities during the data collection period. Most of the mothers who attended the child growth monitoring and nutrition education sessions between July 1998 to February 1999 took part in the focus group interviews and meetings with participants.

Procedure of data collection

Data were collected in several ways. Although some procedures were concurrent, this section presents each process separately. How data were collected from the participants is shown in Table 4.3. Information in Table 4.3 shows how triangulation was used to obtain data from all the actors to ascertain trustworthiness of data. Apart from one man from the non-governmental organisation who participated in the in-depth interview, all other participants were women. Obtaining data from women in this study was effective.

Table 4.3: Study participants and how data were obtained from them

	Number of Participants for focus group interviews	Number of Participants for in-depth interviews	Number of Participants for open-ended interviews
Pre-test	2	-	5
women	32	4	21
Community health workers	7	2	4
Nutrition field workers	15	2	16
Collaborator	-	1	-

Participants tended to trust me readily and willingly provided rich information. My position as a woman may have influenced the amount of information given and, possibly, the participation level evidenced.

Open-ended interviews

The purpose of the open-ended interviews was to obtain the perspective of the persons interviewed and information that could not be observed in the study. The history of the program, the backgrounds of the participants, their perceptions and attitudes of the program and their work were obtained through these interviews. These interviews identified the experiences of the participants, their knowledge about nutrition education process, their expectations and the changes they would like to see take place in the program.

The interviews for sixteen nutrition staff were held at the normal working place of the staff. The purpose of these interviews was to provide a background of the nutrition fieldworkers, determine the work they do and their perceptions of nutrition education in

the communities in which they work. I interviewed each staff during the normal working hours. Due to the long distances between the health facilities, only one person was interviewed per day. The District Nutrition Officer travelled with me to each of the health centres where the field nutrition staff were attached. The presence of the District Nutrition Officer was necessary to build rapport and trust and contributed to credibility of the research.

Four community health workers were interviewed at the centre where the nutrition education sessions and other community functions took place. This was considered an appropriate interview setting because it is where they do their work. During these interviews, the nutrition officer was not present. These interviews were held after interviews with the participants and observations of three child growth monitoring sessions. The purpose of these interviews was to determine the selection criteria used to identify them, the training they had received, the nature and challenges of their work. Their perception of the work they undertake, the history of the program and what they would like to see happen in the program and why were also assessed. These interviews were held in October 1999.

Open-ended interviews with twenty-one women were held in the homes of participants who had been part of the child growth monitoring sessions before this study commenced. One nutrition staff at the health centre and one community health worker accompanied me to the participants' home. This was necessary for identification purposes, to further cement that the research was approved and accepted by the government, for openness of

the study and to build rapport and trust. I asked the participants questions while the two staff were present. They assisted in explaining the purpose of the study to the community participants and in explaining some items on the interview schedule. They did not interfere with the answering of the questions.

The aim of these interviews was to obtain background information on the participants, their perception of child growth monitoring program and nutrition education activities and the improvements they would like to see in the nutrition promotion initiatives through the child growth monitoring programme. The actual interviews lasted about one hour. Participants' interviews were held in the month of September 1998.

Focus group interviews

The purpose of these focus groups was to explore the experiences, perceptions and attitudes of participants on the nutrition education activities and the program. Participants gave their own perceptions and impressions of the nutrition promotion in their own words. Focus groups were organized for nutrition staff, community health workers and women participants of the program. The interviews were tape recorded to ensure accuracy. Notes were taken during the interview process and used as feedback for participants to validate what had been discussed. The focus group interviews at the end of the fieldwork were to facilitate interpretation of data obtained from the open-ended interviews and to obtain insight on the participatory approach employed in the study.

Nutrition education facilitators as moderators

A moderator in a focus group plays a crucial role to set the pace of the discussions, listens carefully and encourages every person to make contributions to the discussions (Scrimshaw & Hurtado, 1987). Participants selected one community health worker to moderate the focus group sessions for the women and community health workers. This was prior to the scheduled interviews. Participants selected the moderator based on the ability of leadership of the person judged from their own perspective. The people were asked: *"Who will lead the group interviews?"* Several names were suggested and the persons present agreed on one by consensus. Each community health worker moderated one focus group interview. One nutrition field worker moderated each of their focus group interviews. She was selected by other persons present, to moderate, just before the interviews.

During the focus group interviews, I was an observer and took notes during the discussions. In particular the group dynamics, level of participation, anxiety and distractions were noted. What was noted was, not only what each person said but how and what they meant by what they said. On some occasions I suggested questions important to the study, or in the event of the moderator not clearly explaining a question, I clarified the issue.

Conduct of focus group interviews

Focus group interviews for the participants were held in the community hall where the various community activities take place including child growth monitoring sessions. This

was considered a neutral place where the participants felt comfortable talking openly. Nutrition staff held their focus interviews in the nutrition counselling office at Thika District Hospital where some nutrition staff perform their work. Each focus group lasted between one to two hours. This ensured that people did not get exhausted or lose interest in the sessions. Focus group discussions for the community participants were for mothers with children aged below five years and the community health workers. Mothers were asked to come for the discussions verbally by the community health workers. At that moment, the date, time, place of meeting, value of their participation and the approximate length of the discussions was indicated. Mothers were requested to keep time so that others would not wait for long. They also came with their children and were requested to carry some snacks for the children so that they did not get hungry. The District Nutrition Officer informed the nutrition fieldworkers when and where to come for their focus group interviews.

Although most mothers agreed to come for the meetings starting at 10:00am, most arrived after 11:00am and most interviews started after 11:30am by a consensus of those present. When some mothers came after the start of the sessions, they were allowed to participate in the focus groups. The number of persons who participated varied from one focus group to another. The participants of the focus groups were not compensated for taking part in the focus groups because this was likely to affect their participation in the child growth monitoring program later on. During the initial focus group interviews, consent to carry out the research was sought from the participants who had not attended

previous meetings. This was after the participants were told about the aim of the study, who was carrying it out and that their participation was voluntary.

Through discussions with each selected moderator, I pinpointed how to guide the discussion sessions. This was on the day of the focus group before the planned meeting time. I reviewed the purpose of the study and in particular the interview with the moderator and how to promote participation before the session. The moderator introduced the topics in an easy comfortable manner, emphasized that there was no wrong or right answer, avoided to display or express personal opinions, encouraged all persons to participate and listened carefully in order to move on with the discussion. Moderators were open to suggestions, controlled the time, observed the participants' non-verbal communications and responded accordingly thereby creating a conducive environment where members felt free to express themselves. Focus group guides (see Appendices H* & J*) in the *Kiswahili* version were used for the women and community health workers. Moderators clarified the questions, rephrased them as appropriate and kept the discussions going on in a lively manner. Use of silence was encouraged to allow time for all to participate.

A close to circular sitting arrangement was used during the focus groups so that all persons could see one another. The benches were arranged in a form which was close to circular. Although most participants knew each other, at the start of the discussion sessions, each person introduced herself for the benefit of all persons present. Participants also agreed on the length of time for the discussion. Members established

rules for the interview. These were that one person talks at a time and participants were informed that what they said would be tape-recorded for the purpose of writing the report. Members were also asked to speak clearly and to freely participate in the discussions.

One of the community health workers started off all the discussions for the participants. This was by a word of prayer followed by introducing the purpose of the gathering. The role of the moderator and the researcher who was a recorder at this point was also explained. This was to let the group know that nobody was an expert on the subject but the aim was to learn from the group and that opinions of every person were important. The moderator then introduced the topics for discussion. She asked the questions, explained them and allowed people to talk. She encouraged all members to participate.

The government nutrition staff was present during the focus group interviews with the participants. However, she was requested to listen to the discussions, contribute minimally in the discussions and share her comments with me after the interviews. This was meant to enable the mothers to share freely in the discussions. At the start of the discussions, the participants were informed that the researcher and nutritionist would just observe. Although it is recommended that observers sit away from the participants of a focus group (Stewart & Shamdasani, 1990), this was not done as it was equal participation of all and would have looked culturally odd to have some people separate themselves.

Information I recorded included the major points discussed, both verbal and nonverbal responses and communication such as silence or looking at each other among participants during the interviews. At the end of each focus group session, I summarised what had been said and the purpose of the information to which group interviewees responded. Participants were thanked for their contributions and reassured that their ideas were valuable. The cultural nature of this community whereby most decisions are based on group discussions, made it easy to organise and conduct the focus group interviews.

The focus group interviews held and the number of participants present is indicated in Table 4.4.

Table 4.4 Focus group interviews held with women participants, community health workers and nutrition staff.

Date of interviews	Type of participants	Number present
3 rd June 1998	Nutrition field workers	6
23 rd June 1998	Community health workers	7
8 th September 1998	Participants	6
5 th November 1998	Participants	26
10 th November 1998	Community health workers	5
3 rd December 1998	Nutrition fieldworkers	15
5 th February 1999	Women & community health workers	26

Note:

Participants refers to both women and community health workers.

Information in Table 4.4 shows that all the key persons in this study participated in the focus interviews.

In-depth interviews

In-depth interviews were held with two community health workers, four participants of the community child growth monitoring program and one person from Sustainable Agricultural Community Development Program (SACDEP), one of the collaborating non-government organisations. These interviews were held in the venues for the persons involved as stated below:

SACDEP: In one of the rooms in the office premises

Participants: In their individual homes

Community health workers: In the hall where growth monitoring activities take place.

Although the in-depth interview guides were prepared and used (Appendices K and L), the interview did not follow that order but proceeded in a natural manner and covered what I thought was necessary to respond to the research questions. I took notes during these interviews. Focus of the interviews was on the history of the program and specifically nutrition education, perceptions of nutrition education, future plans and benefits of the nutrition education activity. These in-depth interviews allowed the people to speak for themselves about their perceptions and views on nutrition education communicated through the child growth monitoring program.

Observations

Observation was considered appropriate as the strengthening of participation was meant to increase not only the people's own knowledge and understanding of nutrition education but to lead to making decisions about the program. This approach was also

considered appropriate because nutrition education sessions in the child growth monitoring program take place on a monthly basis. Information was, therefore, obtained on a regular basis over a period of nine months.

Observations provided a check for inconsistencies and discrepancies that may have been due to forgetting or verbal responses from the interviews that may have been incomplete. They helped establish whether what people said was a reflection of what they did or not. Observations composed a major part of the study. I began as an onlooker/observer at the initial stages of the research, and gradually became an observer/participant and participant/observer as the study progressed.

Observations were made from entering the field during every contact with participants of the child growth monitoring program in the community. This was during informal meetings, interviews and child growth monitoring sessions. The purpose was to understand the context through personal experience, observations and talking with the participants. I took part in all the observations while the nutrition staff attached to Ngoliba health centre was an observer in six out of the eight sessions. One counsellor attached to the health centre responsible for prevention of Acquired Immune Disease Syndrome (AIDS) was an observer in one session and the District Nutrition Officer observed in one session.

Observations of the child growth monitoring sessions were planned to examine in detail the process of nutrition education so that it could be described adequately. This was

necessary to provide detailed descriptions that were factual, accurate and to avoid irrelevant information. Observations yielded information about the nutrition education activities and sequence of the activities, how the people inter-related and qualitative analysis of the setting.

During the child growth monitoring sessions, the events included the sequence, introduction, people present at beginning, what was said at the start, who did what, response and reactions of participants, what and how participants engaged in the activities. I made notes on the feelings and emotions people evidenced, distractions and enablers in the process, how each session started and closed, and how participants reacted to the closure. How completion of one activity related to the next activity was also recorded. Observations provided data that described the context, activities that took place and the meaning of what was observed from the perspective of those observed. Observations were important in understanding what transpired in the child growth monitoring program and how nutrition education was conducted. Brief notes were made during the observation sessions which were later expanded into field notes.

One can be a non-participant or a participant observer. A non-participant observer takes on a position in relation to participants which does not disturb the usual function and behaviour of a group, whereas a participant observer takes part in the activities of the group (Touliatos, & Compton, 1988, p. 143-144). I made observation as both a participant and non-participant in the natural setting of nutrition education activity in this study.

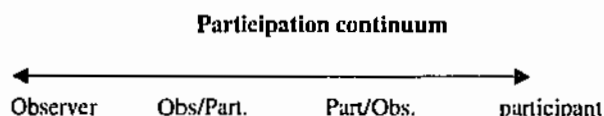
Participant observation

In the first part of the fieldwork, I was mainly a non-participant observer. The purpose of this was to understand the actual nutrition education process at the community level so that the participatory approach could be appropriately incorporated. I was in this capacity and gradually moved to observer as participant to participant as observer according to Babbie, (1982, P. 208-210) as the study progressed. I then directly took part in the nutrition education process in the latter stage of fieldwork. The nutrition education sessions gave information on organisation of the education materials, topics and the participation of the women and community health workers in their education process. I moved between observer-participant and participant-observer as found appropriate for me. This was necessitated by the fact that I was not to influence what the outcome of participation would be, but rather to facilitate members' participation. This sometimes caused conflict as the more I participated, the less I tended to observe and the more I observed the less I tended to participate. Observations were mainly of the group activities than the individuals.

As a participant, I was engaged in the education process as a facilitator to reinforce participation. I took part in the discussions, and promoted participation of the women in making contributions during the discussions. During this period, the preliminary findings and how to increase participation of all members in nutrition education during the child growth monitoring sessions were discussed. The participants were aware that observations were being made.

While I took a critical approach to the research, it was necessary to have some method of organizing the reality and therefore the need for observation guides (Appendices M & N), on relevant concepts. Observations were also made of things that I expected to happen but did not happen. In this case I observed the whole process of an activity and noted any perceived gaps.

Throughout the study, I moved back and forth along the continuum of participation. According to Dane (1990, p. 158), the continuum of participation is a complete observer, then observer as participant, then participant as observer and lastly as a participant.



Note:

Obs/Part: refers to observer as participant

Part/Obs: refers to participant as observer

According to Jorgensen (1989, p. 58), during the observations, people have a tendency to involve one especially to contribute expertise or assist in some way. This was true in my case and I tried to be involved as seemed relevant so that I could not distort the findings of the participatory process. I took field notes throughout the observation sessions.

Informal conversations, meetings, records and field notes

Data were generated during informal conversations. Such information contributed to understanding what was happening. The questions asked were not determined in advance

but emerged during the activities and informal discussions. This was in instances such as: while walking with the nutrition staff, mothers and community health workers to different households, or when walking with participants before or after the nutrition education sessions and issues relevant for the study were voiced. Such comments were noted as field notes. Afterwards when we engaged in normal conversation this was further discussed and provides some of the voices in the study.

Meetings with the participants provided data for the study. Three such meetings were held between November 1998 and February 1999. In one meeting, participants discussed views together on strengthening participation in their program. During another meeting, persons discussed ways of increasing their incomes so that they could have sufficient food at all times. A third meeting was held to discuss the preliminary findings and discuss what the participants would like to see take place in their program.

Book records kept by the community health workers were analyzed. The study of the records helped see what actually was recorded, a background of who had participated in project previously which could not be easily obtained by the interviews and focus groups. Records provided information on attendance. Specific details of data recorded and a comparison of the records and what was actually done.

Brief notes were openly taken during the child growth monitoring sessions, open-ended interviews and the focus group interviews. This did not seem to disturb the participants because they knew I was undertaking a study. The brief notes included the questions

asked, the comments made and the key words used. Field notes provided what was observed and contain what people said. They gave descriptive information on what was observed, quotations from people, feelings and reactions, and field generated insights and interpretations. Actual words that were used were noted as direct quotations. These provide the voices in this thesis. Comments on what was observed were also noted. Field notes permitted me to return to observations during data analysis after fieldwork. Records of experiences were kept in a diary form in a notebook.

Field notes also indicated my feelings, reactions and reflections on what was taking place. Non-verbal communication and behaviour responses were also noted. Expanded field notes were made from the brief notes. At this stage, comments, details and impressions made were added. Questions that came to mind during the write up of the field notes were noted and addressed during the next visit. These notes provide the in-depth description and analysis of participation that was investigated.

Language, translation and transcriptions

The language used during the data collection in the field was mainly *Kikuyu* in addition to *Kiswahili* and *Kikamba* that the population speaks. Using the language of the participants' culture helped build rapport and people could express themselves comfortably. The meaning and symbolism of the words used was, however, a challenge to note taking. I speak and I understand *Kiswahili* well. However, although I speak and understand *Kikuyu* and understand *Kikamba*, the expressions of different words and phrases had to be learnt. I noted most of these in the vernacular as it was stated and got

the meaning during the actual activity process or afterwards as found appropriate. It was essential to capture the precise language used so that what was recorded reflected the participants own terms and meaning.

Data collected from the open-ended interviews were translated and recorded in English or the vernacular. Data from the focus group interviews were tape recorded in *Kikuyu*, *Kikamba* and *Kiswahili* as used during the discussions. Later, these were translated and transcribed into English to facilitate further analysis. An example of a transcript in English is indicated in Appendix Z. Great care was taken with the translation of terms and concepts. Information was reported back to participants during the focus groups and at the end of the fieldwork to ensure that what was said was understood as the participants intended. Participants' verbatim extracts were sometimes re-framed or summarised in order to have them understood as the participants intended. I did both the transcriptions and translations myself and checked emerging themes with participants in subsequent meetings. Some editing of recorded interviews was done to ensure clarity of flow of the discussions.

Reliability and validity

Reliability as regards to the consistency, stability and dependability of the data collected was taken care of in various ways. Open-ended interview items were asked in such a way that they looked for clear specific data, which if repeated would give similar results. Focus group interview guides and observation guides were prepared by myself to obtain detailed information to capture the participatory process. The study was designed so that

repeated observations of the same phenomenon could be observed over time and this contributed to reliability of the study. Undertaking the study in the natural working environment of the nutrition promotion efforts and within a duration of nine months was long enough to collect data that were reliable.

Data that are not only reliable but true and accurate were considered in the study. In order to provide a comprehensive and rich picture of the participatory process at the community level, triangulation of research methods and data collected were made. Multiple data sources and multiple methods gave both qualitative and quantitative data. Combinations of methods of data collection contributed to validity and to crosscheck the findings. Participants reviewed a summary of the focus group interviews with opportunities for revision as a validity check.

The design of the study so that repeated observations were made means the conclusions on the effects of participation can be made with some degree of confidence. Repeated observations allowed for detailed analysis of data and provide information on the trends on the participatory process and how nutrition education is promoted through the child growth monitoring program at the community level. To ensure the validity of collected data, some of the emerging categories and themes were discussed together with participants in a meeting at the end of the fieldwork with opportunity to have their input. For the nutrition field workers, these were mainly from the preliminary analysis (Appendix V) of the open-ended interviews. In the case of the women and the

community health workers, the preliminary analysis (Appendix W) was based on both the open-ended interviews and the observations.

Preliminary analysis of data was carried out so that participants could give their views on the emerging themes. This was important to discuss findings with key players and share their experiences of the research before leaving the field. Results of this were used to make a tentative curriculum plan for nutrition education in the program for the coming year. The results led to starting an income generating activity to increase people's earning potential. Thus, the participatory process allowed the results of the study to be utilized by the participants. This helped the promotion of nutrition that conforms to the criteria established by the people themselves.

Leaving the field

Data relevant to provide insight on nutrition education had been collected by October 1998. By February 1999, adequate information that explained participation had been collected. Most of the new data collected tended to confirm the categories and codes that were emerging. The participatory process, however, is a dynamic one and new things constantly arise. One of these was in relation to development of education materials to support the curriculum that had been developed. This point was addressed by adopting teaching posters that could be suitable for the situation. Materials development for the curriculum required finances that were not available at the time and it was not possible for this to be pursued. In essence, I had enough data to answer my research questions.

Extra data would just have confirmed that or addressed new research questions. I, therefore, left the field when I could confidently address my research questions.

Considering the participatory nature of the research, the materials development was important. However, it is likely that other equally important aspects would have come up to be addressed. My point of departure from the fieldwork was that it was a practical timing. Of importance is the fact that I was doing my PhD thesis with a time limit, therefore, I could not stay in the field forever experiencing participation. Ending of the fieldwork was not a surprise to the participants as they were informed of my time limits at the start of the study and during the research process.

Data analysis

Data collected through the open-ended interviews were analysed during the fieldwork using descriptive statistics. These data indicated the socio-demographic characteristics of the study participants, gave a historical background of the child growth monitoring program and perspective on nutrition education of the women, community health workers and nutrition staff. This analysis also indicated what the participants wanted to see take place in the child growth monitoring program. Collection of qualitative data and part of its analysis were carried out simultaneously.

The units of data analysis appropriate were the nutrition staff, the child growth monitoring sessions where nutrition education is undertaken and the participants of this program in the community. These yielded relevant data that responded to the research

questions investigated. Organisation of data was undertaken according to how and when they were collected. Data from the observations and focus groups were translated and transcribed as soon as it was possible in order to minimise error. What was said was recorded verbatim. Based on the fact that the data collected used a variety of methods, the analysis of the data also varied. An inductive analytical approach was used. Descriptive statistics using SPSS program were used to generate frequencies from some items from the open-ended interviews. The qualitative data were analysed according to codes and categories developed in line with the emerging themes.

Codes were developed from data collected through the observations, focus group interviews, meetings and conversations. Some of the codes were used to generate new data. By September 1998, some of the codes and categories were emerging. I had noted some of these in my field notes as "motivation of community health workers", "food security and generation of incomes a priority" and "field nutrition worker motivation".

The child growth-monitoring sessions were more the unit of observation and analysis for the participatory process than the individual participants. However, individuals were the unit of analysis on nutrition education promoted. Table 4.5 gives a summary of data source and analysis procedures. It indicates the variety in data collected. These data were prepared for analysis in relation to how they were collected. Apart from data from the open-ended interviews that I prepared by summarising them, most data were prepared for analysis by translating, transcribing and coding.

Table 4.5 Summary of data source and analysis

Data source	Purpose	Form of data	Preparation	Data analysis
Open-ended interviews	Historical background Knowledge Experiences Expectations	Descriptions	Summary data	Descriptive statistics
		Quotations	Translate Transcribe Code	Develop emerging themes
Observations	Experiences Decision-making skills Interpretations Reflections	Notes	Translate Transcribe Code	Develop emerging themes
		Quotations Reflections		
Focus group interviews	Expressed needs Attitudes Experiences	Quotations	Translate Transcribe Code	Develop emerging themes
		Non-verbal Reflections		
In-depth interviews	History Perceptions Expectations Experiences	Notes	Translate Transcribe Code	Develop emerging themes
		Quotations		
Meetings	Decision making	Notes	Translate Transcribe Code	Develop emerging themes
		Quotations Non-verbal		
Conversations	Explanations Cross-check	Notes	Translate Transcribe Code	Develop emerging themes
Field notes	Reflections Experiences	Notes	Transcribe Code	Develop emerging themes

Table 4.5 indicates the variety in data collected. These data were prepared for analysis in relation to how they were collected. Apart from data from the open-ended interviews that I prepared by summarising them, most data were prepared for analysis by translating, transcribing and coding. Data from the open ended-interviews were analysed using SPSS computer program to yield frequencies that explain the historical background of the program and the socio-demographic characteristics of the participants. I coded qualitative data and analysed it to explain nutrition education and the participatory process phenomenon under study.

Development of codes, categories and themes

During the observations, events and emerging events were selected and recorded. These were coded into themes. The events selected were the nonverbal behaviours and how the words/language were said. Events were recorded in form of field notes. Coding was later done where some meaning was attached to the recorded behaviour. For example laughter to indicate acceptance, or spontaneous clapping of hands to suggest approval of an idea, or crying of the child to suggest some form of discomfort or key words used to indicate an idea.

All data in edited transcriptions were coded. Some of the coding took place during the fieldwork. However, due to the translation of most of the data, most of the coding was done at a later date. I transcribed the whole field data separately according to the dates when data were collected and in relation to how it was collected. Therefore, I had separate transcriptions for data from the open-ended interviews, observations, in-depth interviews, focus group discussions and field notes. Informal conversations were transcribed according to dates and any significant activity that took place at the time. Dates on which data were generated are indicated in the verbatim quotes in this thesis.

Codes, categories and themes were developed progressively throughout the data collection and analysis. This was:

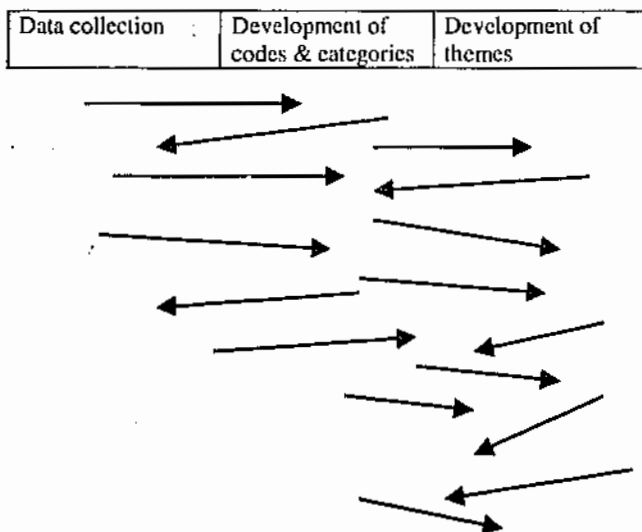
- In the field as the codes and categories emerged.
- During making of translations
- During the writing of transcriptions

- During interactions with my supervisors as we discussed about my data
- Sharing my research progress with other postgraduate students

Codes, categories and themes were noted in a separate notebook as they emerged.

I translated and transcribed data myself, therefore, was very familiar with it. Later as, I went through the categories, I grouped them together in a logical sequence according to the emerging patterns in themes. These themes were drawn in relation to the research objectives of the study. I examined each transcript separately to identify the major themes. There was movement to and fro as I did the analysis. The interaction between data collection and data analysis is shown in Figure 4.1.

Figure 4.1 Interaction of qualitative data collection and analysis



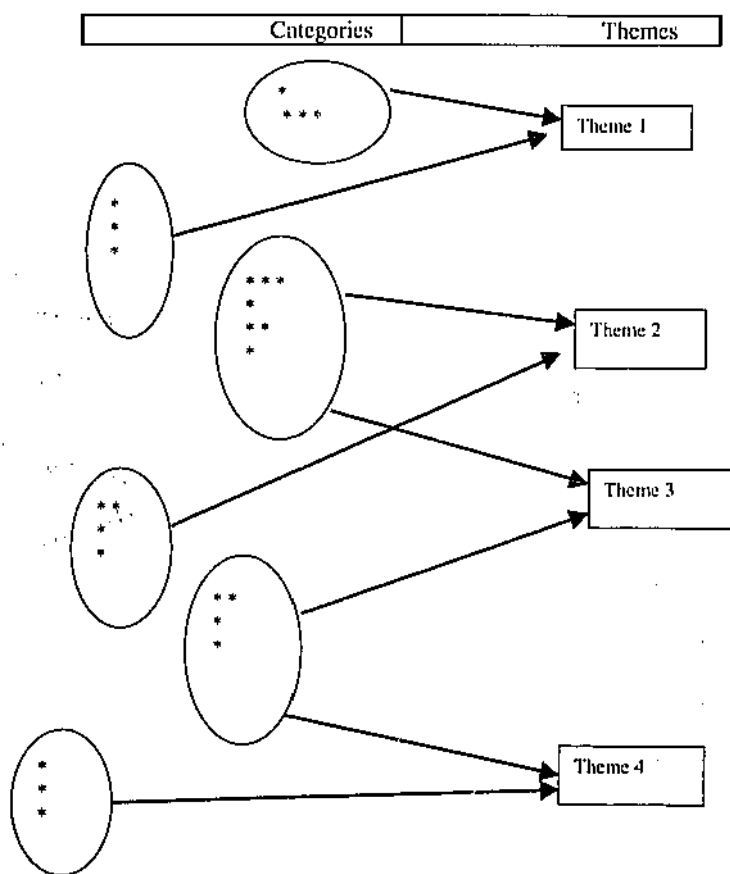
Later, I took one transcript and read it through several times. Then, I selected several categories related to one sub-theme and as I went through each transcript, I highlighted these categories. I did this for all the transcripts on one sub-theme and then repeated the procedure for the next until I exhausted the sub-themes that developed. During this process shifts and movement of categories to and fro from one theme to another took place. It was a cyclic process. How the themes were developed from the categories is shown in Figure 4.2 and Appendix Y.

Data were organised in a logical sequence to develop themes according to emerging patterns as many times as appropriate. Both differences and similarities in the emerging themes were noted. For each theme, I 'cut' and 'pasted' the categories in one Word file. I went through each file on a theme separately and re-read it several times. I then wrote out the meaning I made out of a specific theme in my own words. After writing, I went back to the file on the same theme and selected verbatim quotes that explained or exemplified the meaning I made of the theme. This was repeated for subsequent themes until I exhausted possible categories and themes.

Interpretation

Coded data were interpreted to describe the events that took place. Concepts described are presented in narrative with examples from data to provide insight as when the idea emerged, the trend of the idea and its location in the data set. Data are described in detail to provide a picture of the reality of the experience of the participatory process by myself and the research participants.

Figure 4.2 Development of themes from categories



Note:

It should be noted that some categories fell into more than one theme. An example of how specific themes were developed from categories is shown in Appendix Y.

Analysis aimed to provide an accurate, detailed, complete and informative profile of the participatory process. Voices are used to show this. As the patterns in themes emerged, I interpreted the observations and noted further categories. During the process, I confirmed and explained data as I searched for more data. Data from the open-ended interviews is presented to provide a historical reflection of how nutrition education has been promoted in the district by nutrition field workers and in the growth monitoring program by community health workers and women. Language used during data collection was not English. Discussions of findings with the research participants before leaving the field were meant to address, partly, the limitation of language translation and interpretation.

Summary

A multi-instrument research design was appropriate to describe the participatory process employed in the study. I set the initial research agenda and the participants of the program contributed to the agenda. The research process was agreed upon by consensus together with the participants and myself through initial discussions and thereafter through continuous dialogue. Triangulation of methods of data collection provided data that were rich, appropriate to answer the research questions and sensitive to the social culture of the participants. Research instruments were initially developed by myself and reviewed together with the community health workers and nutrition staff to incorporate participants' interests in the research.

Ethical considerations were taken care of from the research design stage and throughout the fieldwork. These included official authority to conduct research, consent from the participants and issues of confidentiality. Building trust and rapport took a considerable time at the start of the study. Trust was sustained during the research process by keeping confidences of participants to myself.

Data collection and part of the analysis were carried out concurrently in a cyclic manner during the fieldwork. Undertaking the study in the natural working environment of nutrition promotion efforts and within a period of nine months was sufficient to collect data that were reliable. Triangulation of research methods and data that were collected contributed to validity and to crosscheck the data. Participants reviewed a summary of the focus group interviews as a validity check. To ensure validity of the data, emerging categories and themes that had developed at the end of the fieldwork were discussed together with participants with opportunity to have their input. I took field notes throughout the period of fieldwork and these provide what was observed and the verbatim quotations from the participants.

Preliminary analysis of data was done to give participants opportunity to give input on the emerging themes. The participatory research process is a dynamic one giving rise to new developments in the research. By the end of the nine months of fieldwork, I had adequate information to address my research questions. I, therefore, left the field when I could confidently address my research questions.

Data collected through the open-ended interviews were analysed using descriptive statistics. Codes were developed from qualitative data. Codes, categories and themes were progressively developed throughout the data collection and analysis. This was in the field as the codes emerged, during the translations and transcriptions and during the process of interactions with data during further analysis after the fieldwork. Concepts developed from the data were synthesised and interpreted to respond to the research questions. These concepts are presented in narrative form to provide insight of the experience of participation. Data obtained are described to obtain a picture of the reality of the situation as experienced by all who participated in the research. The participatory process employed in study and in the program ensured that participants took part in all the major phases of the study based on their abilities. How participation was undertaken and the roles played by each group of participants is discussed in Chapter Five.

CHAPTER FIVE

PARTICIPATORY RESEARCH PROCESS: WHAT WAS IT?

Participatory research engages participants to take an active part in decision making and actions during the entire research process. It involves working with people or groups as co-researchers (Reason, 1994; Fals-Borda, 1991). The process values genuine collaboration which is also culturally rooted (Reason, 1994, p. 328). The key to the process of participation is dialogue. It is argued that people play a key role in setting the agenda, data gathering and analysis and controlling the use of the research outcomes (Reason, 1994, p. 329, Fals-Borda, 1991, p. 7). Participatory research is meant to collect data that seek to release people's knowledge, thoughts and voices that develop critical analysis of their situations. Fals-Borda & Rahman (1991) state that it is a process of enlightenment and awakening of the people. However, research on how the process takes place in an established growth monitoring program is unknown. The dynamism of the participatory process adopted in this study is presented in this section. Participants in the child growth monitoring program were engaged in deciding on what would take place in the research and the program and how to implement what they suggested.

The main strategy of the participatory efforts was to have mothers and community health workers participate in the child growth monitoring program. They were to make decisions, plan and carry out the research and implement their program. This was based on their perceptions of what should take place in the program assisted by government health staff. The socio-demographic characteristics of the research participants is shown in Tables 5.1 and 5.2.

Table: 5.1 Socio-demographic characteristics of the participants of Ngoliba child growth monitoring program

Characteristics	Women N=21	Community health workers N=4
Age in years		
>19	1(5%)	-
20-24	4(19%)	-
25-29	7(33%)	1
30-34	5(24%)	1
35-39	3(14%)	2
40+	1(5%)	-
Total	21	4
Marital status		
Single	1 (5%)	-
Married	19 (90%)	4
Widow	1 (5%)	-
Total	21	4
Highest education level attained		
Primary	17 (81%)	2
Secondary	4 (19%)	2
Total	21	4
Number of children have		
1-2		
3-4	9	-
5-6	9	1
7-8	1	2
	17	1
Total	21	4
Religion		
Protestants	14 (67%)	3
Catholics	6 (28%)	1
Muslim	1 (5%)	-
Total	21	4

About 81% of the women participants were aged below 34 years and 81% of them had primary level of education. A majority of them, 86%, have four children or below although they are still in the reproductive age. A majority of the women, 95%, were Christians. Although one person was a Muslim, all meetings started and ended with a Christian prayer. Of the Ministry of Health nutrition staff in Thika District, 16 out of the

18 participated in the open-ended interviews (Appendix T). The other two were on leave during the time these interviews were held therefore they did not take part. However, all the nutrition staff participated in one or more of the focus group interviews for nutrition field workers (Appendix U). Table 5.2 shows the characteristics of the Ministry of Health nutrition staff in Thika District in 1998-1999.

Table 5.2. Socio-demographic characteristics of Ministry of Health nutrition staff in Thika District in 1998

Characteristic	Ministry of Health Nutrition field workers N=16	Percent
Age in year		
24-29	4	25%
30-39	4	25%
40-49	7	44%
50	1	6%
Total	16	100%
Marital status		
Single	6	38%
Married	9	56%
Widow	1	6%
Total	16	100%
Highest education level		
Primary	3	19%
Secondary	12	75%
University	1	6%
Total	16	100%

Above data show that half of the nutrition staff were aged below 39 years and the other half over 40 years. Of these staff 75% had at least secondary level of education. All the nutrition staff in the district are females. These are the personnel responsible for promotion of nutrition in Thika District in the Ministry of Health. From the outset, participants were involved in contributing to the research agenda and planning fieldwork for the research.

Organisation of child growth monitoring sessions

A study in the natural setting where the child growth monitoring sessions were held provided an understanding of the social context in which nutrition education is promoted and enabled me to experience how and what actually took place. This setting was more meaningful for participants to make decisions that would be relevant and beneficial to them. Ngoliba child growth monitoring has six community health workers who organise and manage the program. The women who come to the program are mothers whose children are aged between 6 months and five years. These mothers bring their children to be weighed once a month so that their growth and development is monitored at the community level. The attendance of both the mothers and the community health workers is on a voluntary basis. During these sessions, the community health workers assisted by the mothers, weigh the children. They discuss together the growth and development of the child and appropriate counselling is given to mothers based on the progress of their children.

At the start of the weighing sessions, a selected topic on health and nutrition is taught. This occurs mainly in discussion form. The community health workers are involved in primary health care in the community. They, therefore, make visits to the homes of community members and give appropriate advice on social and health-related concerns. In the words of one of the community health workers during the open-ended interviews: *"Sometimes mothers come individually at home to weigh their children...We teach mothers on some aspects of health and nutrition before weighing the children"* [23/10/1998]. The community health workers also sell medicine for minor ailments as

provided through the *Banako* pharmacy operated under primary health care. One community health worker noted: *"We sell medicines to people in the community for sickness like malaria, cough and pain"* [21/9/1998].

The child growth monitoring activity takes place once a month on a day agreed upon by both the community health workers and the mothers. Prior to strengthening participation in the program, open-ended interviews were held with mothers who took part in the program and initial observations of the program sessions. These were meant to provide an understanding on what and how nutrition education was conducted in the program.

These initial observations and interviews revealed that nutrition education is promoted by the community health workers, however, mothers do not make decisions on what takes place in the program. This was suggested by one mother when she said: *"We just come here and we are taught. We do not say what we should be taught or what should be done in this centre"* [8/9/98]. Mothers were also dissatisfied with the program and felt nutrition education alone in the program is not sufficient to promote nutrition well-being. The study then centred on decision making in the program. The focus of the participatory process is described with specific reference to participants (women and community health workers) of the child growth monitoring program that participated in the study reported in this thesis.

Decision making with respect to entry in the field and ethical concerns

During the initial meetings, the purpose of the research was articulated and consent sought. The purpose of the research to involve participants with no specific outcome seemed confusing to the participants at the start. At the university and government level, written consent was preferred whereas in this community, verbal consent was preferred. Participants tended to view signing documents which are not theirs with some suspicion. Verbal consent was therefore accepted.

Confidentiality of the results was an issue that generated discussions. Participants felt that their voices would be used in the research. However, they wanted to be identified as themselves not by using pseudonyms. Typical ideas on this was given by one woman when she said:

"I think you should not put false names for what we say. We are the ones taking part in the study not somebody else. I think it is not right to write what I say and give somebody else's name who does not exist as the one saying it. I am a Christian and I take that to be cheating which is not right for me" [7/7/98].

Another aspect was that related to the group process. The majority felt that what is done in the program is done by all those who participate. They felt the research should identify what is said as pertaining to the group consensus and not individuals specifically. This was shown by typical statements as voiced by one woman:

"When one person says something and we agree with it, all of us do not have to repeat the same thing but we can add to it. If you write the name of one person as the one who gave the idea, it is not fair as it shows that others did not say anything when in fact they did" [7/7/1998].

After discussions, we came to a consensus that I would use a quotation and state its origin by indicating the person who said it by their position in the program and the role they played in the research. This was by indicating whether it was a woman participant, community health worker or nutrition field worker who made the statement. The list of participants would, however, be given in appendices in this thesis (Appendices Q, R, S, T and U).

The issue of anonymity of participants is one that a participatory approach in a research must certainly address. The preference for the participants in this study may be very different from another. Participants preferred to be identified with the study as themselves. Participants' spiritual beliefs play a part in what they think is ethically proper for them and this should be respected. In addition, when a study is a collective one, such as this one, participants may prefer to have equal say in what is written and not have some stand out. What participants consider to be ethically proper was different from what is officially accepted as ethical in research or official government policy on ethics. This thesis, therefore, gives the voices of the participants according to the roles they held in the program and the study and the dates on which specific data were generated.

Participation requires a lot of patience before one can embark on the actual study. Entry point is a challenge. It can influence participation positively or negatively depending on how the participants associate you with how you get access to them. Access that I considered proper for me was networking with the government nutrition staff in Thika

District who have some influence on the child growth monitoring program. This worked well for identifying the research participants and access to the community. However, this was not so for one of the non-governmental organisations that the Ministry of Health collaborates with.

I did not know where the offices of this organisation were. The District Nutrition Officer took me there to introduce me to the organisation. We met one staff who said she could not talk about the program and I had to make an appointment with a more senior officer. I made several contacts to get the officer but was always told they were busy. Later, the nutrition officer explained why the delay. She said: *"I only understood last week why you have not been able to get to the organisation ... There might have been a misunderstanding that you wanted to investigate their work"* [18/9/1998].

After this, I tried thrice to contact the organisation but failed. Once after I made the appointment in person with the officer, I was rung by the secretary on the day of the appointment to cancel it because *"the officer had to go to the head office"*. I did not pursue their participation further because they were no longer involved in the program. I contacted the second non-governmental organisation myself. I had no problems with them participating in the study.

Point of entry determines the participation of all the actors depending on their perception of the researcher and the reason for their participation. The point of entry is critical and should be thoroughly investigated for a study of this nature. This is because, in a

participatory research, one does not just want to obtain research data from people but to catalyse people's participation.

Participation in the research process

The fieldwork engaged all participants in the research process. Table 5.3 shows when the observations were made during the child growth monitoring sessions and the number of participants who were present. Information from Table 5.3 suggests that after the open-ended interviews with the women in September 1998, attendance of both mothers, children and community health workers increased as from October 1998 to the end of fieldwork.

Table 5.3 Number of participants present during the growth monitoring sessions.

Date child growth monitoring session held	Number and type of participants present		
	Mothers	Children	Community health workers
8 th July 1998	15	15	2
7 th August	12	23	3
8 th September	4	4	1
9 th October	38	32	4
6 th November	33	27	3
11 th December	21	25	3
8 th January 1999	18	21	5
5 th February	26	26	5

During some of these sessions, children whose mothers were not able to come brought in other children for weighing as it is indicated in Table 5.4. It shows that mothers valued the growth monitoring of their children such that when they were not able to bring their

children, it was important enough for them to send their older children (all who were girls) to bring their younger sibling for growth monitoring.

Table 5.4 Number of children who brought other children for the growth monitoring.

Date	Number of children who brought other children
7 th August 1998	1
9 th October 1998	2
11 th December 1998	2
8 th January 1999	1
5 th February 1999	3

Of concern is that apart from the months of September and December 1998, the other three were times of school term. This means that older siblings either missed school on these days or were not attending school in order to bring their younger sibling for weight monitoring. Unfortunately, I only reflected on this after the fieldwork. This is an issue that may need attention to ensure that the girl child does not miss their education activities to participate in child growth monitoring programmes. In a few cases, children were brought in by neighbours who had also brought their own children.

Although participants were engaged in the research process, there were instances in the process when the participants felt they could not take part. A case in point was in the curriculum development process. Although participants agreed on the topics they would like to see covered in the program, when it came to the actual development, it was left to the community health workers and committee selected for income generation. This is in

agreement with other findings that participatory research can only make people do what they are ready to do, not what they are not prepared to do (Maguire, 1993).

Participants took part in the entire process of setting the research agenda, planning field work, data collection, data analysis, discussion on findings and recommendations but in varying degrees. The willingness to participate for the government nutrition staff appears to have been expectations that I would be a resource. This was voiced by one of them by: *"How will we be working together?"* [3/6/1998] Another during the same meeting said: *"Come with new ideas and help us to improve"* [3/6/1998]. The participants on the other hand felt I had come to help them as indicated by a typical statement from one woman: *"We have come to be visited so we should be willing to work together so that we can be helped"* [7/8/98]. Table 5.5 shows the degree to which different actors participated in each phase.

Table 5.5 Participation of actors in the research process

Actors	Setting agenda	Planning for fieldwork	Data collection	Data analysis
Women	*	*	**	*
CHWs	*	**	**	*
NFWs	*	*	**	*
self	**	*	**	**

Note:

* or ** indicates the degree to which participated in making decisions in the activity. ** indicates more contribution than *.

CHWs refers to community health workers

NFWs refers to nutrition field workers

Table 5.5 shows that community health workers played a major part in planning for the fieldwork and data collection. The participants did not take part in the writing of the

thesis. However, they gave their views on the research outcomes from their perspective. This was during the focus group discussions held with the nutrition field workers on 3rd November 1998 and the meeting with participants of the program on the 5th February 1999. How participants took part in the various phases of the research process follows.

Formulation of the research agenda

Initially, I formulated the research problem, alone. My interest was on how nutrition education is promoted through the child growth monitoring program at Ngoliba and what would be the results of increasing participation of women in making decisions in the program. I was undertaking my PhD studies at Edith Cowan University, Western Australia from 1997. As part of my thesis requirements, I had to have my proposal approved before I could go to the field. This meant I had to identify the research problem and appropriate methods of answering the research questions before I went for fieldwork. I, therefore, identified the research agenda alone but gave the participants opportunity to input in the agenda.

Although a participatory research requires that the researcher and participants determine the research agenda at the beginning, this may not be practical in some occasions like that involving a PhD work outside the research context. Setting the agenda together raises participants' expectations. The requirements of the academic research process may make this invalid in case a proposal is rejected by the academic institution. In my case, I found it appropriate to set the agenda and have participants give input in the research.

This worked well, but, it would have been very challenging if the participants interests were very different from mine.

In order to ensure that the participants gave input on what they wanted, I was open and clear about my research agenda, process and time limit. For example in a meeting with the community health workers, I explained my research questions in the following manner:

"I would like to know how you carry out nutrition education in your child growth monitoring program. To do so, I will need to find out how the program started, how you have been involved and what benefits you have got from the program. I also want to find out what will happen if everybody who takes part in the program is engaged in making decisions on what goes on in the program" [23/6/1998].

A similar version of this was used while explaining the research agenda to the women participants and in subsequent encounters when I explained what I was doing. After clarifying issues related to my agenda, I asked them: *"What would you like the study to do for you and for your program" [7/7/1998]*? The participants did not indicate what they wanted immediately. The participants seemed to want me to go on with my research agenda without their input. I encouraged them to indicate what they wanted the research to do as it was their program and gradually in subsequent meetings the participants contributed to the research agenda.

Contribution to the research agenda

The community health workers' contribution to the research agenda was indicated by one of them as: *"Ask the mothers why they do not always bring their children for weighing. Let them say what they want so that we can help them"* [23/6/98]. Another one said: *"Find out why people sometimes do not come so that we know what to do to help them"* [23/6/98]. The women took a longer time to state what they wanted to be done in the research and program.

One community health worker asked for the women's input in the research agenda in this manner: *"What can we do to help each other? What would you like the research to do for you in this program and how?"* [7/7/1998]. At the end of the meeting when women did not voice their views, another community health worker stated:

"Let us go home now. You discuss what you want to do and we will review it in the next meeting. Think through what you would like to see take place in this weighing centre and say what you want to be done in it. Do so in the next meeting so that we proceed with the program and study together. We want you to say what you want to do in this weighing centre" [7/7/1998].

Eventually some women indicated what they wanted the study to address. The typical response of women on the agenda was indicated by one of them as:

"Let us discuss together what we can do to help ourselves so that we do not just weigh children. We should do more to improve ourselves. Ask the mothers what they would like to do so that this program can help us to feed our children and ourselves well" [7/8/1998].

However it was the meeting held on 8th September 1998 that most women gave their views on the research agenda. One woman stated: *"There is drought for a long time sometimes in this area. At such times, there are no vegetables to feed the children. What can we do to have vegetables always?"* [8/9/1998]. The participants discussed the issue of food security for some time. Another woman stated: *"How can we get loans"* [8/9/1998]? Another said: *"We should do what can give us some money. If we have an income generating activity, then we can have money. Let us meet and discuss how we can have money through this weighing centre"* [8/9/1998]. Another one said: *"Ask mothers what they would like to see take place in the program and let us do what we agree on"* [8/9/98].

Hesitation of women to contribute to the research agenda may be in part due to the fact that they have been used to be told what to do in the program and may, therefore, feel uneasy when told to suggest agenda in their program. Other remarks have shown that time is required to explain the participatory process so that people do not feel confused and dissatisfied when they fail to receive advice and direction they are used to and to let them experience the participatory process (Ewles & Simmet, 1996). Women's contributions to the research agenda were incorporated in the open-ended interviews that took place later in September 1998. This was indicated by: *"What nutrition concerns would you like to see addressed in your program?"* and *"You can make any comments you like related to your program or anything else"*.

The government nutrition staff made input in the research process. At the child growth monitoring level, on 7th July 1998, one of them talking to the participants said:

"We have called you to know what you do and how we can work together on this study. Nowadays we let the people themselves decide what to do. This is because the government these days want people to say themselves what to do. The government is not to tell them but we come in to help people by providing technical support on what they want to do" [7/7/1998].

The District Nutrition Officer, one nutrition fieldworker, community health workers and myself later discussed how to incorporate the views of everybody in the open ended interviews. The research agenda for the participants was different from mine in two ways. The women and community health workers aims were to see obvious tangible benefits and improvement in their program while mine was to provide insight on how the program was conducted and how the participatory process emerged and its outcomes.

When participants are not accustomed to being requested to contribute their opinions to the agenda in their program or work, they tend to find it confusing when suddenly they are told to contribute to the agenda. According to Freire (1993), the objective is to arrive at action based on the reality of the people, therefore, a facilitator of critical thinking must be prepared to work with and alongside people. In order for participants to comfortably contribute to the agenda, time is required to build trust and confidence. The researcher's challenge is to ensure this is well handled for it determines the entire research process.

Participation in planning of fieldwork

The fieldwork was planned on a continuous basis together with the District Nutrition officer, community health workers, the women and the nutrition field worker plus myself. In the first planning meeting, the community health workers, nutrition field worker and myself discussed and agreed on how and when to meet the women. A date and appropriate time were set. The community health workers were to inform the women to attend this meeting.

During the child growth monitoring session held on 8th September 1998, the planning of the open-ended interviews was done. The interviews were to be held in the women's homes, the community health workers were to inform the women on the dates and times of meetings. One of the community health workers, nutrition field worker plus myself were to go to the women's homes together to collect data. The community health worker planned which of them was to take part in the collection of data in the women's homes on different days as agreed by them. Fieldwork was planned as the research progressed. It was an open planning process whereby participants were encouraged to express their views.

Community health workers made decisions on when and how to carry out the open-ended interviews. In one such planning session one community health worker said:

"We should go to the homes starting at about 10:00am as the mothers will have collected water and done some cleaning. We (community health workers) shall inform the people whom we are to see so that they are available on the day we visit them. We shall plan so that at least one of us is available on each day" [8/9/1998].

During the focus group interviews, they were to moderate the discussions. They were to organise and lead all the discussions and meetings during the research. The women made decisions on the dates and times of the open-ended interviews, focus group interviews and meetings. They were to select the moderators for the focus group interviews. The District Nutrition Officer was to introduce me to the nutrition fieldworkers and the community health workers. She was also to participate in all initial planning meetings. The nutrition field worker attached to Ngoliba Health Centre was to go to the homes of the women for the open-ended interviews, pinpoint government's position on the research and the government's policy on community participation. She was also to be an observer during the focus group interviews and to participate in the child growth monitoring sessions. I was to highlight information to collect, ask questions during the open-ended interviews and to record important points during the focus group interviews, meetings and child growth monitoring sessions.

The planning phase of the fieldwork was carried out throughout the study but the major thrust of collaborative planning occurred at the start of the study. Participation of the participants at the start of the study in making decisions on what the study was to achieve and how to carry out the research propelled actors to actively participate in all phases of the study. Their participation in designing the fieldwork led to data collection methods that were culturally appropriate. One of the women during the last focus group of the fieldwork when reviewing the research process strengthened this point. She said: *"Your visits to our homes to see the actual situation pleased us very much and even our families"* [5/2/99]. Planning may flow smoothly from setting the research agenda if

enough consideration is paid to reflect on the agenda and for all actors to accept the plans that are developed as flexible and open to change if need be.

Participation in data collection

Data collection and analysis were, to a certain degree carried out simultaneously. It is, therefore, not easy to separate some elements of these two processes. However, the specific elements related to each and how all actors participated are given. During the data collection process, the community health workers played several functions. During the open-ended interviews, the community health worker who took us to the women's homes introduced me and the nutrition field worker to the women and other persons in the households. She explained the purpose of the research and our agenda for coming to the homes. The community health worker clarified some questions appropriately and at times probed for more explanations.

During the focus group interviews, the community health workers collectively organised the venue for the interviews. Four of the community health workers moderated at least one focus group interview. The venue and arrangements for the meetings was organised by the community health workers. One of them was the leader during these meetings. They also collectively organised and carried out the child growth monitoring sessions. Women participated in the open-ended interviews, focus group interviews and child growth monitoring sessions. They made suggestions on what topics to be covered in the program and the type of information to collect during the study.

The District Nutrition Officer explained the government's policy on community participation and primary health care to the participants and nutrition field staff. In a meeting with the participants she said: *"Now the government does not want to plan for people what to do. It wants the people themselves to decide what to do and how to go about doing it. We in the government will support what you are doing"* [9/10/1998]. She was an observer during the child growth monitoring sessions. She provided resources in the program during the research. These were weighing scales, weighing bags and vitamin C supplements for the mothers and children attending the child growth monitoring sessions. She also introduced me to all nutrition staff and organised the focus group interviews with them.

During the data collection, the nutrition field worker went to the women's homes and helped clarify some items of the open-ended interviews in the local language. She explained the meanings of the local phrases to me in English. During the focus group interviews, she was an observer, recorded some of the interviews and participated in the interviews. During the observations in the child growth monitoring, she was an observer, took part in the sessions and recorded and explained meanings of the growth chart and some nutrition information. She pinpointed the governments' position on participation during the open-ended interviews with the women and the child growth monitoring sessions.

I asked the questions and recorded the responses during the open-ended interviews and the focus group interviews and gave reflections on what was discussed at the end of the

interviews. During the child growth monitoring sessions and in the homes of the participants and meetings, I made observations and recorded them in form of field notes. I collected data using the in-depth interviews and conversations. Based on the data collection process experienced in this research, it can safely be said that once the research agenda and planning has been undertaken collaboratively in an open manner, participatory data collection is very fulfilling for the participants and the researcher.

Participation in data analysis

The cyclic nature of the data collection and analysis meant that the actors in the research validated data as we went along. Further data collection during the next sessions was based on insights from previous analysis. Specific roles were played by different actors in the analysis. I carried out preliminary analysis of the information from the open-ended interviews and translated and transcribed data from the observations, field notes and focus group interviews. In addition I did the coding, development of categories and themes that emerged. Synthesis of themes was also done by myself. During discussions on the research with my supervisors and postgraduate students further categories and themes also came up.

Participants and myself continuously made reflections on the study during conversations and discussions during the child growth monitoring sessions. We discussed the preliminary findings together during which the participants verified what the data revealed. After data were collected from the women using open-ended interviews, discussions were held on October 1998 on the views of participants about the data

collected. Based on this discussion, decisions were made on changes to be incorporated in the program. Notable action on income generating activity was arrived at this time. Specific meetings were held on 3rd December 1998 with nutrition staff and on 5th February 1999 with community health workers and women to discuss preliminary findings and reflect on our experiences and what we had gained from the research. Based on the outcome of the meeting with participants of the program, a curriculum was developed for the program in 1999.

An indication of the cyclic nature of the data collection and analysis in this participatory research is shown by what one community health worker said in one meeting. After giving a brief on how the child growth monitoring program started she continued:

"Remember Plan International gave us food whenever we came to weigh children previously. But when Plan stopped coming and giving us food, we also stopped. SACDEP trained us and we started weighing children again and many of you were coming. They gave us food twice. But when they stopped, we eventually relaxed and some people stopped coming. Now during the data collection when we came to your homes, all of you said that it would be better if something else was done not just weighing the children. Now say what you would like to do so that we can have the program going on and to sustain ourselves" [9/10/1998].

This is one of the instances that reflects how data analysis by participants was ongoing during the data collection process.

Action based on the preliminary analysis

Two significant activities were decided upon after the initial data analysis and reflection on what had taken place during the study. One was to start an income generating component in the program and another was development of a curriculum based on

participants' suggested topics. The community health workers and the women participants took part in the income generating activity. They were unwilling to have the nutrition field worker and myself take an active role in this activity. To effectively implement the income component, the participants decided to set up other meetings to discuss issues related to it. Overall, the women selected their own committee, officially registered the group in order to handle money matters as it is officially required by the government, set their own rules and regulations to govern the operations of the activity and were to open a bank account for the activity.

Another major action was the development of a curriculum to address the expressed needs of participants for specific nutrition and health information. The women suggested the topics to be included in the curriculum. It was agreed that the development of the curriculum be undertaken by the community health workers and the committee selected to handle the income generating activity. I facilitated this workshop.

Participation in discussion of findings, recommendations and report writing

The participatory nature of this study requires that participants take an active part in all the phases of the study. The nature of the participatory process through reflections and action allowed for discussions of the results and their utilisation during the meetings, growth monitoring sessions and focus groups. Two specific meetings set up to reflect on the research process and to discuss the interim results with participants to increase their participation in the research, were held at the end of the fieldwork. One was with nutrition staff on 3rd December 1998 (Appendix V) and another one on 5th February 1999

with community health workers and women participants (Appendix W). The purpose of the discussions on the preliminary data analysis was to:

- Have participants in the research contribute to data analysis and discuss the findings
- Validate the accuracy of data collected
- Clarify issues raised
- Provide necessary explanations for the data

Participants were in agreement on the findings as regards not being involved in making decisions on what goes on in the program and knowledge they expressed that they required. Based on the topics identified from the preliminary analysis, participants grouped them, prioritised those to be addressed in the program in 1999. This led to developing a curriculum with the community health workers and committee that was selected for the income group with myself and the nutrition field worker as facilitators on 16th February 1999. Participants, however, indicated that promoting knowledge alone was insufficient to bring about nutrition well being and therefore a broader perspective of nutrition should be promoted in the program. This was indicated by one woman by:

"When we first started to come here to weigh our children, we were given flour and taught how to feed our children well. But when they stopped giving us flour, we were taught but when we did not have what to feed our children as we were told, nobody helped us... Now at least we have started something (referring to the income netivity) that we can do to get some money to use to buy food. I think, if we continue to discuss in this group our problems and how to solve them, then this weighing centre will help us" [5/2/99].

The nutrition staff were in agreement with data collected from them and gave explanation as to why the nutrition education status was that way in the District. This was indicated by the nutrition staff during the discussions with them on the preliminary findings by the following statements on 3rd December 1998:

On the in-service training of nutrition staff:

"Nutrition lessons in primary health care are taught by other health personnel ... Nutritionists are left out in being trained as trainers. They are actually marginalised. Even in the few courses that we have attended, sometimes other health staff teach nutritionists lessons on nutrition in such courses".

"I was called to one course and the person that taught us nutrition is not a nutritionist".

"Nutritionists are left out of the training in primary health care and sexually transmitted diseases".

On planning and evaluating nutrition education:

"We do not make workplans so we cannot even evaluate our work".

On perceptions of causes and solutions to nutrition problems:

"Nutritionists come face to face in their work with the reality of poverty. We should, therefore, work towards incorporating income generating activities in nutrition. You know poverty is a major contributor to poor nutrition and therefore income generation is important for improving nutrition status of people".

On motivation and supervision:

"There is no motivation for nutritionists to work. Nurses are promoted every three years but the nutritionists remain in the same position. We, therefore, feel we are looked down upon".

"In the last two years, we have only had one brief visit from nutrition staff from the headquarters".

On linkage with Ministry of Health Headquarters:

"The headquarter staff do not know what we do in the district. Even when you write reports they do not comment on them".

On collaboration:

"SACDEP trains community health workers alone but in the field we work together. I think they train them with other sections in the Ministry of Health but nutritionists are not involved".

On nutrition information reports:

"We write routine reports using the Chanis (child health and nutrition information system) form. There is no further analysis of the reports for decision making and there is no feedback on the reports".

On the focus of nutrition education:

"We focus on curative rather than preventive and promotive nutrition in the health centres and hospitals. In the maternal and child health clinics the children we see are those who have serious nutrition problems but not others. We do not even participate in the health talks".

On the nutrition policy:

*"I do all that is important for nutrition but I have never seen a policy document".
"Focus in the policy is not on nutrition problems at the grassroot level".*

Discussion on the preliminary analysis also gave participants opportunity to correct improper misconception. On the issue of nutrition policy, this was clarified by one of the nutrition staff by stating that: *"We are aware of the policy on infant feeding practices".* This is one chart that gives a summary on how to feed a child. Only 50% of the nutrition staff were aware of this whereas only the District Nutrition Officer was aware of the Plan of Action for Nutrition in Kenya. This was according to the nutrition staff's responses from the open-ended interviews.

On the issue of planning and working, one nutrition staff stated:

"We do not write workplans but we discuss what we are to do together with other staff".

"For us who work at the hospital, we plan among ourselves where each person is to work and we rotate between the wards, maternal and child health clinic and rehabilitation centre where we do counselling".

On the issue of implementation:

"We work with other staff in the same place but each one does their own jobs".

Apart from two nutrition staff who participated in the participatory process in the child growth monitoring program, the rest did not. Reflection by one of them on the process of participation was indicated by:

"I think when people are asked what they want to do in the program, they are very happy. Now they come and even ask us in the health centre for some ideas. Like the other day, they were asking us if we knew some one to contact to assist them with the poultry project. But you see they decide by themselves what to do even if nobody tells them [5/2/99].

The participants of Ngoliba child growth monitoring program who took part in the participatory process gave positive reflections of the process during the discussions on the preliminary findings on 5th February 1999 by statements such as:

"How information was collected from us in our homes was good because we all knew when you would come. We were able to plan with our families so that they also know what we do when we come to the weighing centre".

"We are now discussing our problems in this weighing centre which we did not do previously".

"I think I now know how to ask people questions and get information from them to help us improve the program" [5/2/99].

During these discussions on the preliminary findings, ethical considerations were revisited and participants agreed on the use of their narrative in the research. In the case of the nutrition staff, verbatim quotes used were to have dates when data was generated and indicate that it was stated by a nutrition staff. In the case of the District Nutrition

Officer, information would be referred to by that title but the officer validated her transcribed information before it was used in the report. Participants of Ngoliba program were to be referred to as woman participant or community health worker in the research report. Participants also requested to have the final written research report discussed at the community level so that it can be used in the area. The nutrition staff requested that I discuss with the Medical Officer of Health the report and in particular pinpoint issues on in-service training and training of community health workers.

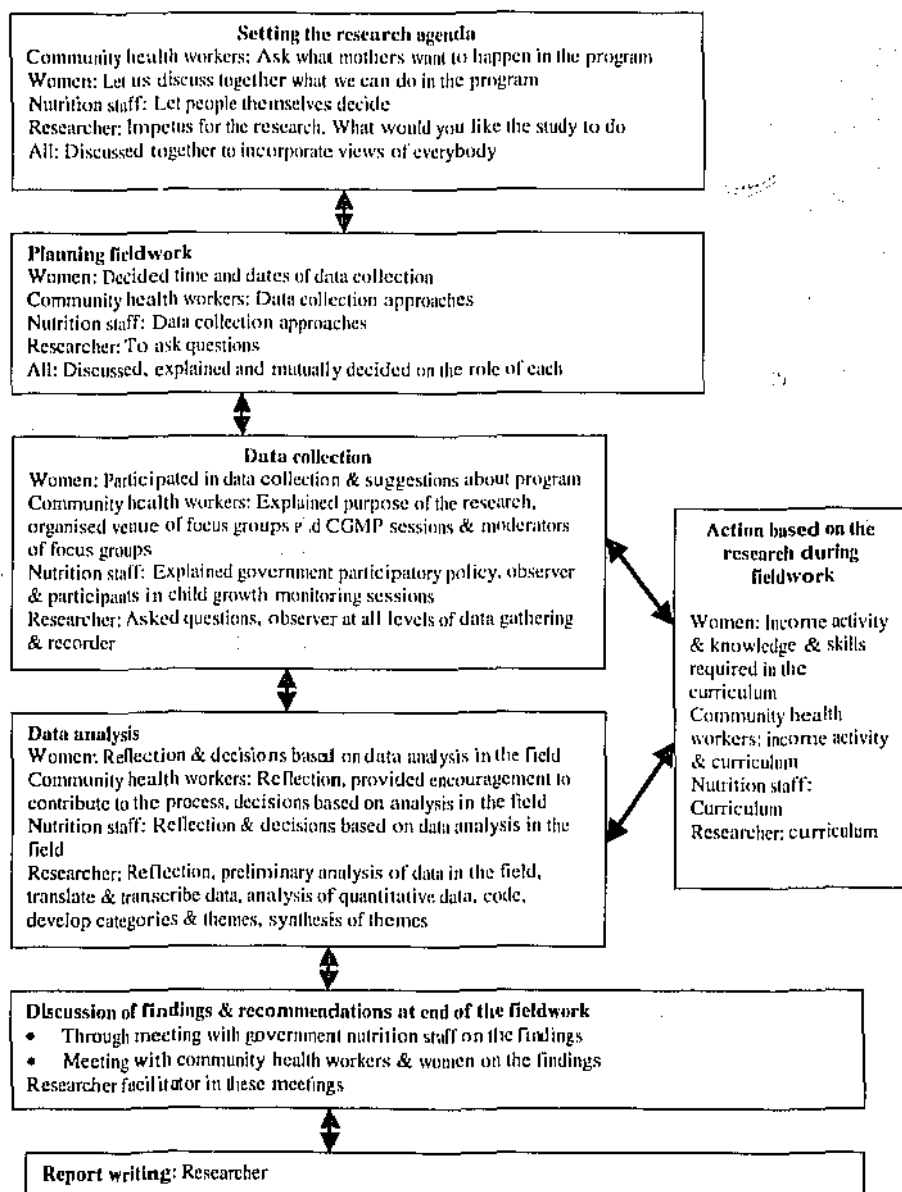
These reflections of the participants during the preliminary analysis indicate the credibility of the findings as they were arrived at based on consensus with them. The discussion of the preliminary findings cleared for me the weak linkage of nutrition educators and the head office, lack of training in participatory approaches and why nutrition field workers feel marginalised. The discussions validated the accuracy of data that nutrition education has had a narrow focus, that women have not been involved in designing their programs and that community health workers function in isolation. Findings presented in Chapters Six and Seven were validated during these preliminary discussions of data analysis and are therefore presented with confidence as providing the real picture of nutrition promotion through the Ministry of Health, Thika District in Kenya.

As I worked on further data analysis in retrospect after the fieldwork, I drew up the conclusions from the research. Ideally, the participants should participate in drawing up the recommendations. This was practically not feasible in my case as I am undertaking

my studies in another continent. Report writing is an important part of the participatory process. For my thesis, however, it was not practicable for all actors to contribute to the writing up of the research project. In addition, this thesis is written in English at a level with which most of the participants are not familiar. Sharing with them the details of such an exercise is not only impractical but is also likely to promote a state of powerlessness and helplessness of the participants that the process seeks to reverse. Additionally, the cost of time in undertaking such an activity is very expensive for the participants.

In order to have participants participate in the write-up, dissemination of the findings of this research, recommendations and conclusions drawn will be discussed and agreed upon with all actors that participated in the research in a workshop. Based on consensus on this, a summary report in either *Kiswahili* or a language of the participants' choice will be written up in an easy to read format that may be relevant for the program and policy on child growth monitoring at the local and nation levels. The modalities of the writing will be based on the participants' views. This will be a report that hopefully the participants will co-author, own as theirs and use. A summary of the role different actors played in the participatory process is indicated in Figure 5.1.

Figure 5:1 Main stages of the participatory process experienced



Mode of participation

Participatory approaches that were employed in this study focused on identifying participants' expectations in the program, participation in the decision-making and participation in implementation during the child growth monitoring promotion activity. These were based on the findings from the open-ended interviews and three observations of the child growth monitoring. The first focus interviews with the participants and community health workers highlighted the emerging themes based on the findings from the open-ended interviews and three observations. These focus group interviews centred on what nutrition education participants would like to see promoted in the program and how this could be achieved. The participants were encouraged to make suggestions not only on what they would like to see take place but how. They were encouraged to be involved in making decisions and in all activities.

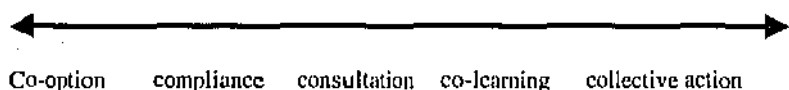
The questions addressed at the start of the study to promote participation were:

- What nutrition education would you like to see take place during the child growth monitoring?
- How would you like this to be done?
- What would you like to see take place in the child growth-monitoring program, how and why?

During the observations it was noted that the community health workers already used instructional strategies that promoted people's participation. This included allowing persons to express their point of view. Some of the statements that community health

workers used that promoted people's participation were: *"Tell us what we learnt"*, *"tell us how you feed the child"*, *"tell us the changes you have had since attending nutrition sessions"* and *"what would you like to see happen"*? Although community health workers employed strategies that promote participation, they seemed to limit this on conducting the child growth monitoring program the way they were trained and failed to incorporate women's decision making on what and how the program should function.

Dialogue was encouraged throughout the research process. During the formal and informal discussions with the community health workers, motivation on how participation of everybody in decision making in the program would be strengthened was addressed. After the first focus group interview and for the remainder of the data collection period, participatory approaches were emphasised. Participation experienced by the actors in the process according to Pretty (1995) can be that of co-option, compliance, consultation, co-learning or collective action level. This can be presented on a continuum with co-option as the lowest level of participation and collective action the highest level of participation. This is presented in the participation continuum below.



At each level, participants take part in the research in different ways. In this study, although it is reflected in Table 5:5 and Figure 5.1 that participants and the researcher

took part in the entire research process, the degree to which each participated is not indicated. The extent to which persons engage in the process indicate whether there is equity in the participation process. In this study, the mode of participation of the participants and the researcher was reflected at three levels. These were cooperation, co-learning and collective action levels and are shown in Table 5.6.

Table 5.6 Mode of participation experienced by actors in the research

Mode of participation	Activity	Community health workers & women	Researcher
Cooperation	Setting research agenda	Gave input into research agenda	Worked together with participants to clarify research purpose
Cooperation	Data analysis of open-ended interviews	Reflections on summary data	Summarised findings for preliminary analysis
Co-learning	Planning fieldwork	Planned together fieldwork	Worked together with participants to create understanding of research purpose
Co-learning	Data collection	Collected data together	Collected data together
Co-learning	Data analysis	Discussed together reflections of data from observations and focus groups on a continuous basis	Summarised data and paraphrased it for interpretation
Co-learning	Curriculum development	Worked together to identify topics for curriculum	Facilitator on curriculum development
Collective action	Income activity	Set income activity agenda Planned for activity and carried it out without support from researcher	Observer

Based on Table 5.2, it can be seen that participation was experienced by all actors but in different degrees. This is in agreement with other findings that participation occurs on a continuum (Pretty, 1995). When one activity is taken into consideration in the process,

different actors will participate at different points on the continuum. High level of empowerment for the participants occurs at the collective level. These findings suggest that participation was experienced differently by actors on the participation continuum. This depended on the experiences of the participants and the researcher.

Reciprocity

Having come from a quantitative research background, this issue was difficult for me at the start of the study. I had until this study undertaken my masters research and four other research projects based mainly on quantitative methods and only used focus group discussions to clarify issues which came up after analysis of the data. In one study, I included researchers in the team from the study population during the data collection and discussion of findings as strengthening their involvement, which at that time I conceived to be participation.

As I started my fieldwork, I believed that I had to be objective and not be involved in other aspects of the research participants' lives except as pertained to my research. I soon realised that this was not possible especially with the participatory approach that the study was promoting. During the home interviews, when invited to eat I accepted. This was a sign of showing respect and as a way of participating in the community's way of life. On other occasions, I was asked to go and visit sick children in their homes. I went and provided what I saw as relevant advice.

The nutrition officer also expected me to assist in the planning of various workshops, nutrition plan and participate in the nutrition workshops conducted. I participated in two

Nutrition Association of Kenya Thika Branch meetings. I willingly did these and gained a lot of insight on what actually goes on in terms of the work nutrition staff do.

Participation in planning for the workshops allowed me to encourage incorporation of participatory methods in the activities of nutrition staff.

I participated in two workshops that ran for one week each. One was organised by one of the non-governmental organisations (SACDEP). The focus of this workshop was capacity building. The other was by the Ministry of Health on promotion of micronutrients. During both workshops, I was among the facilitators. I did this as a way of promoting good working relations. As noted by Baum (1996), if research participants are prepared to give their time for the research, they also deserve some input from the researcher. According to Freire (1993) reciprocity from the researcher is necessary in a problem solving education as one is working with the people and alongside them. This avoids participants feeling they are being used. Participatory process is a collaborative venture between the researcher and the participants and therefore genuine reciprocity is expected.

My social and emotional experiences as a researcher

I was anxious about the people being willing to take part in the research. I had taken quite some time before reaching the community and if they refused to participate, I would have had to spend a lot of time selecting another group of participants. I was relieved when they accepted and the research proceeded well. There were different groups for this study. The District Nutrition Officer, the nutrition field workers, the

community health workers and the participants of the child monitoring program and their children and the staff of the non-governmental organisation. How did I see myself with these different groups?

As I look back in retrospect, I notice that I behaved differently with these groups as a participant in the research. With the District Nutrition Officer, I was more as a colleague who shared information and experiences about issues on what she and I did and the challenges we faced in our work. With the nutrition field workers, I was more like a co-worker who shared my work experiences in similar situations with what they were doing. With the community health workers and participants of Ngoliba program I was both a professional and more as a fellow mother that shared with them my experiences as such. With the non-governmental organisation, I was more of a technical person on nutrition and education.

How did the different groups see me?

I think the nutrition personnel saw me as some technical person. The community saw me both as a mother and a professional. A person who had come to help them. They also saw me as some medical expert. This was noted early in the study on 7th August 1998 during the child growth monitoring session when one mother asked me: *"Doctor, my child has had a problem of chest and breathing heavily what can I do?"* They referred to me as "doctor" early in the study especially so because I had gone with personnel from the Ministry of Health. I had to correct this at each moment and clarify that I was not a medical expert.

Eventually they understood that I was concerned with their nutrition education. Having accepted this position they saw me as a person who could teach them. One incident that portrayed this was stated by one community health worker during the child growth monitoring sessions: "*Now I will ask our visitor (referring to me), to give us a lesson of her choice*" [8/9/1998]. Most of the time they saw me as a nutrition educator and a visitor. They still referred to me as "*our visitor*" up to the final meeting during the fieldwork. What were the people's reflections of who I was?

Overall, I think the people saw me as a friend who had come to help them out. This, therefore, made it possible for me to collect data comfortably. It was, therefore, a challenge to be objective and stand back to look at the data not from their perspective. The translations and transcriptions and reflections in retrospective as I continued with data analysis outside the research setting helped me to critique data from an outsider's position. What participants think you are as a researcher has implications for their expectations of the research. Their perceptions of who you are determines their willingness to take part in the study. It is of paramount importance that persons undertaking participatory research make their positions very clear and their role in terms of what they can or cannot do in the process.

Summary

The focus of participation employed in this study was on decision making. Dialogue was encouraged throughout the process. Women's participation was introduced by asking them to contribute to the research agenda and make suggestions about what and how they wanted their program to function. Participation was ensured by being open and clear about the research objectives and plans at the start of the study. The study progressed according to women's expressed needs and addressed changes that took place in the program to cater for these needs. Participation was developed through continuous dialogue and making decisions about the process and the program. Assistance in accessing resources was provided to promote participation. Reciprocity from the researcher in the participatory process was necessary to avoid participants feeling they were being used. This was a mutual collaborative venture between myself, the community health workers, the women and nutrition staff of the Ministry of Health.

In summary this research yielded promising results in the short term. The cultural setting whereby dialogue is used a lot and decisions at the community level are made by consensus made it favourable for active participation of women to take place in the research and program. My role was that of a collaborator during the fieldwork. This participatory process facilitated the conducting of the growth monitoring sessions. How nutrition education was promoted through the child growth monitoring program based on the experience of the women's participation in decision making in their program in Thika District follows in Chapter Six.

CHAPTER SIX

NUTRITION EDUCATION AT THE COMMUNITY LEVEL

Nutrition promotion within the Ministry of Health in Kenya is handled by the nutrition staff at the health facility level through the maternal and child clinics and patients of nutrition related complications in the hospital wards. At the community level, the community health workers promote nutrition education through the child growth monitoring program in line with the primary health care concept. Nutrition education promoted through this program is based on the main assumption that mothers need knowledge to be able to feed their children well and promote health behaviour in the family. Nutrition education promoted through the child growth monitoring program is closely linked to the immunisation program within the government health facilities and to sanitation, diarrhoea control and food production through the kitchen gardens.

Training of nutrition education facilitators

Promotion of child growth monitoring is undertaken with collaboration from non-governmental organisations as sponsors for training community health workers. Ministry of Health personnel train community health workers and are supposed to oversee the child growth monitoring program. Government nutrition staff who are trained at undergraduate or graduate levels are in charge of nutrition promotion in the Ministry of Health headquarters and at the provincial and district levels. The District Nutrition Officer is in charge of nutrition promotion in the district. This officer works together

with nutrition field workers. Most of the nutrition staff are trained at post secondary level and hold a certificate in nutrition from Karen College in Kenya.

In order to implement nutrition programs, the Ministry of Health embarked on in-service training program for recruited enrolled nurses and midwives in 1967 (Miring'u & Mumaw, 1993). These underwent a six to nine months training program at Karen College of Nutrition, Nairobi qualifying as nutrition field workers. These staff work in the health centres and hospitals and serve the communities in their areas of operation. In 1983, a two-year pre-service diploma replaced the in-service program and the graduates were the community nutrition technicians (Miring'u & Mumaw, 1993). Both the community nutrition technicians and nutrition fieldworkers are attached to the government health centres and hospitals and serve the communities in these facilities. In this thesis, these staff are referred to as nutrition field workers or nutrition staff. About two thirds of these staff are stationed in government hospitals and one third in health centres. Implementation of nutrition education in the Ministry of Health is the main responsibility of these staff with the District Nutrition Officer coordinating all nutrition activities in the district.

Pre-service training the nutrition staff working in Thika District have received, based on their responses from the open-ended interviews, is shown in Table 6.1. Information show that the staff have undertaken a pre-service course in nutrition. Apart from the District Nutrition Officer who has an undergraduate degree, the rest of the nutrition staff, 94% hold a certificate in nutrition from Karen College.

Table 6.1 Pre-service training of nutrition staff in the Ministry of Health, Thika District in 1998.

Nutrition training received	Nutrition staff N= 16	Percent
Certificate & diploma level at Karen College	8	50%
6-9 months	7	44%
2 years		
Baraton University		
4 years	1	6%

Of these, 50% had previously worked in the Ministry of Health as either midwives, nurses or in family planning before being trained for a period of 6-9 months in nutrition, prior to being deployed to work as nutrition field workers. The other 44%, were trained for two years after completion of their secondary school education. These were the personnel responsible for promotion of nutrition in Thika District in the Ministry of Health during the research.

In-service training of nutrition staff

In order for government nutrition staff to perform their duties, they from time to time require in-service training. This is to update staff on trends in knowledge and approaches being promoted in order to achieve the goals in the field of nutrition. Table 6.2 shows the areas of in-service training and the numbers of nutrition staff who were involved in the training. Information from Table 6.2 reveal that of the nutrition staff in Thika District who participated in this study, 63% had received some in-service training whereas 37% had not.

Table 6.2 In-service courses attended by nutrition staff in Thika District

In-service training	Nutrition staff N=16	Percent
In-service courses attended	10	63%
Child growth monitoring	8	50%
Breast feeding	3	19%
Primary health care	2	13%
Gardening	2	13%
Immunisation	2	13%
Diarrhoea	2	13%
Continuing education	2	13%
Rabbit keeping	2	13%
Infectious diseases	2	13%
Project implementation	1	7%
Lactation management	1	7%
Weaning	1	7%
Health education	1	7%
Training of trainers	1	7%
Traditional birth attendants	1	7%
Hepatitis	1	7%
No in-service courses attended	6	37%

Of those who received training, 50% were trained in child growth monitoring followed by about 19% in breastfeeding and 13% in primary health care. It is of note that 75% of the nutrition staff have worked as nutrition educators for between 6 and 30 years, and this shows that most of them may not be exposed to the changes of knowledge in nutrition that have developed since they were first trained. This is likely to be the case because the promotion of nutrition by these staff still focus on the balanced diet based on the three food groups. These are; carbohydrates, proteins, and fruits and vegetables.

Above data also indicate that there is no main focus of in-service training for nutrition staff. This is shown by different themes in which nutrition staff have been trained and the small number of staff that have attended each course. Discussions with the staff

revealed that there is no in-service training program set in place specifically for nutrition staff. This was indicated by the District Nutrition Officer when she said: "*Since I came to Thika District about two years ago, there has been no seminar on nutrition*" [26/6/98]. Another nutrition staff said: "*I have worked for almost ten years but I have never attended an in-service course*" [3/12/98]. If nutrition staff are to be competent in their work, they require to be updated on new developments in their field to be aware of the new knowledge and approaches of achieving goals in nutrition.

In-service training in community participation

In-service training that included communication methods were attended by two persons and those that included the use of drama and plays was attended by one person each. Training on hepatitis B and traditional birth attendants included a component of communication skills. Only three, about 19% of the nutrition staff, had received in-service training with a communication skills component. This shows that communications, which is an important aspect of nutrition promotion at the community level, has had minimal focus. None of the nutrition staff in Thika District had taken a course on community participatory approaches or strategies of how to involve the community in making decisions about their child growth monitoring program. This is so despite the governments' promotion of the district focus for rural development strategy that has been in operation since 1984 (Republic of Kenya, 1995). This strategy's main focus is to involve the community in making decisions on all issues that concern them.

It is apparent from this study that the nutrition education facilitators of community participation efforts are not trained on how to carry this out. These findings are in agreement with other research projects that have shown that most health and nutrition educators are not trained in the use of contemporary problem solving and participatory approaches to facilitate and support the community in people's participation in health and nutrition issues that concern them (Murry & Maina, 1993; Oakley et al., 1991, p. 59). If participation of the community in making decisions about issues that affect them is to become a reality, the facilitators of such efforts need appropriate training to be able to catalyse such a process. This calls for attention to be paid to update nutrition staff training in community participation approaches that promote nutrition specifically and primary health care in general.

In-service training in primary health care

About 13% of the nutrition staff had received training in primary health care. One of the nutrition staff said: *"I have not been involved in primary health care ... Can I also attend primary health care seminars?"* [26/6/98]. This shows that nutrition staff do not know how primary health care functions or their role in it. In relation to the importance of training on primary health care, the District Nutrition Officer stated during the Nutrition Association of Kenya, Thika Branch meeting:

"When you are trained in primary health care, you realise that you cannot work alone. This is because you realise that all elements of primary health care are not only important but also related to each other. This helps you recognise that you cannot work in isolation, therefore, you will be more ready to collaborate with other staff" [15/10/98].

It was clear during the study that the District Nutrition Officer was more conversant with the primary health care concept than the other nutrition staff who have been minimally involved in primary health care activities and yet have worked for periods ranging from 6 years-30 years in nutrition. This may be due to the fact that the District Nutrition Officer is part of the District Health Management Team that is responsible for primary health care in the district. During one focus group discussion with the nutrition staff to discuss the preliminary findings of the study, the District Nutrition Officer stated:

"It is important for nutritionists to be trained on primary health care especially so in the rural areas. This would make every person know his/her role and the role others play in primary health promotion in the community. This would help understand how primary health care is promoted and we would each know our role or duty in primary health care" [3/12/98].

Considering that nutrition is one of the elements of primary health care, nutrition staff need training in primary health care in order to be effective to promote improved health in a collaborative manner in the communities.

In-service training in HIV/AIDS

None of the nutrition staff had received training in HIV/AIDS counselling. Nutrition staff voiced concern over failure to include them on important training sessions relevant for nutrition that take place within the district. A typical response on this was indicated by one of the nutrition staff by: *"Nutritionists are not trained in HIV/AIDS, primary health care and tuberculosis. This is so although nutrition is a component of primary health care and the other cases require nutrition for appropriate management"* [15/10/98]. One nutrition staff stated that: *"No nutritionists are selected for in-service*

training on HIV/AIDS" [29/98]. Another person during discussions said that: "Nutritionists have not been given training on HIV/AIDS counselling or primary health care" [16/10/98].

This is an area of concern given that a majority of the patients in the pediatrics ward and one ward in Thika District Hospital suffer from HIV/AIDS infection and the critical role that nutrition plays in the care of such patients. During the focus group interviews held, one nutrition staff stated:

"HIV/AIDS requires a lot of training and more education even for the community especially on relationships. The government's move is to have these patients handled at the community level yet the community members do not know how to handle this. For example, people eat together with patients and this facilitates spreading of infections" [3/12/98].

Organisation of most of these in-service courses is handled at the District level. It is apparent that there is reluctance for collaboration or laxity on the part of nutrition staff to push themselves forward to be involved in these training. Since the nutrition staff work with other Ministry of Health staff who promote in-service training in these courses, they require to make themselves recognised as contributing substantially to primary health care and HIV/AIDS in the district. This is likely to make them be recognised as important for such training.

Based on the information obtained on in-service training from the open-ended interviews reflected in Table 6:2 and the focus group interviews with nutrition staff, it is apparent that there is a need to focus on in-service training for the nutrition staff. This should be

based on what they perceive to be required for their work. This is important if such training is to be utilised to contribute to the nutritional well-being of the population with which they work. From this study it is apparent that in-service training which focuses on primary health care and HIV/AIDS management is needed. In order for nutrition staff to promote genuine participation at the community level as the government promotes it, they require training in participatory approaches. Such training is likely to make them more involved with the community in nutrition promotion and be prepared for the demands the process may require of them in their duties.

Training of community health workers

Community health workers organise and implement what takes place in the child growth monitoring program and overall primary health care in the villages they represent. Once the community has selected them as indicated in Chapter Two, they undergo training. This is to prepare them for the various duties they are expected to perform. Community health workers in this study had participated in different training programs. The facilitators of the training sessions sponsored by Sustainable Agricultural Community Development Program involved their own staff and Ministry of Health Staff in the training. Training sponsored by Plan International were carried out by the Ministry of Health staff.

Information obtained from the community health workers during the open-ended interviews on the training they had received is shown in Table 6.3. The information shows that all the community health workers had received training in child growth

monitoring and in primary health care whereas others had additional training in areas like leadership and counselling.

Table 6. 3 Sponsors and training community health workers have received

Sponsors	Type of training	Community health workers N=4
SACDEP	Child growth monitoring	3
	Nutrition	1
Plan International (Thika)	Child growth monitoring	3
	Primary health care	4
	Leadership	2
	Foster parents	1
	Counselling	1
	Nutrition	1
	Mosquito control	1
Dagoretti Children's Home	Nutrition	1

Note:

SACDEP stands for Sustainable Agricultural Community Development Program

Nutrition is taught during the training in child growth monitoring and primary health care. Community health workers said that the training from Sustainable Agricultural Community Development Program was for five days whereas from Plan International ranged from 3-5 days. As indicated by one of the community health workers:

"Plan used to train us on everything for example, child growth monitoring and leadership for 3-5 days on each topic. SACDEP trained us for five days at Thika. It was a very loaded training program. They trained us on everything for example, the child growth monitoring and leadership but it was all in a very short time" [24/9/98].

Information from the community health workers showed that training on child growth monitoring includes nutrition education and how to weigh children, plot on the cards,

keep records, make meaning out of the change in weight and advise mothers as appropriate. There was, however, no documented information available on the child growth monitoring training program. Primary health care training focuses on all the elements of primary health care. Table 6.4 shows the training program for community health workers that was held during the fieldwork for this research.

Table 6.4 Timetable for primary health care training of community health workers 19-23rd October 1998

8:00-10:00am	10:30-12:30pm	2:00-4:00pm
Health education promotion	Nutrition	Book keeping
Water & sanitation	Control of endemic diseases	Maternal & child health & family planning
Immunisation	Treatment of common conditions	Supply of essential drugs
Mental health	Dental health	Plan of action

Source: Ministry of Health, Thika District 1998

Information from Table 6.4 reflects the ten elements of primary health care as stated in the primary health care manual in Kenya. Information shows the curative rather than preventive focus of community health workers' training. It also reflects lack of involvement of the participants in contributing to the content of the training. The time allocation for planning is also very limited. What was conspicuously absent from the training were aspects of engaging the community in decision making on how they want the primary health care and child growth monitoring program to function. The District Nutrition Officer made the following comments this on the community health worker's training:

"Once the community health workers are trained, they should start implementing all the elements of primary health care in their villages ... All these topics are covered in four days. After the training, the community health workers are expected to start implementing what they are taught" [15/10/98].

This is apparently a loaded program. Such a program is not likely to adequately address adequate content in nutrition education as expected of the community health workers. In addition, minimal time is set aside for critical analysis of approaches that may appropriately promote these concepts. In relation to the adequacy of the training, the District Nutrition Officer noted:

"I feel we should have more time for each topic so that the community health workers are fully conversant with the concepts. Nutrition is given a very short time in the implementation manual ... They are trained using a similar program each time" [15/10/98].

One of the collaborators indicted the inadequacy of the training by saying: *"One training is not enough. The community health workers need to be updated or given more depth gradually so that they are confident in their work" [16/10/98].*

Asked whether the community health workers are involved in deciding what is to be taught in these training sessions, the District Nutrition Officer responded: *"No, we plan and call them to come and attend. We also select the people to facilitate the training and they come and are taught" [15/10/98].* On those who train the community health workers the same person noted:

"Officers who train community health workers are mainly from the district office. I think, because the health centre staff who are close to the community do not train the community health workers, they, therefore, feel they cannot supervise community health workers as they do not know what they were taught" [15/10/98].

The minimal participation of health centre staff in the training of community health workers greatly weakens their motivation and supervision. This is because, health centre staff who are close to the community may feel sidelined in the training of community health workers and, therefore, be reluctant to supervise community health workers.

Although the trainers of the community health workers are referred to as facilitators, they just provide information. During the discussions with the nutrition staff I noted in my field notes: "*In the training of the community health workers the program talks of facilitation but in essence what appears to be done is the facilitator just provides information*" [15/10/98]. The community health workers who participated in this study felt that they needed more training in primary health care (2), family planning (1) and traditional birth attendants (1). Training of community health workers may need to have regular planned follow-up sessions whereby community health workers contribute to the agenda of the training. This will make the training relevant and beneficial to their work.

The District Health Education Officer is in charge of the training of the community health workers. Although the District Nutrition Officer felt that the nutrition component is inadequate, training is not part of the responsibilities of the nutrition section of the Ministry of Health. The health education section is the one responsible for all training for community health workers. There is an apparent need for active collaboration among the health sections so that nutrition in particular, and primary health care in general can be handled in an effective manner. These findings indicate that non-governmental organisations play an important role in training of community health workers. However,

due to their small size of staff, they require a strong link with the government structures so that they can effectively reach a wider audience.

The results of Table 6.3 suggest that community health workers have been trained in primary health care and child growth monitoring where nutrition is taught. Although it was not possible to trace the child growth monitoring program, the results in Table 6.4 on the primary health care training program indicates that nutrition only receives two hours of the training. This is insufficient to cover content leave alone approaches in nutrition. This partly explains why nutrition knowledge promoted in the program is limited.

Implementation of nutrition education

How a nutrition education program is conducted indicates its outcomes. Although education phases are not distinct from each other but overlap, they can be put into four phases. These are, planning, implementation, monitoring and evaluation. Planning is a crucial phase in the program. It sets out the program purpose, objectives and strategies of achieving them and indicates how a program may be monitored and evaluated. How planning is carried out determines to a large degree the final output of the program.

Planning

Planning of any program is normally based on policies in operation that concern such a program. It was noted that apart from the District Nutrition Officer who was aware of the government policy documents on nutrition, the rest of the nutrition staff were not aware

of such policies. Similar sentiments were stated by other nutrition staff. Lack of access to policy documents provides an understanding of why nutrition education is promoted in the manner that this study reveals.

There were no written documents on how nutrition education in the district and through the child growth monitoring program was planned. Community health workers noted that after their training, they were provided with weighing scales and left to start the program and implement it. Asked how they planned and implemented their work, a typical response as indicated by one community health worker was:

"We meet once per fortnight in each others house where we plan what we want to do for each other. For example, we have made dish racks, kitchen gardens, for each other and at least one neighbour. We call neighbours and we teach them what we are doing together ...We agree on what to teach mothers among ourselves" [23/10/98].

One of the community health workers also said: *"We call for meetings. Sometimes mothers come individually to our homes to weigh their children"* [23/6/98].

Planning for the dates of the child growth monitoring sessions was by consensus during each meeting for the forthcoming session. Mothers who are aware of the date of the next session are expected to inform others as indicated by one community health worker: *"When you go, tell others when to come to the clinic and do not be late"* [7/8/98]. At the start of the study, mothers did not participate in planning about what was to take part in the child growth monitoring program. However as the study progressed, they got

engaged in making decisions in the program and this led to shifts in the program goals and activities.

Information obtained from the open-ended interviews with the nutrition staff on the other hand showed that government nutrition staff planned their work individually. The only time they planned together was indicated during the focus group interviews to review the preliminary findings. One of the nutrition staff indicated this by saying

"We only planned together as nutritionists this year. This is when Plan International came and called us to plan for their programs and to identify what the organisation could support. This is because, Plan International has funds to support nutrition" [3/12/98].

Another nutrition staff stated: *"Another instance when we planned together was when some of us planned for the micronutrient workshop" [3/12/98].* One of the nutrition field workers during this focus interview noted: *"We as nutritionists do not make workplans" [3/12/98].* Another one commented: *"We need to plan together as nutritionists. May be we shall start next year. If we plan from next year, then we can implement what we have planned and evaluate what we have done at the end of the year in relation to what we have planned" [3/12/98].*

Mothers were not involved in the planning of activities in the maternal and child health clinics in the health facilities. The absence of written plans makes it difficult to monitor or evaluate nutrition programs. How the nutrition staff and community health workers carried out their duties prior to the study was also difficult to discover. Lack of planning

is a weak aspect of the nutrition promotion in this district. Although the community health workers and nutrition staff are involved in implementation of nutrition promotion, they lack a plan that may guide direction of what they are doing and what they hope to achieve.

The individualised nature of minimal mental planning by nutrition field workers robs nutrition education contribution from collaborative planning and implementation. If nutrition promotion has to have expected impact there is an urgent need to plan programs with the active participation of actors in a collaborative manner. Indeed if participation of the women is to be enhanced in the district and child growth monitoring program, this is an appropriate area to start. Noting that there are no established planning in operation, participation may in essence have been easier to come about in this research because there were no barriers due to routine or traditional planning to overcome.

Without a plan indicating identified needs, program goals and strategies of well intentioned nutrition education in the child growth monitoring program were activities without a clear purpose. To ensure that the needs and interests of women remained central in the program, they expressed their needs and planned on how to meet them during the study.

Implementation

Implementation is important because it is what brings about the expected results. It is the putting in place a plan by conducting the program, monitoring and evaluating it and then planning again. Although there were no written plans of action, actual implementation of

nutrition education promotion through the child growth monitoring and what nutrition staff did was assessed in this study.

Nutrition messages promoted by nutrition staff

Nutrition messages that the nutrition field workers promote were stated during the open-ended interviews, focus group discussions and a few observations with them.

Information obtained showed that most of the messages are centred on a balanced diet.

As one of the nutrition staff said: *"By a balanced diet is meant feeding based on the*

three food groups. That is, to eat enough proteins, carbohydrates and fruits and vegetables on a daily basis. This is by using locally available foods" [26/6/98]. Another

nutrition staff said that: *"I give talks on nutrition and good feeding, how to prevent common diseases like anaemia, malaria and diarrhoea"* [14/7/98]. A focus on weaning

is handled by nutritionists because as one of them stated:

"We discourage the use of cerelac or weaning a child too early. This is because most mothers start giving their children other foods after about two weeks. The foods used for weaning are not adequate. ... We, therefore, advise them how to use foods that are available like bananas and potatoes for carbohydrates; pawpaws, avocado and ripe bananas to provide vitamins and minerals; and porridge made from sorghum because it is not refined. We encourage them to use local fruits and vegetables mixed with these foods" [26/6/98].

Breastfeeding, prevention of diarrhoea and vomiting and care of a pregnant and lactating mother are also taught. Kitchen gardening is promoted so that: *"Mothers can have sufficient food to use at home all the time"* [14/7/98].

Nutrition counselling is provided to patients with nutrition related disorders. Such patients first obtain medical treatment from the doctor or clinical officer and then they are referred to the nutritionists for nutrition counselling. Normally the counselling session begins by obtaining a history of the patients and discussions about their home life and their eating habits. The nutrition staff then gives suggestions on how to adjust the diet. In one such session, the nutrition staff after initial discussions with an ulcer patient said:

"Eat soft food and do not eat in a hurry. Eat soft vegetables like spinach and soft fruits which are not acidic and drink plenty of milk. Avoid heavy foods like chapatis, whole grains and citrus fruits. Fruits such as pawpaws, avocados, bananas and potatoes are good for you. Avoid tea, coffee and all spices including sodas and processed juice. In addition, you need to try and rest a lot. Do not think too much. If you have a problem, talk to somebody else about it so that you will be relieved" [3/11/98].

This information suggests that nutrition field workers promote proper feeding to correct disease problems rather than to promote a healthy nutrition lifestyle. This shows a strong focus on curative rather than preventive nutrition in the Ministry of Health. The way nutrition is promoted is giving information to women or patients who supposedly take it in to use.

Nutrition information communicated by community health workers

There were no written records on the messages communicated during the child growth monitoring sessions prior to this study. The background on what had been taught in the program depended on the memory of the women and the community health workers. During the open-ended interviews, the community health workers indicated that they communicated information on balanced diets focusing on the three 'food groups' and

prevention of common diseases. In addition, they communicated information on food preparation, preservation and food storage to avoid spoilage, family planning and counselling. They also advised mothers to maintain and use kitchen gardens. Information on hygiene and sanitation, breastfeeding, boiling drinking water and advising mothers to attend antenatal and post-natal clinics were communicated to mothers. The messages they communicated were simple.

During the meeting with community health workers, one community health worker stated: *"We teach mothers on health and nutrition before weighing the children. The topics we teach include child feeding, kitchen gardening, child care, balanced diets, hygiene and sanitation"* [23/6/98]. During the observations of the eight child-growth monitoring sessions, various nutrition messages were taught. The community health workers decided upon the messages. Throughout these sessions, however, the women asked questions, which received responses. The messages promoted during this research are shown in Table 6.5.

The education sessions shown in Table 6.5 lasted about 20-30 minutes. The information that community health workers perceive to be the main causes of poor nutrition and information communicated during the child growth monitoring sessions suggest that community health workers look at malnutrition more in terms of food than the synergic relationship between food intake and disease. They promote information focusing on the practical needs of their communities. An analysis of causes and solutions to nutrition problems are many as suggested in Table 6.10. However, evidence from Table 6.5

indicate that promotion of nutrition education through the child growth monitoring program focuses on only knowledge and monitoring the weight of children.

**Table 6.5 Nutrition messages promoted during the child growth monitoring sessions
July 1998 - February 1999**

Date	Message	How presented
15 th July 1998	Weaning Breastfeeding How feed children	Discussions Questions & answer
7 th August	Kitchen gardening How feed children	Questions & answer Discussions
8 th September	Importance of child growth monitoring Kitchen gardens	Talk Discussions Questions & answer
9 th October	Balanced diet Micronutrients Vitamin A supplement	Talk Discussions Questions & answer
6 th November	Weaning Vitamin A supplement	Talk Questions & answer
11 th December	How to feed child	Questions & answer
8 th January 1999	Hygiene	Talk
5 th February 1999	Results of the study Topics to focus on	Discussions

This is so despite the fact that the primary health care concept in Kenya has all along stressed the fact that income generation, food security and appropriate technology are necessary for success of nutrition programs (Bennett & Maneno, 1986). This shows that what is stated in the policy is not necessarily reflected in practice and that the complex

issues that determine nutrition well-being are not focused on in implementing the program.

Shortcomings of these nutrition messages was that, they lacked a holistic focus on the synergistic relationship between nutrition and infection and minimal attention was paid to maternal nutrition during pregnancy. It is known that the synergism between malnutrition and infection worsens nutrition status and health of the individuals and that maternal nutrition during pregnancy is a key determinant of foetal development (Gracey, 1987, p. 201-203). There is, therefore, need to focus on both mothers nutrition and the relationships between nutrition and infection in the child growth monitoring program if it is to contribute to better nutrition of the children 6 months to 5 years. The manner in which nutrition was promoted in the program was what Freire (1993) refers to as banking education. The nutrition staff and community health workers gave information and the people hopefully received it to use. The information was decided upon by the nutrition educators without participation of women. Later on in this study, when participation of women in decision making in the program was enhanced in a problem solving strategy, through dialogue and reflection, women made decisions on the nutrition knowledge they felt was appropriate for them. Based on participants' questions during the monitoring sessions and what women indicated during the open-ended interviews and during the review of the results of the study, participants prioritised these topics and subsequently a curriculum (Table 7:3) was developed. This addressed the nutrition and health knowledge that participants felt they required information on.

Sources of nutrition information

Nutrition staff obtained nutrition information from the pre-service and in-service training and currently from the media especially television and radio. Community health workers obtain their main sources of nutrition information from their training sessions, churches and the radio whereas the women obtained their nutrition information from a variety of sources. Women's sources of nutrition information is shown in Table 6.6.

Table 6.6 Sources of nutrition information by women

Source of nutrition information	Number of women N=21	Percent of total women
Friends & Neighbours	19	90%
Child growth monitoring centre	18	86%
Maternal and child health clinic*	17	81%
Mothers/mother-in-laws	16	76%
Friends	13	65%
School	9	43%
Community health workers at home	8	38%
Non-governmental organisations	7	33%
Neighbours	6	29%
Churches	5	24%
Radio	4	19%
Other projects	4	19%
Family planning clinic	1	5%
Observe other people and imitate	1	5%

*Maternal and child health clinic refers to clinics carried out in the government health facilities

Data in Table 6.6 shows that women obtain nutrition information from a variety of sources. Most of the participants, 90%, received nutrition information from friends and neighbours, 81% from the maternal and child clinics and 76% from mothers or mothers-in law. This suggests that women obtain and use information from other people. The fact that the majority of women obtain nutrition information from mothers/mothers-in law, friends and neighbours indicates that other persons in the community are important sources of nutrition education. It has been observed that a lot of behaviour is learnt

through modelling as a person observes other people and uses this behaviour as a model for their own (Bandura, 1977). How women and nutrition facilitators make judgements on the credibility of these sources is important although it is not addressed in this thesis. In the process of the fieldwork, no indication was implied from the community health workers or nutrition staff in relation to the selection of messages from these other sources. From the observations during the child growth monitoring sessions, nutrition information tended to be presented as if the nutrition staff and community health workers were the only source of nutrition information. This is because no reference was made about the other sources of information. There is no focus on using knowledge the community has in solving nutrition problems. It appears that nutrition staff are trained on specific nutrition knowledge and they fail to acknowledge the wealth of nutrition knowledge that has sustained communities for generations. If nutrition education in the community is to be effective, it must acknowledge the nutrition knowledge within the community and work with people to promote nutrition behaviour with them. What may be required is how to enable mothers to make judgements and choose what is credible information. Knowing how to judge credibility of information sources and credibility of information is a critical element that needs to be addressed at the community level. This will prevent mothers accepting all the information they get as appropriate. Efforts should also be made to include or collaborate with these other sources of information at the community level.

How information is communicated in the growth monitoring program

The way messages are communicated determines to a large extent what they accomplish. Information to mothers to attend the monitoring sessions is communicated to them by

word of mouth through other women neighbours. Information on dates of meetings or cancellation of meeting sessions is also communicated by word of mouth through the women, the schools and churches in the area. As indicated by one community health worker: *"We shall make announcements through the churches and the schools"* [23/6/1998].

Verbal face to face communication is how nutrition messages were, mostly promoted. One of the community health workers during the open ended interviews stated that: *"We discuss by listening to the women explain what we taught last or previously. This helps us to know if they have learnt something or to correct wrong thinking"* [23/10/98]. Another community health worker said: *"We listen to how mothers feed their children then we advise them as appropriate. We also answer questions from mothers and ask them questions and let them answer"* [23/10/98]. One of the community health workers also said that: *"We used demonstrations previously but not now"* [23/10/98].

During the observations of the child growth monitoring sessions, dialogue was the main method of communication used. This was in the form of talks followed by discussions on the same topic. Questions and answers from the community health workers and women and vice versa were also used during these sessions. An example of when the community health worker led the discussions and the women responded is presented in Table 6.7.

In my field notes I noted: *"The community health worker asked all the questions at the start and the women responded. Later on, the women asked questions and the community health workers gave them responses"* [15/7/98].

Table 6.7 Part of the child growth monitoring session held on 15th July 1998

Community health worker:
In order to know what we have been doing here, tell us what we have taught you and how you have practiced it in your homes.
Woman 1:
I feed my child porridge in the morning and mid morning before I give lunch latter.
Community health worker:
How do you make the porridge?
Woman 1:
I use flour made from <i>mhia</i> ⁸ and maize and I add some blue band (margarine). Sometimes I add milk to it. ... I also prepare rice together with spinach for food at lunch time. He eats well. The grandmother feeds him well but not myself.
Woman 2:
I give my child porridge. I prepare porridge from flour ground from <i>mhit</i> , beans, groundnuts and green grams. I also give her food made from potatoes, beans, mashed potatoes and beans mashed together. I mostly use food from our family meal and mash it for her. I feed her many times. I sometimes give her milk but rarely. She eats everything and feeds well.
Community health worker:
That is good.
Woman 3:
My child eats everything but I rarely give milk. The child does not like bananas and porridge. But takes porridge when I add milk. I also give food like rice plus vegetables and potatoes. He likes milk but rarely takes it. He breastfeeds whenever he wants.
Community health worker:
What vegetables do you add?
Woman 3:
<i>Terere</i> ⁹ and kales. He does not like spinach.
After getting responses from all the women the community health worker said: "You can now ask questions". At this three women asked questions and the nutrition field worker, and community health worker responded to them.

An example of when the women asked questions and community health workers responded is shown in Table 6.8.

⁸ *Mhia* is flour made from a local grain in Kenya.

⁹ *Terere* is an indigenous vegetable in Kenya.

Table 6.8 Part of the child growth monitoring session held on 8th September 1998

Community health worker:

"Let everybody ask a question and then we shall try to answer them"

Woman A:

"My child is sick many times but feeds well, why"?

Woman B:

"My child has diarrhoea and vomiting and I give medicine but the child does not change why"?

Woman C:

"My child does not walk well why"?

The community health worker responded:

"... May be you feed her a few times. How often do you feed the child"?

Woman A: "Many times".

Community health worker:

"Or sometimes the child may have worms. Do you give de-worming medicine?"

Woman A: "Yes. I give sometimes back ..."

Community health worker:

"Now about the child who has diarrhoea how many times?"

Woman B: "Yes most times".

Community health worker: Do you warm the child's food"?

Woman nodded indicating "yes" in response.

Community health worker:

"Diarrhoea and vomiting is sometimes due to poor hygiene and sanitation. So you should keep everything clean. ... For good feeding of the child, do not force the child. Let the child eat comfortably and you should not be in a hurry. This will help the child enjoy the food. ... Concerning your child, (addressing Woman C), do you exercise the child? Response by nodding suggesting "yes". A short silence. "You should exercise the child always and not let the child sit in one place. Have you taken the child to the doctor"?

Response: Woman C: "No".

Community health worker:

You should take the child to the clinic so that the doctor can check if there is a problem that requires attention. But how old is the child"?

Woman C: "Eleven months".

Some light laughter from other women.

Woman D:

"That is alright. Some children take longer to walk. My first child started to walk at thirteen months so it is all right. I think there is no problem with your child. But you should make him do some exercise. That helps them walk faster".

Although discussions were used in the growth monitoring sessions, the community health workers, on the contrary, did not view discussions as learning. This was suggested in one session, when one nutrition staff asked: "*Did you teach last time?*" [7/8/98]. The response given by one community health worker was: "*No, but we discussed what the people felt they had learnt from attending this clinic (referring to the program) and people gave their views*" [7/8/98].

At the start of the data collection, the community health workers asked questions and the women responded. As the study progressed there were more interactions in giving ideas and responding from the women, the community health workers and nutrition staff. From the way the child growth monitoring sessions were held, it was evident that dialogue was used freely. This facilitated contributions by the women and community health workers in making decisions in the program. The fact that they were able to discuss freely made it easy for them to express themselves.

The way information was communicated suggests that nutrition education is viewed by community health workers as provision of information and not how to make decisions and choices about nutrition information or access to the foods. Use of dialogue was an asset in the program that contributed positively to making decisions that enhanced participation in the program during the fieldwork. Instructional strategies the community health workers used were a major factor that favour participation. This included listening as indicated by "we listen to mothers", the use of "tell me", "tell us" questions and paraphrasing by use of statements such as "you said" or "you meant". The women and community health workers used instructional strategies that favour participatory approaches in the child growth monitoring program during this study and this facilitated the use of the research findings.

Target audience for nutrition messages

Target of nutrition messages in the child growth monitoring programmes are mothers of children aged five years and below. This was shown by this statement from one

community health worker: *"I give information to mothers mainly but also to fathers if they are available at home. I am happy to talk with them as they are the providers. But I have only talked to a few of them if I get them at home"* [23/10/98]. Another community health worker said: *"I cannot get them (referring to fathers), I have only talked to one"* [23/10/98]. Another audience for nutrition messages as said by one community health worker are: *"Young girls but not very often. Also grandmothers although these are few"*. Community health workers, however, as indicated by one of them said that: *"Fathers used to come when there was flour being given. This was because they helped the mothers to carry the flour"* [23/10/98]. It is probable that the program can be planned to attract attendance of fathers. This shows that if the program extends to deal with the social factors of the families in the community, it is likely to lead to a wider coverage.

Information shows that planning and implementation of the child growth monitoring program is carried out through discussions and coming to a consensus. The use of dialogue favours promotion of people's participation in making decisions on issues that concern them. How the decision making process works, however, needs a written record and to be reinforced for positive utilisation of the results. The way the program is promoted agrees with one analysis of growth monitoring that, it appears that the program provides information to mothers rather than monitoring or promoting child growth (Nabarro & Chinnock, 1988, p. 945).

Monitoring and evaluation

Monitoring and evaluation are important components of any education program, not only for accountability but also for decision making to strengthen such programs. This is because it indicates where the program is and what has been done. There was no comprehensive monitoring or evaluation of either the nutrition staff or community health workers work. The aspect of monitoring that was noted during the fieldwork is that related to supervision. This is an important element in ensuring a program runs well or to make adjustment that guide actions at appropriate times in the education process. Supervision is also an important motivational tool.

Supervision of government nutrition staff

Based on information from the nutrition staff, there was no supervision of their work by the Ministry headquarters. During the discussions, one nutrition field worker said: *"Sometimes work is frustrating. You work but nobody comes from the headquarters to see what you do. There is no feedback from the reports you write. Even if you write the reports they have no value"* [18/11/98]. During the focus group discussions on the preliminary findings one of the nutrition staff said: *"There are no visits from the headquarters. For the last two years, only one visit was made. But it was not really a visit to see what we do for the officer was just passing enroute to another place"* [3/12/98].

On supervision of nutrition work in the district, the District Nutrition Officer had this to say: *"We normally go to the health centre as a team (meaning together with other ministry staff of different sections in the district) so that we cut down the costs. But*

supervision is rarely done. I have visited the health centres at least once in the two years I have worked here. But I did not see nutritionists unless they were told I was going there. This research helped me to visit staff again in their places of work." [18/11/98].

It is apparent that the nutrition staff see the need for supervision from their superiors, however, they are not satisfied with what they get. On the other hand, these same staff do not supervise the community health workers handling the child growth monitoring program. This was indicated by the one of the nutrition staff by: *"Once the community health workers are trained, we are supposed to supervise them but we do not. This is because of transport and other financial problems"* [15/10/98]. The community health workers and women in Ngoliba however expected to be supervised by the nutritionists. The District Nutrition Officer, however, noted: *"The nutrition staff do not train the community health workers. I think, they therefore feel that they cannot supervise them as they do not know what they were taught"* [15/10/98].

One nutrition field staff said: *"Once the community health workers are trained, we are supposed to follow them up but the nutritionists are not able to follow the groups"* [11/6/98]. These show that nutrition field workers are rarely supervised and neither do they supervise the child growth monitoring programs they are supposed to.

Supervision of the child growth monitoring program

According to the community health workers, there is no supervision carried out in the program. During the focus group interviews with the community health workers one of them said:

"When Plm International was providing flour, they used to come. When they stopped, nobody else comes. So we do whatever we want. From the Ministry of Health, they come only when they are training us. They do not come to know what we are doing after the training"[23/10/98].

Another community health worker said: *"Others do not come. Even the Health Centre staffs do not come although they are near here* [23/10/98] (it takes about five minutes walking time to reach the Health Centre from the venue where the child growth monitoring program activities that took part in this study take place). Another community health worker said:

"Supervision is important. If people follow up to see what we are doing, we feel we are working. Sometime's we do not know if what we are doing is right or wrong because nobody follows up to see what we are doing. When we write reports, nobody responds. Therefore, you write reports for who?" [23/10/98].

Another community health worker said: *"They only teach us and there is no follow up to see what we are doing. Nobody checks on what we do. So we do not know if we are doing what is wrong or right. Follow-ups are important for us to see areas we can improve on"*[23/10/98].

Supervision is an important way to identify needs from an outsider's point of view. It can also contribute to identify solutions as the need arises and be able to address such needs which the program or facilitators may not be in a position to do. During the fieldwork one community health worker noted the positive results of supervision by: *"The District Nutrition Officer brought us weighing scales and bags after your first visit and knowing our problems. So, if the Ministry of Health staff and other people come often, they can know our problems and help us to solve them"* [23/10/98].

Need for supervision of community health workers cannot be overemphasised. This is an important aspect of promoting community nutrition and should be stepped up. It is important because community health workers receive very short training sessions. They need frequent visits to interact with nutrition facilitators so that they gain input on their concepts and approaches. In order to build their confidence and self-esteem in what they are doing, they require frequent contacts. Although the community health workers in this research were motivated, maintaining recognition of their work through visits to the child growth monitoring program and women's homes is likely to lead to sustained or increased motivation.

Findings in this study show that nutrition programs in Thika once they have been set in place are left to function without assessing their relevance and dynamic changing needs. The cyclic nature of this research based on dialogue, reflection and action involved formative evaluation. Information obtained from reflection about the program was used by women and community health workers on an immediate basis as found appropriate to

make decisions. This research observed that active participation in the program may address monitoring and evaluation in the normal routine operation of the program.

How people participate in the child growth monitoring program

Different actors take part in the child growth monitoring program. How they participate in the program determines what takes place in the program. Table 6.9 shows how the actors participated in the program during the fieldwork. This shows that engaging all actors in making decisions in the program led to participants taking part in more activities in the program. Participants shared responsibilities and were accountable for what each person was responsible for in the program. Assessing how people are participating in the process contributes to identify who are participating and whether those that need to take part are actively engaged.

Table 6.9 How people participated in the growth monitoring program during the study

Actors	What was done at beginning of the study (based on interviews and initial observations)	What was done towards the end of the nine months fieldwork (based on observations)
Ministry of Health	Training Weighing scales & bags	Weighing scales & bags
Nutrition field worker	None	Attended child growth monitoring sessions Provide nutrition information Interpret children's weights Recording during the weighing sessions Counselling mothers on feeding Advice community health workers Resource on curriculum development
Community health workers	Organise all sessions Provide nutrition & health information Weigh children Record weights Interpreted weights to mothers Custodian of weighing scales, bags and records Solicit for resources Decide when to have meetings Make arrangements to announce for meetings Motivate and encourage mothers to attend sessions Leadership of program Counselling on feeding Networks	Organise all sessions Provide nutrition & health information Weigh children Record weights Interpreted weights to mothers Custodian of weighing scales, bags and records Solicit for resources Decide when to have meetings Make arrangements to announce for meetings Motivate and encourage mothers to attend sessions Leadership of program Counselling on feeding Networks
Women	Take children to sessions Receive nutrition & health education Sometimes when to have sessions	Take children to sessions Decide on nutrition & health education in the program Participate in deciding when to have sessions Interpretation of weights Decision on how to promote incomes through the program Leadership to handle income activity Networks to SACDEP & Department of Social Services
Collaborators (NGOs)	Training Weighing bags & scales Food supplements	Assist participants on budgeting for poultry project
Researcher	Observations	Facilitate participation Resource on curriculum development

Resources for nutrition education

In order to carry out any program effectively, basic resources are required. These are needed to facilitate program activities so that desired goals are achieved. In this study, the resources for nutrition education were looked at from the government staff level in the district and at the child growth monitoring level. The purpose was to provide understanding on resources available that enable nutrition education to function the way it does in the district.

Resources

During the fieldwork for this thesis, it was found that the child growth monitoring program lacks basic facilities. During the first meeting with the community health workers one of them said: *"Our weighing bags are torn so we cannot weigh. We do not have a weighing scale for older children who can stand because they do not want to be put in the bags"* [23/6/98]. Later when The District Nutrition Officer handed the weighing bags to the community health workers, one of them said: *"The old bags were torn and putting children in them was difficult. We were using our own 'lessos' to put children in the bags before weighing. There is also no scale to weigh older children"* [8/9/98]. Later the weighing scale for older children was provided by the District Nutrition officer.

When questioned as to what resources the community health workers had available for their work one of them said: *"There are no bags to carry medicines, weighing scales and weighing bags. We lack writing materials like pens and books. Sometimes we have to use*

our own money to buy these" [21/10/98]. Another community health worker said: *"They teach us how to use chalk and board but they do not give us the boards so we do not have materials to use"* [21/10/98]. These results show that there are limited resources set aside for the child growth monitoring program. During the fieldwork, I provided pens, writing materials and manilla papers for their use.

The room where the child growth monitoring was held had four benches, which were not sufficient to seat over twenty persons. As one community health worker noted: *"We require more benches for the mothers"* [8/1/99]. The inadequate sitting space indicates that the program will need extra physical facilities if it is to cater for all the mothers and children aged below 5 years in this community. Nutrition field workers also lacked basic materials for writing. In my observations at the Ngoliba Health Centre where the nutrition field worker is situated I noted in my field notes: *"The nutrition field worker recorded information on a piece of rough paper. There is no proper stationery for use by this staff"* [23/6/98]. The situation was similar at the district office.

According to the District Nutrition Officer, 25% of the cost-sharing money in each health facility is set aside for primary health care. Nutrition education gets its financial support from the 25% of primary health care funds. This is used for feeding patients in the hospital and nutrition activities. There is no central government funding allocated for nutrition education at the community level. The government however allocates funds for supplementary feeding in the hospital. No money is allocated for follow-up activities. One of the nutrition staff during the observations in the maternal child health clinic in

Thika said: "We have no equipment to carry out demonstrations" [18/11/98]. During the focus interviews with the nutrition staff, the District Nutrition Officer said:

"You should be involved in planning for 25% of the cost sharing money at the health centre. If you plan then you can be given money. You can collect it as imprest and buy supplementary foods for your work. There is money available for this but nobody comes for it" [3/12/98].

These findings show that there are limited resources for nutrition education, however, nutrition staff are not aware of how to access the limited resources available for their work. In order to be effective in promoting nutrition education at the community level, there is need to provide basic resources to facilitate the work of both nutrition field workers and community health workers' performance. In order for finances to be accessed, planning to show what the funds will be used for and the expected results will be a pre-requisite. Thus, clear planning is an area nutrition educators must pay attention to if they expect to access the limited resources from the central government or elsewhere for nutrition education.

Motivation and recognition

Staff in any program require recognition of their efforts. Recognition motivates them to move on in their vision for the future and sustains their interest. This study found that both the nutrition staff and community health workers wanted to be recognised and motivated to work. During the discussions of the preliminary findings, a typical statement in relation to this was voiced by one nutrition field worker by: *"There is no motivation for nutritionists to work. Nurses are promoted every three years but the*

nutritionists remain in the same position. We therefore feel that we are looked down upon" [3/12/98]. However, the District Nutrition Officer noted that: *"There is a scheme of service for nutritionists and you should familiarise yourself with it and know your rights"* [3/12/98]. Another nutrition staff on the same point stated: *"We need ideas on how we can improve ourselves so that we are recognised. We also need to show our work so that we are recognised for what we do and so that our work is appreciated"* [3/12/98]. During the micronutrient workshop, other Ministry of Health staff from the district participated. This provided an opportunity for nutrition field workers to share with them about the work that they do and how other staff can participate in promotion of better nutrition in the district.

Community health workers and the women require motivation to participate in the program. One community health worker during the open-ended interviews stated: *"When we counsel people, sometimes they are not motivated and fall out of the project. That is, they do not come again, therefore, we must be patient with them"* [23/10/98]. During the discussions with the community health workers, one of them said: *"We lack motivation to work. The community does not respect you, so you get tired working for no pay"* [23/6/98]. During the child growth monitoring sessions, the community health workers gave generous comments to motivate mothers in feeding their children. Typical statements as said by one community health worker was: *"Today there was no underweight. You are, therefore, feeding your children well." Continue to feed them well"* [7/8/98]. In another session one community health worker said: *"You have done well, today there is no underweight"* [11/11/98]. Evidently, women received positive

motivation from community health workers when their children were gaining weight as expected. When they were not growing as expected, they were counselled on how to improve the child's growth.

Women were not motivated to bring their children to the program if their weight remained the same. This was indicated by one of them by: *"When one sees that the child is not gaining weight, I give up as there is no benefit"* [21/9/98]. One staff from one collaborating organisation said: *"People complain that weighing the child and told how the child is, that is 'the child is doing well or feed the child like this', but not to give anything else is not enough to motivate people consistently to attend"* [16/10/98]. This may be one of the reasons for drop-out or non-participation.

In a nutrition program, if children's weight is being monitored, there should be tangible ways to address those children who maintain constant weight or the ones whose weight falters. If this is not done, the mothers may not only be de-motivated to come but may be dis-empowered by their attendance of the child growth monitoring sessions. This is because failure to gain weight may be viewed by such mothers to imply their inability to provide for their children or inability to understand or do what they are being taught in the program.

Volunteerism of community health work

Work in the child growth monitoring is carried out on a voluntary basis. The government expects the community to show appreciation of the community health workers through

either contributing cash or in kind. However, the findings of this study show that there is no form of remuneration for them. Community health workers' sentiments indicate that it is not satisfying to work on a voluntary basis over a long time. During the child growth monitoring sessions one community health worker said:

"I see that sometimes doing voluntary work is hard. This is because, it demands a lot of sacrifice in terms of time and you even fail to undertake your own economic activities and nobody appreciates what you do. You are not even provided with writing materials like pens. You work sometimes up to very late and you are not even given lunch. You do a lot of work but there is no pay" [8/9/98].

Similar sentiments were voiced by statements made by the community health workers during the focus group interview held on 23rd October 1998. These were:

"Voluntary work is difficult over a long time"

"This is voluntary work and there is limited time to carry out the work".

"As you do community work, your own work is delayed. Nobody thinks of improving community health workers".

"We are also called to seminars but are not paid for it and leave our work unattended".

"Our pay is to get God's blessings" [23/6/98].

These comments show that although these community health workers were committed to work, they felt that being a volunteer over a long time is difficult. The commitment to voluntary work causes their own work to lag behind and they felt their work was not recognised. During the discussions with the District Nutrition Officer she noted that:

"The community health workers expect to be recognised for the work they do. If nothing is done for them, they pull out of the program. For example, when Plan International gave food to the communities, many of them were interested in their work. This is because, their children got some food. Anything that is done in the community they are given first priority. For example when starting poultry or goat projects" [2/9/98].

Apart from the provision of food, none of the other suggestions have been done. In a study carried out in Kenya by the department of Community Health of the University of Nairobi in Kenya, it was found that it is difficult to sustain the expected level of financial contribution by the community for support of the community health workers (Ofosu-Amaah, 1983, p. 24). In assessing success of nutrition problems in Africa, (Kennedy, 1991) noted that although volunteerism seems a solution, it does not seem to work in the long term.

Findings of this study show that there is an urgent need to address some form of remuneration for community health workers to maintain motivation for primary health care work. Noting the importance of nutrition well-being for the economic and overall welfare of the population, it is unreasonable to expect volunteer workers to bring about major nutrition changes in lifestyle. These workers also tend to be from the same poor communities and are poor. To expect them to devote themselves both to the expensive process of participation in terms of time and nutrition at no pay is not realistic. Nobody works for nothing in the long term. What is required is some form of recognition of their work. This may include provision of badges or having some community activity where they are publicly acknowledged.

A nutrition program that expects to get results needs to maintain motivation and recognition of the community health workers as they play a critical part in primary health care at the community level. Assessing how to motivate community health workers together with the community may lead to recognition that is culturally

appropriate. As has been shown in assessing nutrition programs in Africa, successful programs tend to be those that uncover and respond to felt needs of recipients and that are flexible in response to changing needs of the participants (Kennedy, 1991).

Perceptions of nutrition education

Perceptions of nutrition problems and solutions influence how a program is planned, implemented and its outcomes. The way nutrition education facilitators perceive the causes and solutions of poor nutrition to be affects the content and how nutrition education is promoted. On the other hand, how beneficiaries perceive what the causes of poor nutrition are and their possible solutions determine how they interpret and use nutrition education information.

Couses and solutions of poor nutrition

In this thesis, the nutrition staff, community health workers and the women outlined the causes of poor nutrition and suggested possible solutions to the nutrition problems in the community. Perceptions of people about the causes and possible solutions of malnutrition suggest areas that need attention in the community. Table 6.10 shows what the different actors in this study viewed to be causes and solutions of nutrition problems in the community. The results in Table 6.10 suggests that causes of poor nutrition include nutrition knowledge, socio economic factors such as incomes, food prices, food availability and accessibility.

Table 6.10 Perceptions of causes and solutions to nutrition problems

Actors	Causes of malnutrition	Suggested solutions
Nutrition field workers	Poverty Low incomes Landlessness Low food intake Poor sanitation Disease Large family size Ignorance of mothers Difficult to change attitude Expect free food Inadequate time for food preparation & childcare Large families Inadequate knowledge on adequate diet Poor feeding Poor food preparation practices Over-dependency on starchy foods Drought	Provide nutrition knowledge Provide supplementary foods Income generating activity Advocate for smaller family size Promote family planning Advise to use what have Kitchen gardening Train local leaders on nutrition Provide funds for nutrition Address people's attitudes Provide private room for counselling Policy on fathers incomes
Community health workers	Lack of time to prepare food well Food insecurity Low incomes Large family size Lack of knowledge on what is proper nutrition Poor sanitation & hygiene Landlessness Lack of food to buy Lack of money to buy food Unreliable rainfall	Teach kitchen gardens Advice on feeding Provide projects like poultry Practical kitchen gardening Demonstrations on food preparation Income generating activities
Women	Food insecurity Low incomes Inadequate knowledge on proper nutrition Lack skills in food preparation Unreliable rainfall	Practical kitchen gardening Income generating activity Nutrition information Skills in food preparation to gain practical application Loan to build a water tank Loan to start poultry keeping Loan to fence the gardens Increase incomes
Collaborator	Poverty Food insecurity Inadequate knowledge on nutrition	Depth in training on a gradual basis for community health workers. Training should also include, agricultural & food processing at the household level

Women and community health workers tended to identify problems and suggest solutions that were within their abilities to address, whereas the nutrition field workers stated what could be handled both at the community level and what was beyond the community to handle. The identification of the causes of nutrition by the participants in this study reflects similar findings from another study conducted by Freedom from Hunger of Davis California in 1986 that showed that nutrition issues do not exist in isolation (Hinton, Rausa, Lingafelter & Lingafelter, 1992, p.70S). These issues include poverty, economic, social problems, food security and nutrition knowledge. Suggested means of addressing nutrition problems reflects this complexity as they focus on specific skills in food preparation and gardening to increase food accessibility, low incomes and information. In essence, relevant knowledge coupled with practical skills and practical action to address incomes stood out as priority solutions to the problems of nutrition according to the participants.

Causes of poor nutrition

Poverty was stated to be a main cause of poor nutrition. Women stated that lack of food due to drought and low incomes, inadequate knowledge on nutrition and skills in food preparation were main causes of poor nutrition. One woman indicated this by: *"We lack food partly due to unreliable rainfall. There is lack of sufficient water therefore, poor food harvests are common. Sometimes you have money but there is no food to buy. Other times you do not have the money to buy food"* [8/9/98]. Another woman said: *"Drought is common, therefore, fruits and vegetables are not available throughout the year"* [8/9/98].

Community health workers, as voiced by one of them, stated that: *"Lack of food and lack of money to buy sufficient foods is a major cause of poor nutrition"* [23/6/98]. Low incomes are also a main cause. This was stated by one community health worker during the open-ended interviews by: *"Food from the market is very expensive because it comes from outside the area"* [13/11/98]. Large family size was pointed out as a cause of poor nutrition. One community health said: *"Some mothers have many children, therefore, they cannot feed them well. We advice mothers to go for family planning"* [23/6/98]. One of the collaborators from the non-governmental organisation noted that:

"Poverty is the main cause of poor nutrition. People live below the poverty line ...People are prone to infections due to malnutrition therefore their children are often sick ...Large families also means that most of them cannot adequately depend on what they produce for good nutrition" [16/10/98].

Most of the causes of malnutrition stated at the start of the study tended to be "victim blaming". This was suggested by statement from one community health worker by: *"Food preparation and lack of time to prepare foods lead to poor nutrition"*. Another community health worker said: *"People are lazy to prepare food well"* [23/6/98]. Another one said: *"People do not know how to prepare well-balanced meals even if they have food but these are few"* [7/8/98]. It was also said by one community health worker that: *"People tend not to eat well balanced meals as required"* [7/8/98].

Insufficient food production, low incomes to purchase sufficient food, lack of food to be purchased and inadequate knowledge on what is good nutrition were stated as causes of poor nutrition. In addition, inappropriate food consumption and preparation methods and

large family size are causes of malnutrition in Ngoliba community according to perceptions of the community health workers and women. Education promoted through the child growth monitoring, however, tried to address only nutrition information and gardening as a food security measure.

The nutrition staff stated that poverty of mothers in particular and families in general, low incomes, food insecurity, social problems, attitudes and large family size were among the main causes of poor nutrition. Another reason was stated by one nutrition field worker: *"Poor people who are involved in illegal projects like local beer brewing are harassed by police therefore fail to provide for their families"* [3/6/98]. Most of the nutrition staff saw nutrition problems in relation to what the community can do to better their nutrition. Overall, they perceived nutrition problems to be due to inadequacy of families and especially women to meet the nutrition needs of their children and families. Tendency was to blame the families for their poor nutrition status. This perception fails to see the wider social and economic situations that cause nutrition problems. Food prices, food accessibility and economics are issues over which the community has no control. A narrow perception of the causes of poor nutrition affects the strategies that are used to solve nutrition problems.

Solutions to nutrition problems

Solutions that community health workers see as feasible to solve nutrition problems include those that focus on their work and the community. This was indicated by the statements from community health workers during the focus group interviews such as:

"We should have a project that will earn money or bring in income so that people can purchase food if they lack food" [23/10/98].

"We should have things we can do practically. For example, we should have a kitchen garden at the weighing centre so that people can learn as they see samples" [23/10/98].

"We should have an income generating activity so that more people will attend. This can be like sewing, keeping poultry or contributing money as a group so that people are motivated to work better as they get some income" [23/10/98].

"We should get demonstration materials so that people can see how actual foods recommended are prepared" [23/10/98].

The solutions according to the community health workers centre on food security, information on feeding and skills in food preparation and increasing incomes. Women, on the other hand, voiced increasing incomes, access to loans, nutrition knowledge and skills in food preparation and food production through the kitchen gardens as important in solving their nutrition problems. Typical statements that reflected this from women were:

"We need to have an income generating activity. We should identify ways to get more income" [21/9/98].

"Show us how to mix foods for weaning" [22/9/98].

"We should have demonstrations to cook so that we learn practically how to prepare the different foods as we are taught" [22/9/98].

One woman during the open-ended interviews, suggested that access to water was important by: *"Get me a loan to build a water tank so that I have water at home" [21/9/98].* Security to obtain loans was voiced as a solution to nutrition problems. One woman suggested this by saying: *"If we were able to get loans, then we can use the money to develop ourselves and get food. But we lack a title deed to get a loan" [21/9/98].* Another woman one said: *"If I had a loan, I could fence my garden so that the vegetables are not destroyed by chickens" [23/9/98].* Another woman indicated the need

to increase food through poultry rearing by asking: *"Can somebody as an individual be assisted to get a loan to rear poultry as an individual and not as a group [21/9/98]."*

This shows that although participants acknowledge nutrition knowledge and skills in food preparation as important, they see solutions to nutrition problems from a wider perspective. Increase in incomes, access to credits, water and food production are distinct critical aspects that need to be addressed in order to solve nutrition problems. Broadening the scope of nutrition education is what women think will solve nutrition problems.

Nutrition staff tended to suggest different solutions to nutrition problems. One was that the women require knowledge for proper nutrition. This was indicated by statements from nutrition field workers such as: *"We should do individual counselling"* [26/6/98]. Another view was to increase women's incomes. This was voiced by one nutrition field worker by: *"We should involve women in income generating activities"* [3/9/98]. Large family size was considered an important issue to be addressed. This was stated by one nutrition staff when she said: *"There is need to continue to advocate for smaller families"* [3/9/98]. Another view was that the government provide resources needed to carry out nutrition promotion. This was stated by one nutrition staff when she said: *"I wish the government gives nutritionists more support so that they are able to help the members of communities in which they are working to prevent most of the diseases which have become too expensive to cure"* [3/9/98]. The nutrition staff also saw the need to involve the local leaders in nutrition promotion. This was indicated by one nutrition

field worker by: "Train local leaders on nutrition" 2/9/98]. On the socio-economic problems that lead to poor nutrition, one nutrition field worker said:

"Socio-economic problems should be addressed in the food and nutrition policy. For example attention should be paid to those husbands who go drinking and leave their families hungry. There should be some form of policy to ensure the money that the father earns is spent on the food budget in the home" [3/6/98].

In order to solve nutrition problems, one collaborator noted that:

"For success on nutrition, we must focus on the income levels and food production for families ... For example, what people grow, influence what they eat. Most do not grow vegetables and fruits. They will, therefore, need agricultural interventions to ensure that these foods are available at the household level and therefore accessible to them" [16/10/98].

Apparently there was a narrow focus on the remedies to nutrition problems by all actors. The focus tended to be on the family or women to solve the problems. The wider causes over which the women have no control, however, had minimal attention paid to them. Focus of solutions to nutrition problems by the nutrition staff is centred on the woman and family and practically none on the society and wider economic situation that significantly influence nutrition status of families and in particular children. Addressing the socio-economic concerns through policy as suggested by the nutrition staff is important but of more relevance is the enforcement of the such policy. Diversifying the scope of nutrition education to encompass a wider spectrum of nutrition solutions is an area that needs attention by all nutrition educators. This should of necessity engage the trainers of nutrition staff at all levels so that the graduates from such institutions graduate

with a broad perception of nutrition. Training of the community health workers should therefore pay attention to nutrition in a holistic manner.

How other colleagues perceive nutrition staff

Nutrition staff felt that other Ministry of Health staff did not hold their work in high regard. During the open-ended interviews, nutrition staff voluntarily indicated that other Ministry of Health staff viewed them negatively even though I did not ask them a question on this. This may suggest that they feel looked upon in a negative way. One of the nutrition staff indicated this by saying:

"Other health staff do not recognise nutritionists. They look down on our work as a junior job. Our work does not bring in money to the health centre and the staffs exclude us from making decisions involving cost sharing money. ...Other staff think a nutritionist does not work" [9/6/98].

Another nutrition staff echoed the same: *"Other staff think nutritionists do not work" [11/6/98].* Nutrition staff felt other Ministry of Health staff felt they could handle nutrition work and either sidelined or excluded nutrition staff from participating in nutrition related activities. This was voiced by one of the nutrition field workers by:

"People who are not trained in nutrition think they can handle nutrition issues" [2/9/98].

Another nutrition field worker's comment on the same was: *"Nutrition activities are sidelined as nurses handle nutrition. Other people even teach nutrition in courses you attend and they are not nutritionists" [2/9/98].*

Apparently persons working within the Ministry of Health are not conversant with nutrition work or the tasks of nutrition staff. This was suggested by one nutrition field worker during one focus group discussion by:

"In the Ministry of Health, there are so many sections and people do not know each other or what the different sections actually do. One doctor asked me: 'What do you nutritionists do in that rehabilitation centre?' (Referring to where the nutrition offices are located). 'What is your work?' You can imagine a doctor asking me that. I asked him: 'What do you do with your diabetic patients? You should be referring them here for nutrition counselling'. Imagine if a doctor in the hospital does not know what a nutritionist does, what do you expect?" [3/12/98].

How other colleagues perceive the nutrition staff and the work they do may affect their self-esteem and confidence in work. During the planning of the micronutrient workshop, the District Nutrition Officer requested my help in planning for it. I suggested having other nutrition staff participate in the planning, which she accepted. During the planning, they decided to include staff from different departments and also decided on the content of the workshop. This was the first micronutrient workshop of its kind in Kenya at the district level.

I facilitated participatory planning and implementation of the workshop together with the nutrition staff. The results of this workshop on the Ministry of Health staff were encouraging. They later made comments to me about nutrition staff as exemplified by one nurse like: *"Now we understand what nutrition staff do. We even realise the mistakes we make in our own homes"* [16/10/98]. This workshop helped the other ministry staff understand and appreciate, to some degree, the work of nutrition field workers.

As indicated by one of them, it is only the nutrition staff themselves who will lead people to recognise them by their work and collaboration with other sections. During the discussions with the nutrition staff on the preliminary results of the study one them said this: *"We need ideas on how we can improve ourselves so that we are recognised. We also need to show our work so that we are recognised and so that our work is appreciated"* [3/12/98]. Early in the study, it was noted that nutrition staff tended to expect collaborators to come to them and not nutrition staff to go to collaborators. The self image of nutrition staff will need to be improved through self-help strategies and participation is likely to bring this about.

Initiation and perceptions of the child growth monitoring program

The initiation of a program determines people's expectations and perceptions of what it is meant to do. The initiation of the child growth monitoring program was indicated by typical statements as this one stated by one community health worker:

"After the training, it was announced in the churches and schools for mothers to bring their children to the centre for weighing. We were given flour to distribute to mothers of children who were underweight and we were provided with weighing scales and books to keep records. We started weighing children and demonstrated preparation of uji (thin porridge) which children drank. Although flour was targeted to be given to mothers of underweight children, we gave it to all mothers who attended" [23/6/98].

The flour used was rich in proteins and fibre. It was stated by another community health worker that: *"Plan gave us soyabeans, millet, sorghum and we mixed and ground it here. We had a lot of flour at that time"* [23/6/98]. Another community health worker added:

"Plan used to give us a lot of flour monthly. At that time, many children used to be brought for weighing. We were also giving mothers free de-worming medicine. Then in 1996 Plan stopped to give us food. Mothers stopped to bring children in 1996, when Plan stopped giving flour. During the period that Plan International gave us flour, one of their staff used to visit us a lot, therefore, people were motivated to attend" [23/6/98].

The community, therefore, did not participate to initiate the program. Later on, as noted by one community health worker:

"In 1997, we restarted weighing children. This is when Sustainable Agricultural Community Development Program (SACDEP, a non-governmental organisation) initiated a group focusing on food security and nutrition in the location. The group selected three members (these were the same who promoted child monitoring promotion previously), to attend a one week training" [23/6/98].

During the research two of the persons who attended the training were functioning community health workers. One community health worker explained:

"After the training we reported to the group what the training was about. The group agreed that we start weighing children again. We were given flour twice by SACDEP. Once, was to issue flour to mothers at the centre and once to the SACDEP group members. Most mothers stopped to bring children for weighing when there was no more flour. We got fewer and fewer people come to weigh their children" [23/6/98].

The last weighing session prior to the research was in April 1998. There were no weighing sessions in May and June 1998 because as explained by one community health worker: *"We met last in April 1998, but I was not present. We did not meet in May because there was a chief's baraza on the same day so the weighing session was cancelled. I do not know when they set the next meeting to be" [18/6/98].* In June 1998,

this research rejuvenated this program. The outsider's initiative was reflected by one of the community health workers by:

"Plan International had the idea to uplift the nutrition status because many children were malnourished then. Plan International had originally trained us for primary health care especially on running the community pharmacy in 1992. Nutrition education through the child growth monitoring was introduced in 1994. This was Plans original idea. The aim was to monitor children's growth and give flour for the severely malnourished" [23/6/98].

Another community health worker noted that: *"Sustainable Agricultural Community Development Program started in 1997 and their aim was to help children and parents maintain good health and family planning and food security"* [23/6/98].

The main focus of the child growth monitoring program has been weighing children and nutrition and health education. Throughout the study, the community health workers and the women referred to the program as the "weighing centre or weighing clinic". This indicates the main focus of the program. The research gave impetus to the program again. This was shown by statements such as this, by one woman: *"You are the one who has made us come so often to weigh children"* [11/12/98]. The challenge is whether the program will continue after the end of the research.

Based on the information of how the initiation of the child growth monitoring program was started, it is apparent that it was what Freire (1993) refers to as banking education. This is because the outsiders gave the information and said what and how the program should function and the people for whom it was intended were not part of the initiation

process. The community health workers were trained on what to do and left to start the program and implement it on their own. There was minimal involvement of the community participants in the design of the program or what was to be done in it. This reflects what was experienced by Scheider, (1992, p. 84S) that poor people have little input into the efforts intended to help them. From Scheider's working experience, well intentioned people act out their own perceptions and expectations of what would help the poor without involving the people themselves. In assessing growth monitoring, Nabarro and Chinnock (1988, p. 947) also noted that the widespread advocacy of the growth monitoring program was not a result of a careful review of policy and program research but more a reflection on the needs and concerns of the international community on what is appropriate for poor communities.

People have their own expectations from any program. Their objectives of participating in a program may be different from that of the government, policy and even nutrition educators. Participants' perceptions are the fundamental basis for the success of nutrition education program at the community level. The government looks at the child growth monitoring program as a way of monitoring children's growth as a child survival strategy. They also look at it as a central focus for addressing nutrition well-being of the vulnerable groups specifically young children aged between six months and five years and their mothers in the community. How all actors perceive the program determines what takes place in the program.

Perceptions of the participants in the program are indicated by the reasons for joining a program, what their roles are and what they expect from the program. What the participants think the program is, or should be, is important in addressing the concerns of the program. Four of the community health workers joined the program because they were selected during a sub-chief's *baraza*. The selection was by voting by a show of raising hands. One person joined because she likes to do voluntary work: *"I am just interested to see the community health workers work. Although I was trained by SACDEP and Plan, I work mainly with the Church"* [23/10/98]. The main reason why the community health workers function in the program is because they were chosen by the community. Whether those who were selected would have volunteered to do the work is not known as it was not pursued in this study.

Most of the women joined the program because they were told to do so. At the start of the study, 52% of the women said the community health workers informed them during visits to their homes to join the program. About 29% were informed by the churches, 24% were informed by neighbours or family members, 19% by the maternal child clinic at the health centre and 9.5% by the school. It should be noted that some of the women were informed by more than one source.

Several reasons were cited as to why women had joined the program. Table 6.11 indicates the reasons why the women joined the program. This shows that a significant proportion of the women, about 33% joined the program because they had been told to do so, followed by 29% who joined in order to gain knowledge on how to care for their

children. Apparently there was a narrow focus of what the program was to do as indicated by these responses.

Table 6.11 Women's reasons for joining the child growth monitoring program

Reasons for joining the program	Number of women N=23	Percent
Know how to care for the child	6	29%
Observe how the child grows	4	19%
Know how to feed the child	2	9.5%
Be given soya flour	2	9.5%
Because told to join	7	33%

Benefits of the child growth monitoring program

Statements made by participants indicate what the program had achieved. Community health workers think that: *"There is now better health and nutrition for children in the community. Diseases like marasmus and kwashiorkor have reduced. This is because there is better feeding/eating"* [23/6/98]. There are changes in the nutrition status of children. One community health worker suggested this when she said: *"There is better nutrition. When we started, children were very poorly nourished but now they are better"* [21/6/98]. Another community health worker noted that: *"One child was marasmic. We advised the mother on how to feed the child properly and the child improved. This is when I believed that lack of food can lead to a disease"* [22/9/98]. One of the nutrition field workers said that: *"Mothers appreciate nutrition advice for example when a child recovers from illness and gains weight after following the advice on feeding"* [3/6/98]. Another community health worker noted that there were changes in nutrition knowledge. She noted that: *"Previously mothers lacked knowledge about the importance of weighing*

children periodically. Now they like to have their children weighed so they appreciate that we are helping them. The mothers are also more informed on nutrition knowledge" [23/10/98].

The program has also resulted in some changes in the way women do activities in their homes. One community health worker suggested this when she said:

"People did not value bringing children for weighing at first but now they value weighing the children. In addition, there is improvement in hygiene and cleanliness at home... People are also now boiling drinking water in their homes" [23/10/98].

Women indicated that the program had benefited them in gaining knowledge on how to feed their children. This was indicated by one woman by: *"After the teaching on how to prepare weaning foods, I now can mix different foods for my child. At first the child did not like but now the child eats some of it well"* [15/7/98]. Another woman said: *"When my child is not growing well, I try to find out why"* [7/8/98]. The program was, however, not meeting the desired expectations of the participants. This was suggested by one of the community health worker when she said: *"People say, bringing children to be weighed only, has no value"* [24/9/98]. Another community health worker supported this when she said: *"The mothers think that weighing is inadequate. If we listened to them, the program could plan for more than just weighing in the child growth monitoring"* [25/9/98].

These perceptions expressed early in the fieldwork suggest that the community see value in the program, however, they think the program could address more concerns to make it

relevant for them. Participation of women in making decisions on what to take place in the program led to adjustments in what the program handled and how it did this.

Women's expectations of the growth monitoring program

One of the aims of this study was to see what would result when participants of the child growth monitoring program were engaged in making decisions about nutrition education through the growth monitoring program. To do so, participants were asked what they wanted to see take place in the program and how they expected it to take place. Participants' views indicated their expectations from the program. These were related to economic, food security, workload, knowledge and skills and decision making.

Economic

Most women during the open-ended interviews indicated economic expectations from the program. About 52% said incorporating an income activity in the program was needed whereas 9.5% suggested obtaining loans through the program. One woman voiced the need for loans when she said: *"If I have a loan I can get water at home [21/9/98].* Another woman said: *"I lack a title deed for security to get a loan" [21/9/98].* Another woman indicated the need for income by: *"We need to have an income generating activity so that we do not see as if we are wasting time when we bring children to the child growth monitoring" [22/9/98].* Another woman said: *"If we make contributions when we come to weigh children, it would encourage people to come and also people are able to buy what they lack" [23/9/98].*

Women and community health workers expected the child growth monitoring program to address economic concerns. If the program is to function according to community members' perceptions, then it should allow the expressed needs of the participants to be tackled as they propose. Noting that about 46% of Kenya's population live below the absolute poverty line (Government of Kenya, 1996), a program that intends to affect people's nutrition well-being cannot afford to ignore the economic concerns of participants in such a program.

Initiation of the income generating activity does suggest that addressing economic concerns of participants in the child growth monitoring program is likely to lead to development of a program that is relevant for the people according to their own perceptions. It has been noted that in African countries, income in addition to information is needed in order to improve nutrition (Kennedy, 1991). However, as the findings of this study indicate, no concrete action has been taken to increase incomes through the child growth monitoring program in Kenya. Income security is a key to good nutrition in this community because it ensures food accessibility. This is because the food that is produced on their farms is insufficient to feed the families throughout the year due to unstable rainfall. Poverty in Kenya is evidenced by income inequalities and this situation is not likely to change significantly (Mburu, 1984). This is worsened by the implementation of the structural adjustment programs. There is, therefore, a need to actively include economic perspectives in the child growth monitoring program in order for the program to realise one of its goals of better child health and in particular nutrition.

Workload of women

Roles that women play in their lives is depicted in the activities they perform on a regular basis. Assessing the work they do indicates their workload. This provides the time and energy commitments of participants. Of the women interviewed, majority said they performed a variety of activities on a daily routine basis. These activities are given in Table 6.12.

Table 6.12 Main activities performed by women on a daily routine basis

Activities done daily	No. of women	Percent
Food preparation	21	100%
Washing clothes & bathing children	19	91%
Cleaning house/homestead	19	91%
Farm work	18	86%
Fetching water	17	81%
Collecting firewood	15	71%
Feeding children	7	33%
Care of animals	5	24%
Prepare children for school	4	19%
Assist children with home work	3	14%
Casual work	2	9%
Exercise the child	1	5%
Collect sand	1	5%
Look for produce to sell	1	5%

Most of the activities stated in Table 6.12 are done in the homes. However, fetching water and collecting firewood had to be done outside their homes. In the cases of mothers who did not do so, they had older children or other people in the home who went out to either fetch water or collect firewood. Due to the steep slope to the river and the forest, animals could not be used to carry the firewood or water. These were carried by the persons on their backs. Activities people do has a lot of implications for their time. Water for the households in this area was mainly obtained from the two rivers of

Athi and Thika. Among the households that responded to the open-ended interviews, only one had a water tank.

Noting that participation in the child growth monitoring program demanded a lot of time from mothers, means and ways to save time spent on other activities may enhance participation in not only the program but other activities. About 9.5% of the women said they would have liked loans to construct water tanks whereas another 9.5% indicated their inability to get loans due to collateral required to access credits in Kenya. This may suggest that accessing water in the homes would reduce women's time spent on fetching water.

Nutrition knowledge and skills

Women expected to gain nutrition knowledge and skills from the program. They expected to gain knowledge in different aspects as indicated by questions such as: *"When a child is sick, why should I not give her milk or bananas?"* [15/7/98]. Another one asked: *"If I am pregnant before I stop to breastfeed the child, what can I do?"* [15/7/98]. Based on the topics the women identified during the child growth monitoring sessions and the open-ended interviews, a curriculum was later developed to address these concerns. Women also suggested that they needed to be taught skills related to food preparation. One woman stated this when she said:

"During seminars or education sessions, tell us to contribute in kind or cash so that we have proper demonstrations. This will help us to know how to cook and we can practice what we learn at home. This will help us know how to prepare and cook well. Teaching us by just talking is not very helpful" [9/10/98].

Learning through taking part in tangible action relevant to the daily lives of women is preferred. This is important considering the changes in foods available and, hence, changes in food preparation and eating habits of the people. Some of the foods available on the market are new to the culture and people are not accustomed to prepare them. Food preparation is, therefore, an important area of focus. Local recipes using foods available and accessible on the market could be developed together with the women. This could be an asset to the community and could be used in other programs in similar communities. Although knowledge and skills are important, women strongly indicated that education and weighing alone were insufficient to bring about nutrition well-being.

Education and weighing alone not sufficient

The central focus of the child growth monitoring program was education of mothers on health and nutrition related concerns and monitoring children's growth. The program, however, did not adequately reflect people's needs. Typical statements that suggest this were voiced by different women by:

"Just going for education and weighing alone, I see it as a waste of time" [21/9/98].

"Just to come and weigh the baby and go home is not motivating" [22/9/98].

"I am tired of going to weigh the child always and there are no other benefits" [24/9/98].

"If I had money to start a small business, and earn income, the education I get would be more beneficial because I could practice it" [25/9/98].

These statements show that, although, women perceived education and weighing as necessary, it is insufficient to bring about nutrition well-being of the families in this community. One of the collaborators noted that:

"Education alone is not sufficient for proper nutrition. There is need to incorporate other elements in the program. This may include provision of de-worming medicines. In fact people complain that just weighing the child and told how the child is growing, that is, 'the child is doing well', but do not give anything else that is tangible is not enough to motivate people consistently to attend the program" [16/10/98].

This is in agreement with other findings which show that nutrition knowledge is necessary but it is not sufficient to bring about proper nutrition behaviour or to bring about informed decision making (Greenberg, 1989, p. 175; Tones, 1996, p. 16; Tones, Tilford & Robinson, 1991, p. 11). Providing nutrition education only is not enough to attract regular attendance by people who may require the information the most in the program. The child growth monitoring program should evidently address what participants want. Women's active decision making about what and how the program should function led the program to address the incomes of the women and nutrition topics that they saw as relevant. This, as in other findings suggest that nutrition knowledge alone will not result in nutrition change unless people are motivated by personal or group goals and health concerns to initiate change (Mothibe, 1990, p. 26; Cuntento, et al., 1995). It has been noted that among the leading factors to malnutrition is poverty which is wide spread in the country (Mburu, 1984). This being the case, a program that has nutrition focus in Kenya needs to address more than education and weighing for effective results. In addition, once nutrition information is discussed and mothers of underweight children counselled no action is taken to correct the state of poor nutrition. As noted by Nabarro and Chinnoek (1988), the exercise of identifying reasons for poor growth serves no purpose if there is no appropriate action to address the problem.

Food Security

Food insecurity as it is indicated by insufficient food production, food unavailable, and inadequate incomes to purchase food were stated as causes of poor nutrition. One woman suggested this by saying: *"I buy food always as there is not enough grown on the farm. Sometimes I lack money to buy all the required foods"* [21/9/98]. Another woman said: *"I lack food to buy for example fruits and vegetables. Sometimes I just feed as I am able to get food but not necessarily a balanced diet. Sometimes fruits are not available even if you have money to buy them"* [21/9/98].

Food production is insufficient to meet the food needs of most families. This is worsened by unreliable rain that is common in the area. One woman indicated this when she said: *"The food we get from the farm, we eat for a short time and then we start buying food again. During the drought, there is no food, there is little money, therefore less food, sometimes there is no food available to buy"* [24/9/98]. The importance of food security was indicated by another woman by saying: *"If I am helped to keep poultry, it is possible to get enough eggs for my children always"* [25/9/98]. One of the community health workers indicated the poor food situation by saying: *"We give mothers advice but the mothers say they cannot afford the foods due to low incomes"* [23/6/98]. This is in agreement with other observations that show that mothers who are poor cannot afford the changes they are expected to make in the food and nutrition habits (Mburu, 1984, p. 40).

Food prices, low incomes, lack of food to buy and low food production are cited as reasons for food insecurity. In order to effectively address nutrition, the food security

situation should be addressed. During the study, the food security situation was addressed minimally by teaching on kitchen gardens. However, women required tangible learning on gardening. In agreement with Kennedy (1991, p. 21), nutrition education programs should be multi-disciplinary to integrate nutrition and agriculture because agriculture is still the primary economic activity of most people in Africa. Food security is an integral part of nutrition promotion. A child growth monitoring program that focuses on nutrition in a rural area in Kenya should, of necessity, have a focus on food security as is suggested by the participants of this study.

These findings suggest that women's expectations from the program are not adequately addressed. It has been observed from elsewhere that health programs are less effective when the target population does not perceive the problem or solution in question to be the most salient problem or the most appropriate solution (Dhillon & Tolsma, 1998, p. 2). Work around the world suggests that when communities are consulted about their health issues, they see those to do with their environment as the ones of most importance (Baum, 1996, p. 186).

If the child growth monitoring program at the community level is to function to meet the nutrition needs of the children below five years, then weighing and education alone are not sufficient. The program will need to broaden its focus to include other needs of the participants, as perceived by them, which impact on nutrition. Actively engaging the participants' in making decision and planning in the program as was experienced in this study, led to practical actions. It addressed participants' nutrition needs and their other

needs which impact on nutrition as was expressed by them. This provides a lot of hope for promotion of participatory strategies in nutrition.

Community health workers expectations of the program

According to the community health workers, increase of incomes through the program, provision of teaching materials, supervision and exposure to communities which undertake similar programs are likely to improve the program outcomes. One community health worker indicated increase of incomes by saying:

"We need loans to improve our standard of living for example poultry, kitchen gardens so that we increase both food and incomes. We should also look for a market for our produce when we have produced a lot so that we sell it at a good prices" [23/10/98].

Community health workers expected the program to be supervised. This was indicated by one of them by: *"If visitors come to the group more often, mothers can appreciate what we teach them. We should also get more follow-ups from the ministry to motivate us and the group and to come and assist us" [23/10/98].* In addition, although health and nutrition education is taught in the program, there were no teaching materials available to be used by community health workers. Consequently, community health workers gave talks or discussions without any illustrations. Teaching materials are required to be used in the program for effective education. One community health worker said: *"We should have a kitchen garden at the centre so that women see what we teach them. We should also have access to teaching materials so that we do not just talk to mothers but let them see what we are doing" [23/10/98].* Materials for teaching should be given attention as

this is likely to motivate both the community health workers and the women in the program.

Exposure of the community health workers to other communities doing similar activities is likely to promote learning among community health workers. This was voiced by one of them by: *"Tours to other projects doing similar work can help us learn from others."* This is an area that should be explored. Community health workers also indicated that they would like more women with young children to attend the child growth monitoring program. One of the community health workers suggested this by saying: *"I feel bad when mothers do not come here for the sake of their children"* [8/9/98]. The community health workers and the women also desire to have input from outside in their program. Community health workers expect economic and food security concerns to be stepped up in the program. In order for them to teach effectively, they do require appropriate teaching materials. Supervision and tours would be a motivational tool for these staff.

Need to promote the child growth monitoring program

The child growth monitoring program is put in place to monitor growth of children 6 months to five years and nutrition education at the community level. However, not all women with children in this age bracket bring their children for growth monitoring. Although non-participants were not included in this study, the participants did indicate the need to have children of this age bracket attend the growth monitoring sessions. Asked what comments they had about the program, some women voiced the need to promote the program so that non-participants attend.

On this one woman said: *"Keep on advertising this weighing centre so that people especially the ignorant can come whether or not flour is given"* [8/9/98]. Another woman said: *"Keep on advertising this weighing centre so that people especially those who do not know how to feed their children can come whether or not flour is given"* [21/9/98]. Another woman said: *"I will let those people across the river to know so that they can come because they usually ask for information about the weighing. Some come and just ask if there is flour for porridge so that they can bring their children for weighing"* [25/9/98].

The fact that women see the child growth monitoring program as a useful one and seek to include others from the community suggest that the program is valued. It is considered appropriate for bringing about social change in the community that is likely to contribute to general well-being and nutrition well-being of children below 5 years. This is likely to occur with the participation of women in planning, designing and implementing the program. The resources available to cater for increased attendance in the program is, however, a challenge. The seating arrangements cater for a maximum of about 28 persons. If the program blossoms, facilities and extra resources will be needed.

Functions of nutrition education facilitators

The part played by nutrition educators is important because they influence the achievements of nutrition programs. Roles of facilitators indicate not only what facilitators do but also what is expected of them in those roles. In relation to nutrition

education at the community level, the government nutrition staff and the community health workers influence how nutrition education is conducted and what it achieves.

Roles and responsibilities of government nutrition staff

The District Nutrition Officer is in-charge of all nutrition work within the Ministry of Health in the district and is a member of the District Health Management Team. She works with seventeen nutrition staff of whom six are stationed at the Thika District hospital, three at Gatundu sub-District hospital and the others are in eight of the 54 health facilities in the district. Nutrition staff are responsible for counselling all patients in the hospital that have special diet related diseases, weigh the children in the maternal, child and health clinics and counsel their mothers on nutrition. There were no official records on the work expectations of nutrition staff or on what they have accomplished. However, based on my observations of their work during the study, the open-ended interviews, focus group interviews and discussions with them it was noted that they performed a wide variety of tasks.

Nutrition staff who are stationed at Thika District Hospital and at Gatundu sub-District Hospital are responsible for ordering hospital food and preparing special diets. In the case of Gatundu, they are also responsible for planning and sometimes food preparation for the patients in addition to other duties. They counsel mothers of malnourished children identified in the maternal child and health clinics and the paediatrics wards in the hospital. They also counsel patients (sometimes their care-givers) with diet related disorders like diabetics, hypertension and ulcers. At Thika hospital they operate kitchen

gardens where they obtain vegetables that they use as samples for demonstrations during the counselling sessions with patients.

Duties of nutrition staff at the health centre level

At the health centre level, nutrition staff promote child growth monitoring through the maternal and child health clinics and in the community. They also perform other nursing duties as allocated by the officer in-charge of the health centre. This is because as said by one nutrition staff:

"Mothers who bring their children to the maternal child and health clinic come mainly for vaccinations. Very few children come to the health centre just for growth monitoring promotion. Mothers with malnourished children sometimes stop coming to the clinic. Therefore, when one is trained as a nurse or midwife, the Clinical Officer gives you other duties as well" [11/6/98].

Provision of nutrition information, what the staff referred to as counselling, was what they did most of the time. This was exemplified by one of them by: *"If a child is underweight, I have individual counselling. Either I go and talk with them outside alone or else I tell the mother to wait until all other patients go" [26/6/98].* Another nutrition staff showed how her work in the health facility and the community is done by saying:

"I talk to the patients in the out-patient ward. I give talks on nutrition and good feeding, how to prevent common diseases like anaemia, malaria and diarrhoea. I also teach community health workers and nursery school teachers on child growth monitoring in seminars organised by Plan International. I sometimes attend the child growth monitoring sessions in the community to see what they are doing and help them with records and nutrition information. I also work with women groups. The women groups have their own objectives and so they give me about five to ten minutes to talk to them about nutrition and then they continue with their work. I normally get involved with women activities to motivate them" [14/7/98].

Another nutrition field worker said the following about her work:

"I carry out child growth monitoring in the maternal child and health clinic. I weigh the children and provide nutrition education depending on individual cases. I also identify those children that are underweight for follow-up. Sometimes I provide advice to groups of mothers on social problems and I also do private counselling for mothers with private problems. I identify children with problems and refer them to the Clinical Officer where I take them personally to avoid long queuing and so that I can explain to the officer the problem. I also do field work or follow up of cases depending on the weather and if the persons are within walking distance" [9/6/98].

What the nutrition staff did was to provide nutrition information to patients at the health facility level or to mothers of children who were malnourished who had come for vaccinations in the maternal child and health clinics. As noted, few mothers brought children to the health facilities just for monitoring their growth. As pointed out by one of the nutrition staff: *"Nutritionists are doing more of curative nutrition. That is, handling the malnourished children rather than preventive and promotive nutrition"* [14/7/98]. This shows that nutrition staff focus on curative nutrition and minimal attention is paid to preventive nutrition promotion as a life style.

Some of the nutrition staff took part in the child growth monitoring in the community although this was rare and not on a regular basis. What was clearly absent from the work the nutrition staff did was how they supported community health workers in their work and women in making decisions on nutrition well-being or in making choices about credible sources of information and how to select such sources. Community health workers and the women, on the other hand, expected nutrition staff to supervise and support them in their child growth promotion activities.

The reluctance of nutrition staff to work with the community may be in part due to them not being conversant with primary health care and community participation. Community health workers have had some training in primary health care therefore, they are more conversant with the concept than the nutrition field workers. This may lead to a feeling of inadequacy and may in part contribute to minimal involvement of nutrition staff in child growth monitoring at the community level. This is likely to be the case because, the nutrition staff do not participate in training the community health workers so they are not even aware of what they have been taught. If nutrition field workers are to participate effectively in child growth monitoring promotion and nutrition education at the community level, they certainly need to understand and feel confident about primary health care. They, therefore, need training in primary health care and approaches of community participation.

Nutrition staff reach a small proportion of mothers with children aged between 6 months and 5 years in the health facilities. During observations at Thika District Hospital and Ngoliba health Centre, it was noted that only few children were attended to by nutrition staff. When children came to the health facility for treatment or to the maternal child and health clinic for immunisations, they were only referred to the nutrition staff if they were found to be underweight or visibly malnourished. In one of the observations in Thika Hospital, no child was referred for nutrition counselling throughout the day. In essence, nutrition staff depended heavily on other health staff to direct malnourished children or patients to them. This indicates the strong curative focus of nutrition education within the Ministry of Health. It was also observed that the link between nutrition staff and

other health staff was generally weak. This weak collaboration makes it more difficult for even malnourished patients to reach nutrition staff. It can safely be concluded that nutrition staff reach very few persons who need nutrition education and the curative focus excludes promotion of nutrition to ensure a healthy life style.

Crucial roles played by community health workers

Community health workers perform a variety of duties on voluntary basis after they are trained. They are responsible for primary health care at the community level. This study was limited to the community health workers' role in child growth monitoring. According to one nutrition staff: *"The community health workers are trained to carry out the child growth monitoring activities"* [11/6/98]. The work the community health workers perform was explained during the open-ended interviews and focus group interviews. How they perform their work was observed through the growth monitoring sessions and through the contacts I had with them during the nine months of fieldwork. Information gathered show that the role of the community health workers is diverse covering different aspects of primary health care. During the growth monitoring sessions, the community health workers provided nutrition information to mothers and weighed their children, recorded weights on the child growth card, advised mothers individually and collectively based on the weight gain or loss of the children and were leaders of the program. During the open-ended interviews, as we collected data, they advised mothers. One community health worker stated that: *"I advise them as appropriate. I advise them on social problems when they come to me or when I visit*

them" [23/9/98]. This shows that they advise mothers in their homes. A typical response when asked what work they do, was given by one community health worker as:

"We weigh children individually when they are brought to our homes or at the weighing centre. We teach mothers on child rearing, gardening, feeding, preservation of vegetables and we visit them in the homes to see how they are getting on. This is especially so in the case of those mothers who have children who are not gaining weight" [23/6/98].

Another community health worker stated: *"We visit the sick in their homes and provide relevant counselling"* [23/6/98]. The work community health workers did during the child growth monitoring sessions is shown by the field notes I made on one day:

"Two community health workers collected the keys from a person who keeps them at the shopping centre. Keys are kept at a central place so that whoever is using the community hall can have access to the venue. They opened the windows, swept the room and wiped off the dust. Scales were set in the centre of the room and they prepared the sitting arrangement and the record books. The community health workers then informed the persons present who until this time were standing conversing outside to come in. One of them welcomed everybody and said: "We can start our meeting and wait as the others come. Stand so that we pray to start our meeting today". The community health workers led the session together. Teaching was in form of questions and answers. They gave a talk on gardening, weighed the children and while doing so discussed the weight gain or loss. One recorded the weight in a notebook while another recorded it on the child's card. In closing, the community health workers encouraged the mothers as there were no underweight children that day. They gave a summary of what they had done and ended the session with prayer" [7/8/98].

How the child growth monitoring sessions were held may be represented on a time-line as shown below.



Teaching mothers and weighing of children

Initiation of the child growth monitoring is based on the principle that educating mothers to feed and care well for their children will lead to better health of the children. Community health workers indicated that teaching mothers and weighing their children was their main task. During the child growth monitoring session, one community health worker said:

"We do not only weigh children, we also teach mothers so that they know how to care for the children and to feed them properly. We also teach them how to prepare food. For example we used to teach them how to cook a balanced diet. We used to prepare porridge and have children fed during the weighing sessions" [15/7/98].

During another child growth monitoring session, one community health worker said:

"We shall talk about what we do here. We are committed to work. We come so that we teach the mothers on feeding their children well. ... We earn our incomes by doing some casual work but we are committed to this program. We fail to go for casual work so that we come and weigh children in this weighing centre. ... I feel bad when mothers do not come here for the sake of their children. ... We work here and find out about children not because we have children but to help these children in our villages" [8/9/98].

During the open-ended interviews with the women, one of the women said about the farming group she attends: *"We are planning to ask another group in the community to come and teach us" [22/9/98].* The community health worker responded: *"If you inform us (community health workers), we can come and teach you because we have been taught that" [22/9/98].* This shows the willingness of the community health workers to work with the community. Education of mothers and weighing of their children aged between 6 months and 5 years is a main function of the child growth monitoring

program. According to the government, this is supposed to be carried out in the child growth monitoring program once in a month and to cover all mothers from the community with children in this age range. On the contrary, only a proportion of mothers attend the program. Teaching mothers and weighing was the main function that community health workers did.

The manner in which nutrition education was promoted in the program early in this research was one of giving information to mothers. This was indicated by phrases such as "we teach" from community health workers and nutrition staff and "we have been taught" and "education I get" from women participants. As women indicated nutrition information they get is insufficient to bring about nutrition well-being. Later on during fieldwork women's participation was promoted through dialogue and making decisions in their program; the outcomes of this are discussed in Chapter Eight.

Sale of medicine in the community pharmacy

The community health workers operate a community pharmacy where they sell medicine to the community under the *Bumako* initiative. During the focus group interview with the community health workers, one of them said:

"We sell medicines from the pharmacy at home. Medicines we sell are pain killers like panadol, chloroquin for anti-malaria, de-worming medicine and multi-vitamins. We give multi-vitamins for those who have had malaria for a long time and are weak physically. We also sell mosquito nets. [13/11/98]."

Asked how they prescribe medicine during the focus group interview, another community health worker explained: *"When the sick people come home, they explain how they are sick and how they are feeling then I prescribe and give them the medicine. For the pregnant mothers, I advise them as appropriate"* [13/11/98]. How effectively the health workers performed this role and the community's expectations of them in carrying out this role was not investigated. However, this is likely to be similar to the findings of a study done in another East African country, Tanzania. That study found that the community expected the community health workers to play a curative role (Heggenhougen, Vaughan, Muhondwa & Rutabaozibwa-Ngiza 1987, p.93)

Solicit resources for the child growth monitoring program

At the start of the child growth monitoring program, some of the required resources like weighing scales and bags are provided by the non-governmental organisations and the Ministry of Health; subsequent replenishing and provision of resources is the responsibility of the community health workers. The community is responsible for the provision of the building for the child growth monitoring activity and to furnish it. This was indicated during the child growth monitoring session when one of them said: *"We bought these four benches in this room ourselves* (referring to the community health workers). *We require more benches"* [8/1/99]. The community health workers, therefore, identify the resource needs in the program and solicit for resources to continue to implement the program.

No funds are set aside by the central government or the District Health Management Board for the implementation of child growth monitoring. When need arises, the community is responsible to provide for the resources on their own. Early in the study, it was found that there were no basic resources like weighing scales or bags for the child growth monitoring program. The District Nutrition Officer identified the shortage when she participated in the study and provided for them. In order for any program to function, resources are required. Acquisition of sufficient resources on a timely basis is crucial for proper program implementation. Placing the whole burden of management and implementation of the child growth monitoring to the community health workers appears overwhelming. Although community participation is engaging participants in all issues that concern them, it should not be let to overburden the community.

It appears from this study that the government strategy views community participation as the community providing for the resources required to maintain and run the program. This demeans the whole purpose of community participation which is: engagement in decision making, designing programs, implementation and evaluation but not just resource provision. If the nutrition well-being of Kenyan children aged below 5 years living in the rural areas has to be improved through the child growth monitoring program, then, the issue of acquisition of resources should be addressed at the initial planning stage. This is important, noting that most rural populations are poor and passing the whole burden of implementing such programs to them worsens their poverty status.

Leadership and management

Leadership is a major function that the community health workers perform. The motivation and encouragement of women to make decisions in the program and the research was strongly attributed to community health workers. This was exemplified throughout the study. During the child growth monitoring sessions one of community health workers recapped the history of the program and went on to say:

"Now during the data collection as we came to your homes, all of you said that it would be better if something else was done not just weighing the children. Now say what you would like to do so that we can sustain ourselves. Let everybody speak out their ideas" [9/10/98].

Another community health worker during the same session added: *"What do you want us to do? Let everybody speak what they think honestly" [9/10/98].*

Community health workers encouraged women to make their own decisions. During one of the sessions, one of the community health workers said: *"Let us now discuss how to start an activity for ourselves so that we can increase income to assist us to buy food. ... Let us speak what we would like. When we talk, speak honestly" [6/11/98].* They also encouraged parents to bring children themselves. This was voiced by one of the community health workers by: *"When a child brings another child, the problem is that they cannot explain how the other child is fed or the problems the child experiences. We encourage parents to bring children themselves" [11/12/98].* Community health workers encouraged mothers to read the weighing scales and say what the change in weight meant. I noted in my field notes: *"The mothers were encouraged by the community*

health workers to read the weighing scales and make meaning out of the changes in weight" (5/2/99).

Leadership practiced by the community health workers tended to be collective. At the start of study, they engaged women in deciding when to meet but not on what to do in the program. As the study progressed, however, they started to increasingly engage the women in making decisions in the program. The collective nature of decision-making is a positive attribute that should be promoted to have women participate in decision making and take action in all the phases of the program. The success of this research was partly due to the fact that community health workers were willing and ready to participate in it and encouraged women to do the same.

Community health workers taught mothers and weighed children below the age of five years in the community. They counseled community members on social problems; they sold medicines in the community pharmacy; they solicited resources for the program and were leaders of the program in the community. This findings are in agreement with what has been noted that community health workers are occupied with several duties (Jelliffe & Jelliffe, 1990). These are overwhelming responsibilities that they carried out with minimal resource support, supervision, motivation or visible recognition. The demands on their time, resource acquisition and opportunity cost in terms of what they forgo individually are considerable.

The program was managed by community health workers on their own with minimal follow-up. The expectations by the government of community health workers to

implement the child growth monitoring appears to promote people's participation in terms of people economically implementing their program. This in essence appears to be passing the burden of economics of the program over to the community. At the community level, the weight of this burden falls entirely on the community health workers. This is in line with other findings which have shown that once the communities select their own community health workers, all work and decision making are left to them to continue planning and implementing nutrition education (Oakley et al., 1991, p. 49). This is the case despite the limited training and supervision that community health workers receive.

Based on the participatory process promoted during this study, the responsibilities of the community health workers were shared with the women. This was in deciding what education to promote in the program, having another committee to handle the emerging income activity and enlarging the networking of the program. This may imply that promotion of active participants' engagement in decision making in a child growth monitoring program may in essence lighten the enormous burden the program places on the community health workers. The women are also motivated as they share in these responsibilities and are recognised. However, the issues of program costs should of necessity be reviewed by the Ministry of Health to sustain the program.

Information on nutrition from the health records

Records kept by the community health workers were in a note book where the mother's name, child's name, age of the child, date of birth, weight and date of attendance were

recorded. Community health workers kept the data collected during the weighing sessions in a notebook. When required, they copied out the information to be given to the health centre. Data recorded indicated the weight and age and showed how many were underweight on the specific day. When asked what use was made of the recorded information, one of the community health workers responded:

"Nothing. We just keep it and use it to report. Even when you report, there is no feed back on the report. We wrote reports to SACDEP but there was no response from them therefore we stopped writing. The Ministry tells us to write reports but for who? Nobody wants to see them. So we write them for what purpose. They do not tell us anything about what we write" [13/11/98].

This shows that community health workers expect feedback from the information they provide, however, there is none. If information collected by the community health workers is not used, they feel that they are wasting their time.

There are 54 health facilities in Thika District but of these, only 11 provide child health and nutrition information system (Appendix P) reports regularly. These reports come mainly from the health centres where nutritionists are stationed. No analysis of the reports from the health facilities is done at the district level. The district nutrition section, on the other hand, records all cases that they counsel on nutrition and children attending maternal and child clinics in the hospital. These reports are forwarded to the district statistics office where they are compiled. Information compiled is taken to the Ministry of Health headquarters for supposedly analysis and planning purposes. The statistics officer at the district level noted this about the nutrition records:

"Nutrition records are taken to the headquarters but there is no feedback on them. The headquarters plans based on these reports and yet these reports are not accurate because the information is from only eleven reports which are normally received out of the 54 health facilities and records from the community child growth monitoring program are not normally brought here. From the records we receive, there is need to follow up cases of marasmus, kwashiorkor and constant or faltering weight" [18/11/98].

This indicates the inadequacy of information on nutrition in the district. The child health and nutrition information system (Appendix P) records information monthly that indicates the number of children who attend the monitoring sessions either in the maternal and child health clinic or in the child growth monitoring program. The records indicate the numbers who are underweight, the numbers requiring follow-ups, these are those who have visible cases of anaemia, kwashiorkor¹⁰, marasmus¹¹ and those that register constant weight over three months or those with faltering growth. In essence, this information provides the number of persons attending those with poor state of health and no further information of practical application.

Information from different health facilities are compiled together and forwarded to the national headquarters, however, no feed back is obtained. The headquarters office is supposed to make national plans based on these reports, however, these reports do not represent accurately the district picture on child growth monitoring. As noted by the District Statistics Officer from the Ministry of Health:

¹⁰Kwashiorkor is name referring to poor nutrition especially of children as a result of deficient intake of proteins in the diet.

¹¹ Marasmus refers to poor state of nutrition due to deficiency of all nutrients in the diet.

"This is because most of the information represents only what is recorded in the maternal and child health clinics. Most of the children who come to the maternal and child health clinics come for immunisations. In addition, most of the community child growth monitoring centres do not send in their reports. Besides not all communities in the district operate a child growth monitoring program" [18/1/98].

The compiled information, therefore, does not represent the true position of children 0-5 years in the district. There is no further analysis of the information obtained from the health centres and communities for decision making and there is no feedback on these reports.

These findings indicate that the nutrition information system is unsatisfactory. This supports an earlier review of experiences of community health workers that noted that data collected by community health workers are not processed, used nor presented in a form that can be used for planning and evaluation purposes (Ofosu-Amaah, 1983, p. 41). This is an area that requires special attention if planning of child growth monitoring is to reflect the true position on the ground and at the headquarter level and if such information is to be meaningful, relevant and be useful for improvement of nutrition at the community and national levels. There is also a need for training so that information collected can be analysed and used by the community members themselves.

Challenges faced by community health workers

Nutrition promotion at the community level experiences challenges. These challenges are related to nutrition educators of the child growth monitoring program, the government nutrition staff and environmental factors. Data gathered indicate that solutions to health and nutrition promotion initiatives at the community level are

hampered by complex problems faced by the people. Persons with nutrition problems also tend to have multiple problems. Community health workers are challenged to address all problems related to the participants not just on nutrition or child growth monitoring. This was indicated by typical comments as expressed by one community health worker: *"When we visit people in their homes, they have a lot of problems. They are not able to solve them and sometimes you cannot help either. This becomes frustrating"* [23/6/98].

Inadequate food is a concern that needs to be addressed to ensure effective nutrition. The community health-workers indicated during the focus group interviews that: *"People say, you teach me but where do I get what to feed my children as you advise?"* 23/6/98]. Another one stated: *"Most people have low incomes, therefore, they are not able to buy sufficient food. So, even if you advise on a balanced diet, they do not adapt to it, not because they do not want, but they cannot. There is lack of food"* [23/6/98].

Community health workers also face lack of recognition or appreciation for their work. This was indicated by one of them by: *"Sometimes you talk to parents and some ignore you so you leave them alone"* [23/6/98]. They tend to face some inconveniences in their work. This is mainly in timing for activities in the home and in seminars. One community health worker noted that: *"People bring children to weigh at home at inconvenient times or to buy medicine at inconvenient times. The community think you are paid for your work"* [23/10/98]. Another community health worker said that: *"People do not sometimes appreciate what you do as if they have paid you to work. For*

example, people will come when you are working on the farm and expect you to leave your work and go and give them medicine or weigh their children" [23/10/98].

The Ministry of Health also causes some inconveniences. This was suggested by one community health worker when she said: *"We are sometimes called for seminars during the rainy seasons when we should be working on our farms, as if we are paid"* [23/10/98]. Other challenges as discussed elsewhere are related to resource acquisition, lack of teaching materials and time constraints.

Linkages and awareness of nutrition related policies

Linkages that exist in a program that deals with complex issues such as nutrition reflect the strengths and achievements that are attained in the program. These linkages together with the stipulated policies that give direction to a program determine its outcomes.

Collaboration

The child growth monitoring program functions with support from the government and non-governmental organisations. The non-governmental organisations sponsor training of community health workers whereas the Ministry of Health provides technical knowhow. Three non-governmental organisations work in Thika District on food security and nutrition related concerns. These are Plan International, World Vision and Sustainable Agricultural Community Development Program.

Two of these, Sustainable Agricultural Community Development Program and Plan International have played a role in providing funds for training the community health workers that participated in this study. Sustainable Agricultural Community Development Program also participated in training of the community health workers from the three villages where this study was carried out. These two non-governmental organisations provided food supplements previously to the program. Apparently, food supplementation was a significant factor to attendance in the weighing centres prior to this study. Ministry of Health nutrition section Thika has, however, only worked with Plan International and Sustainable Agricultural Community Development Program and not with World Vision International.

On collaboration, the District Nutrition Officer had this to say: "*We have been allocated 85,000 Kenya shillings by Plan International to plan for their activities. They have no staff trained in nutrition. This is the first time I am involved. We are planning mainly for training*" [20/5/98]. The nutrition staff, however, perceived this to be the work for Plan International and not their own. On collaboration, the District Nutrition Officer said: "There is no co-ordination between the Ministry of Education and Ministry of Agriculture. All people do their own work. One does not know what each other is doing" [11/6/98]. The inter-ministerial co-ordination of nutrition activities at the district level was not clear. Different ministries and non-governmental organisations run their own programs and it is all with the same community yet there is apparently no co-ordination among them. This may imply duplication of efforts. One of the staff of the collaborating organisations noted that:

"The aim of our training is not to duplicate efforts in a particular area but to work with other existing ministries. This is like the Ministry of Health and Agriculture who work on food security and nutrition ... The chiefs and assistant chiefs are important and should always be involved when working in the area" [16/10/98].

This shows that non-governmental organisations recognise the importance of collaboration in nutrition. The assistant chiefs are involved in the selection of community health workers. They perceive their work as important because as indicated by the assistant chief of the area: *"Community health workers assist the poor people in the community a lot. They help solve their problems"* [23/6/98].

During the first visit to the community, it was found out that their weighing bags were torn and there were no weighing scales for older children. The District Nutrition Officer had some which she later provided on our second visit to the community. Sustainable Agricultural Community Development Program, on the other hand, had told the community to organise the community and buy these bags. This is an indication of lack of co-ordination between Ministry of Health and the community and Ministry of Health and Sustainable Agricultural Community Development Program. Collaboration is weak. Each organisation does not seem to know what the other is doing with the same community on the same concerns. There is also poor communication between Ministry of Health and the community on the resources required and available for community use.

Comments on collaboration from nutrition field staff implied a general feeling by them that the non-governmental organisations should refer to them but not for the nutrition

staff to make the first move to seek collaboration. One nutrition field worker implied this when she said:

"SACDEP is working in Gatuanyaga but they do not communicate to us about it. People listen to Plan International and Sustainable Agricultural Community Development Program but not to us (referring to the Ministry of Health) ... I think SACDEP does not see the need of working together" [14/7/98].

Plan International sponsors community health workers' training and provides typing facilities. As indicated by one nutrition staff: *"Plan types our work when they are involved in training. For example, they type timetables and teaching materials"* [22/7/98]. At the community level, announcements for child growth monitoring sessions are made through the chiefs, churches, health centre and the school. These institutions collaborate to make announcements. During the study, community health workers were ready to seek information from other persons. A statement by one of the community health workers that indicated this during one of the child growth monitoring sessions was: *"If you ask something and we do not understand, we shall find out from else where then bring the appropriate answer back as a feed back to you"* [8/9/98].

Collaboration that exists according to the community health workers is that where by either the non-governmental organisations and or Ministry of Health plan and organise seminars for them to attend. There is no input from the community health workers on the type of training they need in these seminars and even when or where to meet. Towards the end of the study, the participants were able to seek collaboration on their own. They went to the Community Development Assistant to find out how to register their income

generating activity. They also went to SACDEP to find out how to budget for their suggested poultry activity. They were ready to write a proposal to seek funding for their program at the end of fieldwork as shown in Table 6.13.

Table 6. 13 Report from the income committee

General meeting 11/2/99
<p>Members decided to open a commercial bank account on 15th march 1999. They decided it because it is cheaper. The charge is Ksh. 500. We decided to be contributing Ksh 30 every month each as a merry go round. After each merry go round, we divide the money to two members. Every member is to buy chickens for rearing. SACDEP helped us to budget for the poultry and how we shall sell the eggs The group is made up of 41 members. We shall write a proposal to look for funds to help us. The officials are: Treasurer: Lydia Wanjiru Chair lady: Patricia Mbiu Vice Chairlady: Milca Njuguna Secretary: Elizabeth Mwangi The committee members are eleven. Written by E. Mwangi (Secretary)</p>

Information in Table 6:13 gives an indication of empowerment as participants took their own initiative to seek out information and establish their own networks. While it may be too early to interpret the long terms results of participation, the establishing of own collaboration tends to support similar findings that development of partnerships initiated by people themselves are likely to lead to commitment of the commoo cause (Hinton, Rausa, Lingafelter & Lingafelter, 1992, p. 70S).

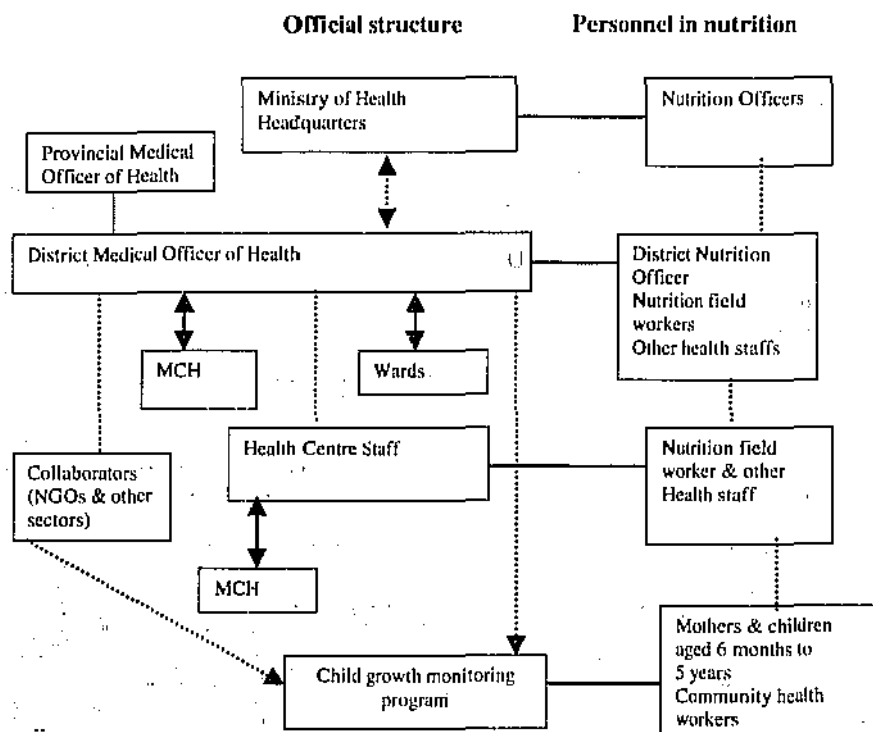
It is evident from the findings that non-government organisations play an important role in the training of community health workers but what will be required is stronger linkage with the Ministry of Health so that they can effectively reach a wider audience. The

nutrition field workers will have to see the need for this partnership other than waiting for the organisations to come to them as has been the case.

Links in the structure of nutrition education

The way nutrition education is structured reflects its functions. Observation during this study of how nutrition education is structured in Kenya through the Ministry of health is presented in Figure 6.1. It depicts how nutrition is promoted through the child growth monitoring program at the community level. The link between the nutrition staff at the different levels is weak. Linkage of the child growth monitoring program with the Ministry of Health and with the collaborators is also weak. This link with the program is only in relation to training of community health workers. One of the collaborators noted that: *"Linkage of the program with the government health facility is necessary if the program is to contribute to improve health of the children. This is because the health centre can help advocate common health problems which the program can complement"* [16/10/98]. The process of nutrition education through the Ministry of Health that was observed during this study indicates a weak link between nutrition facilitators at different levels. The link between collaborators, Ministry of Health and child growth monitoring is also a weak one. There was no association of the program with the health centre and with nutrition staff prior to this study, who are supposed to oversee their work. The child growth monitoring program functions in a solitary manner.

Figure 6.1 Context of nutrition education in the Ministry of Health in Kenya based on this research



Note:

NGO: refers to non-governmental organisations

MCH: maternal and child health clinic

Other sectors: refers to government ministries other than the Ministry of Health

.... Indicates a weak link

This is in contrast with what is reflected in Figure 2.2 which depicts the structure of the program with the health sector to be strong in line with the primary health care concept. Even if participation occurs at the grassroots level and leads to empowerment as was experienced in this research, the weak link between the program and the government

health structure may lead to limited application of the results to be addressed at the macro-level.

This weak linkage means that issues of nutrition at the grassroots have minimal chance of reaching the macro-level. During this research, participation of participants in the program led to addressing their problems from their perceptions. However, this participation is limited in application because the program is not practically reflected in the government structure. In order for nutrition education through the child growth monitoring program to be effective in contributing to improved health of children aged below 5 years, there is need for a strong link between the program and the health sector and supportive collaborators. Regardless of this weak connection within nutrition in the Ministry of Health, nutrition education is carried out at the district level.

Nutrition staff awareness of nutrition and health policies

Although there are policies on nutrition, primary health care and community participation in Kenya, information received from nutrition staff show that grassroots personnel that implement these policies have not accessed such policy documents; neither are they conversant with them. It was noted that apart from the District Nutrition Officer who was aware of the policies like the Plan of action for Nutrition in Kenya and primary health care, the rest of the nutrition staff were not aware of such policies. Only 50% of these staff were aware of the policy on infant feeding practices which is a single chart indicating how to feed the child up to five years of age.

On the issue of access to policy documents one nutrition staff stated that; *"I teach nutrition to mothers and also some patients who require information related to diseases such as diabetics, hypertension and ulcers. However, I have never seen a policy document on nutrition. May be there is one but I do not know"* [26/6/98]. Similar sentiments were stated by other nutrition staff. During the preliminary data analysis, nutrition staff noted as indicated by one of them: *"We should know what the policies say. But if we do not even have them how can we be expected to do what they say ... Even in primary health care we do not know exactly what it says"* [3/12/98]. This reflects the inadequacy of these staff to promote government policies on nutrition. What is required is that policies on community participation, primary health care and nutrition be made available to grassroot personnel so that they can interpret them and apply them in their work.

Summary

Implementation of nutrition education is carried out with no documented nutrition plans or implementation strategies at the government and community levels. The lack of planning makes both implementation, accessing resources, assessing of process and outcomes difficult. Contrary to the broad perceptions of the causes and solutions to nutrition problems indicated by nutrition staff and participants, nutrition promotion narrowly concentrated only on provision of nutrition information and monitoring children's weight. Although women appreciated nutrition knowledge provided through the child growth monitoring program, they expected the program to address more than

just knowledge and growth monitoring. They expected the program to address practical skills in food preparation and kitchen gardening, and economic and food security issues.

Non-governmental organisations play a major role in providing funds for training of community health workers. Once trained, community health workers perform a variety of duties in primary health care. They carry out these responsibilities with minimum resource support, supervision, visible motivation and recognition. The training of community health workers fails to equip them to promote decision making in the program. There is need to step up in-service training for the nutrition staff and community health workers. This is required in community participatory approaches and primary health care in order for them to be enabled to catalyse genuine participation in the communities they work in.

Findings of this study reveal that there is a weak link in nutrition education within the Ministry of Health. There is a weak link between nutrition staff at the different levels of government, with collaborators in other sectors and the link with the growth monitoring program is also very weak. The growth monitoring program works in isolation.

Although there are policies on nutrition, primary health care and community participation in Kenya, information received from nutrition staff show that grassroot personnel that implement these policies have not accessed such policy documents neither are they conversant with them. Nutrition education at the community level in the Ministry of Health is carried with minimal resource allocation.

Nutrition education is carried out without reflection on the expectations of the participants from the program. Women's participation in decision making in the program was strengthened during this study. The outcomes of increased participation which developed in the child growth monitoring program are discussed upon in Chapter Seven.

CHAPTER SEVEN

OUTCOMES OF PARTICIPATION

The process of participation in this study led to changes in the participants and the program. This was shown by the changes in both the process and outcomes of the program during the fieldwork. These changes included empowerment, starting of an income generating activity and curriculum development by the participants in the program. Participation led to self-initiative and critical consciousness raising among the participants. Together with these positive outcomes, there were challenges experienced that were unique to participation. Participation of the women, community health workers and nutrition staff in contributing to the research agenda and participating in planning the fieldwork made the data collection and subsequent analysis during the field work meaningful and appropriate.

The community saw visits to their homes as a way of appreciation of who they were. At the end of the fieldwork one woman said: *"Your visit to our homes to see the actual situation pleased us very much even our families"* [5/2/99]. It should be noted that it was after the visits to the homes to collect data in September 1998 that women started to express themselves openly during the child growth monitoring program. They made specific shift in the monitoring session held in October 1998. The visits to the homes may have had some impact on this. The preliminary findings from the open-ended interviews were discussed with the participants and nutrition field workers to validate the results. The interactive nature of the fieldwork fed into data collection and data analysis. This contributed to data that were relevant.

Participation can make the program function in a more effective manner

Participation allowed the women to express their needs and expectations in the program. These were more than just 'nutrition' needs. Understanding of women's perceptions and expectations in the program were achieved through engaging them in active participation in making decisions in the program. The women made decisions about what they would like to see take place in the program and planned to take action, which they did. This was in relation to the income generating activity and curriculum development that was relevant to their needs. Continuous use and promotion of dialogue in the program was an asset. Participation promoted the use of dialogue and vice versa.

Nutrition education promoted through the child growth monitoring is appreciated by the participants as being relevant for mothers of young children. This knowledge, however, is insufficient to bring about nutrition well-being. In order for nutrition education to bring about desired nutrition well-being in the community, it needs to address what the participants express as their needs and what they expect of the program. Accepting women's perceptions and expectations was achieved by allowing the decisions of the participants to influence program planning and design. Their active participation to plan and design activities in the program showed that their expressed needs were valuable and recognised. As the women were involved in deciding what and how the program should run, they were enthusiastic and motivated towards the program's continuation.

Participation of women and community health workers in identifying what the child growth monitoring program could address and planning strategies to bring it about, led

to action that was satisfying to the women. Gaps identified in knowledge and skills were addressed by the development of a curriculum. Due to limitation of material resources and time, however, materials development for the curriculum and demonstrations were not completed during the fieldwork. The income needs of participants were addressed through initiating an income generating activity in the program. Table 7.1 indicates the expressed needs by the participants, their expectations of how the program could address them and how they were addressed during this research.

Table 7.1 Participants' expressed needs, expectations of the program and how these expectations were addressed during the research

Expressed needs	Expectations of the child growth monitoring program	How expectations were addressed during the research
Money to purchase food	Start income generating activity	Started an income generating activity
Food to purchase	None	Not addressed
Food to harvest from own farm	Theoretical & practical kitchen gardening	Theoretical teaching on gardening
Food preparation skills	Have demonstrations in addition to theoretical lessons	Planned for demonstrations in the curriculum they developed
Weaning foods	Prepare weaning foods during sessions Show how to mix different flour and foods for weaning	Planned for demonstrations on weaning food preparation and mixing different foods and flours in the curriculum they developed
Supervision by nutrition field workers	Nutrition field worker to come to weighing sessions regularly	Nutrition field worker attended and participated in six out of the eight sessions
Frequent contact with collaborators	More contact with collaborators	Participants sought out collaborators on their own initiative
Loans to construct water tanks, start poultry project & fence kitchen gardens	Get credit through the program	None

Information in Table 7.1 shows how increasing women's decision making in the program led to the program addressing most of their expectations. Table 6. 10 shows that engaging women in decision making in their program leads to their active participation. The information from Table 7.1 suggests that this participation comes about as people's expressed needs and expectations of the program are addressed in the participation process. This suggests that active participation leads the program to address the priorities of participants as expressed by them. The process led to the participation of the nutrition staff in the program and the participants reiterated this through demands to have the nutrition field worker participate in their program. This was indicated by one woman by saying: *"We are happy the nutritionist has been coming here since the research started. You should continue to come so that you help us with the program [8/1/99].* During the curriculum development for the program, she was chosen as a facilitator in one of the sessions as indicated in Table 7.3. The participants were able to seek out the collaborators on their own which previously they had not. This was indicated by: *"We went to SACDEP and they assisted us with writing the requirements for the poultry project" [5/2/99].* Prior to the study, the participants waited for the collaborators to come to them. Participation, therefore, allowed the program to establish and strengthen its networks. According to Freire (1993), problem solving education lets people seek out new networks and strengthens existing ones.

Participation allowed for sharing of responsibilities in the program. A separate committee was selected for the income activity and curriculum development, some women were selected to go the Community Development Assistant, and to Sustainable

Agricultural Community Development Program. Another woman was selected to go and do a market search for their proposed marketing for the income activity.

I, as an outsider, facilitated the participation process. The women, community health workers and nutrition staff knew the nutrition problems and possible solutions to these problems. Although they knew the problems and suggested the solutions, they did nothing about it until the participatory process was catalysed by an outsider. Participation in the program, therefore, that allows for working with other people is likely to lead to social change for all persons who take part in the program.

Empowerment

The most significant change resulting from the participatory process was empowerment of the participants. The term empowerment is difficult to define satisfactorily due to its complex nature (Dawson, 1998, p. 190-191; Jack, 1995). Some see it as development of skills and abilities others however, see it as political as enabling people to decide to undertake action (National Secretariat ..., 1991). In this study, empowerment is taken to mean the process whereby the participants exercised their own decision making to determine their needs to be addressed in the research and in their program. This was by making choices about the research process and the program based on their own experiences and understanding on what to do and how to do it. Participants expressed themselves and stated what they wanted to see take place and how it was to take place.

Empowerment was observed as women were actively engaged in defining their own problems and suggesting solutions based on their own experiences and understanding of their situations. Within the nine months of fieldwork, it was shown that dependency had been minimised. The participants suggested practical solutions to their food, nutrition and economic problems and embarked on solving them. Participants were also ready to work together to address their common problems.

Low empowerment at start of the fieldwork

At the start of the study, the women and the community health workers indicated that they appreciated the work undertaken in the child growth monitoring program. During the study participants were asked about the changes that had occurred in the program since it started. One of the responses from the community health workers was: *"We see those mothers who were previously leaving their children unattended value spending time with their children. They now go to work on the farms with them"* [23/10/98]. Another community health worker said: *"One child was marasmic. We (community health workers) advised the mother on how to feed the child properly and the child improved. That is when I believed that lack of food can lead to disease"* [22/9/98].

Women were aware of the nutrition problems and expressed dissatisfaction with the child growth monitoring program. One woman said: *"Just to come and weigh the baby then go home is not motivating"* [22/9/98]. Another woman said: *"Just going for education and weighing the child alone, I see it as a waste of time"* [21/9/98]. Another woman said: *"If I had money to start a small business, and earn income, the education I*

get would be more beneficial because I could practice it" [24/9/98]. These expressions indicated that the participants expected more from the program than what it delivered.

Early in the study women and community health workers voiced concern about attendance in the program and a need to take more tangible actions in the program to address their problems but did not operationalise them. The responses given when I asked: *"What would you like to see take place in the program?"* [21/9/98], indicated helplessness, dependency and a need for practical action to address the problem.

Helplessness is the expression of the inability to do anything about a situation. Helplessness was indicated by various responses. One community health worker stated that: *"You talk to parents and some ignore you so you leave them alone"* [23/6/98]. Another community health worker said: *"People say, you teach me but where do I get what to feed my children as you advise"* [21/9/98]. One woman said: *"When one sees that the child is not gaining weight, I give up as there is no benefit"* [24/9/98]. One nutrition staff indicated helplessness by saying:

"When I find that a child is underweight, then I discuss with the mother and provide relevant advice. However, the mothers are not able to implement what I tell them. In such cases, I leave it because I do not know what to do next, therefore, I leave it to God to intervene" [19/6/98].

The participants knew the problems but indicated they were powerless to solve them. This state of helplessness means that people remain in the same state or deteriorate in their circumstances. They may feel handicapped and trapped in their situation.

Dependency refers to reliance on others or outside intervention to address ones circumstances. Dependency was indicated by a variety of responses. One community health worker stated: *"Give us a project as community health workers only so that we can be able to plan for ourselves"* [26/6/98]. Another community health worker stated: *"Help us to have our individual projects like poultry to improve our standard of living and incomes"* [19/6/98]. Women participants of the program also indicated dependency. One woman said: *"Help us with children's food"* [21/9/98]. Another woman said: *"Being given free flour is what has spoiled us. Now we want everything free."* [25/6/98]. The people at this stage depended on solutions to their food and nutrition problems to come from outside.

Community health workers also tended to suggest victim blaming. They pointed at the problems and solutions from outside themselves. This was indicated by one community health worker by: *"The people do not want to take their children for immunisations and weighing"* [23/6/98]. Another community health worker said: *"The people do not use latrines even when they are available"* [23/6/98]. Another community health worker said: *"These people have low incomes"* [23/6/98]. Still another community health worker said: *"People are taught but they find it difficult to implement because they are too many in the family and all are not able to get enough food"* [23/6/98].

These community health workers tended to blame the women for the poor nutrition status. Blaming women for the state of poor nutrition implies that women are responsible for their conditions. This is a narrow perception. It fails to look at nutrition problems

from the broader perspective of being brought about by some issues outside the control of women such as food access and food prices. The women that indicated helplessness and dependency could be termed as being low in empowerment as they did not have an idea about what to do and how, even though they knew the problem. They also depended on solutions from outside.

Practical action refers to some tangible activity to address nutrition problems. A need for practical action was indicated by responses such as: *"Let us (community health workers) have a project that will earn money or bring income so that people can purchase food if they lack food"* [21/9/98]. Another woman suggested practical action by saying: *"Community health workers should have things practically for example vegetable gardens at the weighing centre so that people can see samples"* [25/9/98]. Another woman said: *"Let us have an income generating activity so that more people will attend"* [24/9/98]. One community health worker suggested the need to *"get demonstration materials so that people can see how actual foods recommended are prepared"* [23/9/98].

These statements showed that participants saw the need to have some practical action in relation to their circumstances although they were not ready to address how to bring this about. Action is required if nutrition promotion through the child growth monitoring program is to have impact on the participants.

Examples of empowerment at the beginning of fieldwork

At the start of the study, some participants indicated some degree of empowerment. A comment by one woman that indicated empowerment was: *"We need to start what we can continue to do ourselves even after the research is finished"* [25/9/98]. Another woman said: *"We need to learn how to help each other ourselves but not to depend on free things"* [25/9/98]. Free things refers to flour that was given by Plan International and Sustainable Agricultural Community Development Program at the start of the program. Other typical responses were indicated by one woman by: *"Let us discuss among ourselves so that we can have a lasting solution to our food and nutrition problems"* [24/9/98]. Another one said: *"We need an income generating activity so that it does not seem as if we are wasting time when we bring children to be weighed"* [23/9/98]. On the importance of the program one participant stated: *"Keep on advertising this weighing centre so that people especially those who do not know how to feed their children can come whether or not flour is given"* [21/9/98].

Women who suggested practical solutions could be said to be empowered but the degree could be termed as moderate. This is because, even if they felt they could do something to improve the situation, they did nothing. When asked by one community health worker: *"What can we do to help each other improve this program? What would you like the research to do?"* [7/7/98]. There was silence. Even when motivated to make suggestions, there was no response. Eventually one community health worker said:

"You go home and discuss among yourselves what you want to do and we shall review that in the next meeting. Think through what you would like to see take place"

in this program and give your ideas in the next meeting so that we can go on together in the program" [7/7/98].

This scenario was similar in the second meeting held in August 1998. During this second meeting, the mothers just nodded their heads in agreement with what the community health workers said but they voiced no comments. Finally, one community health worker said: *"Think seriously about how we can improve this weighing clinic so that it can contribute to improving the nutrition situation in our community" [7/8/98].* It was not until the third meeting held in October that participants verbally aired what and how they would like the program to function. This reflects a need for time and patience in initiating participation.

Decision making at the start of the research also indicated lack of confidence and self-esteem. The participants indicated that they wanted to be told what to do by the researcher or the nutrition field staff and heavily depended on the decisions of the community health workers. Early in the study, most participants tended to refer to; "me", "I" in relation to the problems they experienced. They tended to seek external solutions to these problems. This was shown by statement by one woman when she said: *"Most people used to come when there was flour" [21/9/98].* Another woman indicated this by saying: *"If people hear there is flour being given, they will come" [25/9/98]. "I am tired of going to weigh the child always and there are no other benefits" [21/9/98].* Another woman said: *"If I had money...the education I get would be more useful" [24/9/98].*

Observation of some increase in empowerment

Engaging participants in decision making in the program led to motivation to participate in the program. After the first three meetings one community health worker observed: *"Many people are now coming since we started to tell them to come so that they decide themselves what they should like to be done during the weighing sessions"* [9/10/98]. There was some increase in attendance in the child growth monitoring during the research period (see Table 5.7).

Even after stating what they would like to do to improve the program, there was no action until motivated to take action. This only materialised during the third meeting held in September. During this meeting I asked: *"What would you like to be done to improve this program and how?"* [8/9/98]. The response by one woman was: *"There is drought for long times sometimes and then there are no vegetables to feed our children. What can we do to have vegetables always?"* [8/9/98]. Another woman stated: *"If we start an income generating activity then we can have money to buy food when not available. But to start an income activity, we need to have a formal group"* [8/9/98].

During this same period, decisions on how to conduct the open-ended interviews were agreed upon by the participants, community health workers, nutrition staff and myself. The participants made decisions on when to have the interviews. During these interviews, each of the twenty-one participants was asked: *"How do you think we can improve nutrition education in the child growth monitoring activity?"* Responses to this question indicated high priority for income generation. The second priority was food

security and the third was involvement in planning of the activities in the weighing centre and in education that was relevant for them.

Priority for income generation was indicated by one woman by saying: *"What is most important is money to buy food when not available so that we use the information we get from the program. We need an income generating activity"* [21/9/98]. Expressed need for participation in planning was voiced by one woman when she said: *"We can get Plan International so that we arrange together on what we want to do in our program"* [25/9/98].

Another woman said: *"Previously, Plan International planned for us and we were not involved. So when they left, everything was stopped and nothing much has been happening. We should therefore plan on what we can do together ourselves"* [25/9/98]. These show that women are willing to continue with a program only if they participate in its initiation.

Women started to work on their ideas in October and November 1998. They were ready to initiate their own income generating activity as part of the child growth monitoring in order to improve their incomes and be able to purchase food. They also stated what they wanted to be taught in the program. At this point, participants could be said to have made specific decisions or changes that they liked to see take place in the program.

A sense of belonging and contributing to the group started to emerge as the research progressed. This was indicated by one woman by: *"Let us discuss among ourselves so that we can have a lasting solution"* [9/10/98]. Another woman said: *"We need to start what we can continue to do ourselves even after the research is finished"* [8/9/98]. The community health workers showed enthusiasm in the program as indicated by one of them during the women's open-ended interviews by saying: *"We do not want to give up but to help people help themselves"* [21/9/98].

Evidence of empowerment

Empowerment was seen to have occurred or be taking place based on how the people made decisions, took control of what was happening in the program and shared responsibility for the program. By October 1998, participants freely contributed ideas and asked questions. They reached a consensus on how to start an income generating activity. Women also selected a separate committee to handle the income generating activity and the community health workers to continue with the weighing and nutrition education component of the program. Progressively suggestions on relevant education topics were identified. By the end of the fieldwork, a flexible curriculum was developed to address these topics. There was freedom in decision making. All participants did not have to join the income activity. This autonomous decision making was an indication of empowerment.

The selection of another committee did not seem to lead to immediate change in power positions of community health workers and the women in the program setting but

contributed to sharing power relations for practical reasons. As shown in some other studies, participation may lead to shifts in power so that specific and real interests of participants are served for practical reasons (Selener, 1997, p. 20). Power shifts suggest sharing of power relations. Statements made by the participants indicated this. One woman said: *"Let us elect officials to handle the income generating activity"* [6/11/98]. This shows that participation led to sharing power and decision making in the program. This process is in agreement with other participatory researchers that have found that active participation of all persons in the entire research process contributes to sharing power and social transformation among participants (University of British Columbia, 1995, p.10; Selener, 1997). However, after the income project generates money, the issues of power may be more evident in relation to the two committees when it comes to making decisions about the use of the generated incomes.

Unique incidents that indicated to me that women were taking control were experienced in the month of October 1998. One woman frankly stated to the nutrition field worker and myself during the meeting: *"You leave us to discuss what we want to do and we shall tell you what we have decided and how we want to do it next time"* [9/10/98]. Another woman responded: *"Yes this is true. Let us continue to discuss and we shall come to a conclusion on what we can do"* [9/10/98]. Another critical incident that indicated that empowerment of women had occurred took place in November 1998. One woman said: *"Let us elect the committee for the income generation activity by a show of hands"* [6/11/98]. Another one said: *"I think the visitors, (referring to myself and the nutrition officer), should now leave us so that we can discuss what to do and we shall tell*

them the progress in the next meeting" [6/11/98]. This indicated a high level of empowerment as the women were making their own decisions and choosing their own direction for their well being. They were more interdependent on each other's suggestions and ideas and not dependent on what we (outsiders, myself and the nutrition staff) could do for them. This was contrary to what they had expected at the beginning of the study.

Criticism of dependency also indicated empowerment. This was indicated when one community health worker said: *"Remember Plan gave us flour and now they have stopped. SACDEP gave us some flour and now they have stopped. So how can we help ourselves"?* [6/11/98]. One woman said: *"Those who planned projects and taught us to be given free things have spoiled us. Now that flour is finished, there is nothing people continue with to help themselves"* [25/9/98]. Another woman said: *"We need to learn how to help each other ourselves but not to depend on free things"* [25/9/98]. It is clear that provision of free food while it is welcome to the community at the time does not solve their problems. This agrees with other findings that indicate that participation may lead to break the mentality of dependency by creating self awareness and confidence (Oakley et al., 1991). In situations when food aid may be seen as a solution, active participation of the people is required.

What may be needed, in such cases as famine or drought when food assistance is provided is collaborative planning on the assistance. This will enable participants to make decisions about their most urgent needs, the food assistance required and, possibly,

put in place strategies that would avoid dependency. One of the things that I learned from this participatory research was that, unlike what is popularly believed that when people lack food they should be provided with the need, this was criticised by the women. Strategies that promote dependency do not have a positive impact on the community in the long term.

Participation in the research process led to empowerment of women as they took initiative to solve their own problems by starting an income generating activity and making suggestions on what they wanted the health and nutrition education through the child growth monitoring to address. They also controlled the research process, especially the fieldwork, by determining how data were collected and who were to take part in data collection and how findings were to be used. This was through collaborative decision making in the research process by the women, community health workers, nutrition staff, and myself. Participation in the research process created a learning model for practice in active participation. As noted empowerment is observed when people employ problem solving strategies instead of blaming others for their situation (Hopson & Scally, 1981).

Establishing own network mechanisms

The child growth monitoring program collaborated with the Ministry of Health and non-governmental organisations prior to this study. These collaborators came to the program and community health workers expected them to keep coming to the program even though community health workers did not go to them. At the start of the research, one community health worker said this about the nutrition staff: *"Nobody checks on us. So*

we do not know if what we are doing is wrong or right" [15/7/98]. At the end of the fieldwork during the discussions on what had taken place, one woman said this about nutrition staff: *"We are happy that you have been coming and helping us with information on nutrition. We hope you will still be coming and not stop when the visitor goes away"* [5/2/99]. They were able to make demands on what they felt they needed from the nutrition staff.

Some of the comments about the collaboration with non-governmental organisations as indicated by one community health worker was: *"We write reports but there is no response from them therefore we stopped writing"* [23/10/98]. By the end of the fieldwork, they were ready to seek the collaboration on their own. This was indicated by one woman when she said: *"We went to SACDEP and they assisted us to write up the requirements for the poultry project"* [16/2/99]. Another woman said: *"We went to meet the community development assistant twice but he was not in"* [5/2/99]. This suggests that the participants were now looking for linkages on their own rather than waiting for assistance to come to them. This, it seemed, was as a result of them taking part in making their own decisions in the program.

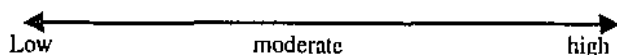
The multi-faceted nature of food and nutrition problems require inter-sectoral collaboration to attain results (Prehm, 1991, p. 12). Collaboration is developed as a result of the participatory research (University of British Columbia, 1995, p. 3; Freire, 1993). The partnerships established between myself (researcher), the Ministry of Health staff, women and community health workers and networking with other non-governmental

organisations and government departments served as a catalyst for change in the program.

Insight on the participatory process

To some degree, participation led to increase in knowledge on the research process from setting the agenda, data collection and analysis and in sharing the results of preliminary findings at the end of the fieldwork. It also made demands on getting the research report as stated by one woman: *"When you finish writing the report, we want to know what is there and how we can use it to improve ourselves. Do not just keep it to yourself"* [5/2/99]. Asked about the benefits of the research in February 1999 at the end of the fieldwork one participant's expression sums it for the women. She said: *"We are now able to discuss our problems and solve them whereas previously we just talked about weighing children and how to feed them"* [5/2/99]. Although these findings are still tentative, they do suggest that participatory research approaches contribute to empowerment of women. These findings are consistent with other results that indicate that participatory research leads to generation of knowledge that leads to identifying problems and this knowledge guides practical action to solve the problems (Selener, 1997; Rifkin 1990).

Empowerment as indicated in literature is on a continuum (Selener, 1997).



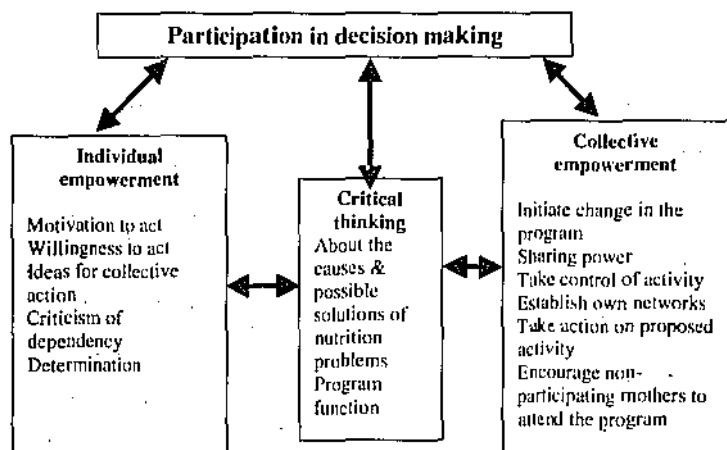
At the collective level, empowerment in the program was low at the start and by the end of the field work had experienced considerable increase. Some people may still not have been empowered, however, although they had been coming to the program during the research. This was voiced by one participant when she stated: *"You tell us to come to the group to weigh children and you are not giving us flour. Fine. We shall only come if there is help, so we won't come"* [11/12/98]. This is in agreement with other findings that empowerment whether at the individual or group level takes place on people's own time schedule not the researcher's (Maguire, 1993).

A dependency mentality which could be seen in the previous quote has a historical background to it. During the colonial period in Kenya and early after independence in 1963, Kenyans were generally accustomed to having their leaders make decisions for them. This was reinforced by providing free handouts or services. This did not encourage individual initiatives in projects at the community level. During periods of food shortage, the government provided food for the people without involving them in making any decisions. This promoted a dependency mentality whereby the government (or other organisations) saw people's problems, made decisions on how to solve these problems and solved the problems for the people. This mentality may affect participation at the community level as some people may prefer to have others think for them and solve their problems.

Empowerment at individual and collective level that was experienced in this study is indicated in Figure 7.1. This shows that participation leads to empowerment as people

get engaged in deciding what to do and how to run their program. Participation led to both individual and collective empowerment. The participatory research approach contributed to assertiveness of women.

Figure 7.1 Empowerment experienced by women and community health workers



There was a shift by the participants from seeking external solutions to their problems. Confidence to make decisions and carry them out collectively, based on women's own perceptions of solutions, were also achieved.

Income generating activity

The community health workers, nutrition field workers and the women in this study identified various reasons for poor nutrition. This is indicated in Table 6.4. There seemed to be a consensus that food insecurity, low incomes and low nutrition knowledge are concerns which, if adequately addressed, would make the education via the child growth monitoring applicable to the families in this community. This could improve child

nutrition. In spite of this, the child growth monitoring at the community level had focused mainly on nutrition and health information and some concern on food security. Lack of incomes were not addressed by the program prior to this study. Families in this area depend mainly on the food grown on these farms for consumption. During my fieldwork there were no rains from December 1998- February 1999 which led the crops planted to dry. This meant that families would need to purchase most of their food later in the year. This explains, in part, why income generation for the women in this study was significant.

Food insecurity was addressed to some degree through the sessions on kitchen gardening aimed to increase access to vegetables in the home. Out of the eight child growth monitoring sessions held (see Table 6.8), two sessions focused on kitchen gardening. This was theoretical information and women preferred practical demonstrations on gardening. Women felt that food security could also be enhanced by poultry keeping. This was indicated by one woman by: *"We should be helped to keep poultry at home so that we have eggs for the family. Even some can be sold"* [22/9/98].

From early in the study, the need for increasing women's incomes was voiced as being a critical component for relevant and practical promotion of the child growth monitoring. During the first contact with the government nutrition staff in Ngoliba she noted:

"The problems facing most of the community around here are such that you can provide nutrition education but they may not be able to implement. This is because of the socio-economic problems that they face ... These problems include poverty. They also lack land to cultivate so that they get enough food. Most of them get money from casual work but these incomes are very low. They earn 70 Kenya

shillings (an equivalent of 2 Australian dollars) per day from casual work. This is not enough to meet their household needs" [19/6/98].

In the meeting with the community health workers one of them stated: *"These people have very low incomes. People with enough land have fewer problems" [23/6/98].* Another community health worker said: *"We give mothers advice on feeding but they say they cannot afford the foods due to low incomes" [23/6/98].* Inadequate incomes were also a reason for infrequent attendance in the child growth monitoring. This was voiced by one of the community health workers by: *"If one has some other beneficial work on the same day as the weighing, one will prefer to go for the economically rewarding job and miss the weighing of the children" [23/6/98].*

Poverty was voiced as being related to ineffectiveness of the program by most women. During the child growth monitoring session, one mother stated: *"We should do some work that earns money so that we can buy food. This will make us apply what we learn from this weighing centre" [8/9/98].* When asked approaches to reduce malnutrition, neither the nutrition staff nor the community health workers cited how increasing women's incomes could be achieved. It was the women participants of the child growth monitoring program that indicated how it is possible to increase the incomes that would lead to reduction of poor nutrition.

During the open-ended interviews, about 53% of the women indicated that if incomes were increased, nutrition problems would be reduced in the area. During the same interviews, about 57% of the women indicated that lack of money to buy food was a

main reason for not implementing the nutrition messages they received from the child growth monitoring sessions. The women's views were that incomes should be addressed by the program for effectiveness. This shows that participation addresses the underlying causes of nutrition as observed in other similar studies that have employed participatory research to other health problems (University of British Columbia, 1995, p. 10).

Requirements of income generating activity

In order to have an income generating component in the program, there needs to be official government registration of such a group. One woman voiced this during the weighing sessions by: *"If we have to do some income generating activity then we must have a formal group. This means we shall need to discuss how to have a formal group and how the income generating activity will function"* [8/9/98]. During one of the open-ended interviews, one woman stated that to: *"Start a formal group that handles money, we should ask the community development assistant who can help us"* [22/9/98]. This indicated that the women were conversant with how formalisation of such a group could be achieved. What the women suggest, they are likely to implement. To have an income generating activity also has challenges of which the women were aware. During the open-ended interviews in one home, one woman stated:

"We need some income generating activity so that we are able to use information we get from this weighing centre. But group income activity is difficult because sometimes individuals fail to do what they are supposed to do. This may not be because they do not want to perform the allocated duty but because other important things have cropped up and they are occupied elsewhere. This makes community work very difficult. It is therefore better to operate an activity as individuals although the activity is organised through the group" [21/9/98].

Another woman said: *"We should find ways of getting money as a group but manage it as individuals"* [21/9/98]. Preference to having individual activity was emphasised by another woman by: *"An individual activity is good as the members of the household can help you with some tasks of the project"* [22/9/98].

This information suggests that even when income generation is to be addressed by the child growth monitoring program, it is necessary that participants decide how it will operate. The functioning of an income activity, on either individual or collective basis, has positive and negative aspects. As noted in other findings, individual concerns override community goals in most cases (Riskin, 1990). Participants need to critically address this at the beginning, as was the case in this study, in order to avoid disappointments that could have been avoided. In this study, participants agreed to manage the activity at the program level but have individuals carry out the poultry project in their homes.

As the participants' confidence increased in the fact that their ideas were supported and could materialise, they started to act on making income generation a reality. Suggestions were given to make crafts and sell them but the problem was the lack of a market for such items. In the meeting to discuss how to improve the program, one woman said: *"I think we can sew, make crafts ... but the problem is where do we sell them?"* [9/10/98]. Another one said: *"I think people can give ideas on how we can make extra money because our main problem is money"* [9/10/98]. Addressing me on the issue one asked: *"Can you get us a market for the things we can make?"* [9/10/98]. Another one woman

said: "Can you get us some money to start a business?" [9/10/98]. The meeting held on the 9th October 1998 appears to have been the turning point in this research and in the program. The concept of income generation developed at a fast rate. Women were willing to address it and face challenges related to it on their own.

Importance of incomes for mothers with young children through the program

The importance of income activity for mothers in this program was stressed as essential if mothers were to benefit from the program. Although there are other women group activities in the community that focus on income generation, women who are very poor or women with young children are not able to be part of such group. Emphasising this one woman stated:

"Most people in the community go to groups to earn money. But the poor cannot afford a lot of money that such groups demand. The groups also demand a lot of time. Such meetings are also very long. Those of us with young children cannot manage to care for our children if we join such groups" [21/9/98].

This indicates the importance of having an income component for young women with children below five years of age. This is a concern to which any person concerned with improving nutrition status of young children cannot afford to overlook. Community health workers let the women speak for themselves. The community health workers asked the women what they would like to do in the program and actually let the women give their own ideas. The comments that came from the community health workers were: "How can we do it?" and "what would you like to do" and "when". This gave women confidence to speak for themselves.

Determination

Participants set aside a separate date to discuss issues of selecting a committee and drawing up rules and regulations. I did not attend that meeting because the participants preferred to meet alone. During the next child growth monitoring session one of the women reported this about what they discussed:

"We met and discussed about the income generating activity. We talked about official registration of the group ... We also selected the committee to handle the income generating activity. Some people did not come because of cultivation. Women agreed to start contributing ... We also agreed to make different crafts and sell. But we need a market for this. Can you (referring to me) look for us a market?" [11/12/98].

During the child growth monitoring meeting held in January 1999, they reported on what they had done in the previous two meetings. They were to open a bank account for the activity with the three officials as signatories. Participants discussed different ways of participating in income generation. They gave each other feedback on what they had found out in relation to what they could do. During the meeting I noted in my field notes: *"It is clear that access to information is an empowering tool. The women are now using information from each other and applying it to make their decisions"* [8/1/99]. Participants fixed another meeting whereby the people discussed income generation. At the end of the day, I noted in my field notes: *"The participants are so eager to have many meetings for income generation with their own initiative. They were not as eager to have the weighing sessions as often. Incomes appear to be a real issue for the women and they are willing to address it"* [8/1/99]. The meetings held to discuss income generating activity are shown in Table 7:2.

During the last meeting I had with the participants on income generation, the secretary to the income generating activity gave this report:

"We tried twice to see the community development assistant for the area and failed. We were told that he had gone to Thika. ... So far, members have contributed money to go and open a bank account and for transport for the persons to go and open the account. ... We have also got registration with the Department of Social Services. Here is our registration certificate (she showed everybody the certificate to verify that it was genuine. There was clapping of hands and laughter to express joy at this). The number of members who have so far registered are 41. We shall discuss later how other members can join ... We will write our proposal to seek for funds next week" [5/2/99].

The following week, the women met to discuss the income generating activity. I did not attend that meeting. The report they sent to me is shown in Table 6.13. Autonomy was noted in that the women were ready to write a proposal to seek funds for their activity an initiative they had not ventured into previously.

Concerns about income activity

Participants' concern was that crafts would not get a ready market. I informed them of the possibilities of some markets at which they were willing to try. I made it clear that: *"Before you agree to make anything for marketing, you should see the different markets available and decide what you can comfortably do"* [8/1/99]. After some discussions, the participants selected one person to go and check on the markets in Nairobi. This person came to Nairobi on a later date (19/1/98) and I went with her to various possible market sites. She saw different possible items that they could make and sell in the market. She also discussed with various persons at the market how they would organise their marketing.

Later, when participants settled for a poultry activity, the marketing was worked together with SACDEP and some selected women from the program. The organisation being an agricultural entity was suited to work out this with the community on poultry keeping. If incomes are to be generated through some production activities, a market search is necessary. This can avoid disillusionment at the end when participants have produced products that they cannot market.

As the discussions on income generation progressed, anxiety and concern about the activity also started to appear. Participants were concerned about how it would function and how they would individually benefit from the venture. During the discussions on the activity, one woman asked: *"If some benefits come in relation to the income activity, will other members who come to the weighing centre but have chosen not to belong to the activity benefit?"* [11/12/98]. Another woman said: *"The problem is how we shall share benefits that may come up"* [11/12/98]. This issue was discussed at length and participants decided to set aside another meeting to discuss and agree on issues related to the income generating activity. A point to note is that the actions that participants arrive at based on participation of members in decision-making may create anxiety and further demands on the participants' time and emotions.

Self-initiative and enthusiasm of participants for income generation

Participants indicated self-initiative to address their food and nutrition problems. One woman indicated this by saying: *"We need to learn how to help each other ourselves but not to depend on free things"* [21/9/98]. Another woman said: *"We need to start what we*

can continue to do ourselves even after the research is finished" [22/9/98]. Another woman indicated self-initiative by saying: *"Let us discuss among ourselves so that we can have a lasting solution"* [23/9/98]. Another one said: *"We need to make monthly contributions so that we buy what we lack. That would be more beneficial"* [24/9/98]. These views indicate the self-initiative of the participants.

Participants showed their enthusiasm in several ways. One example of this was observed in the number of meetings they called and attended to focus on the issue of income generation. Between November 1998 and February 1999 they had held six meetings to address income generation on their own. A summary of these meetings is in Table 7.2.

Table 7.2 Meetings held to discuss income generating activity

6th November 1998
 20th November 1998
 20th December 1998
 29th December 1998
 20th January 1999
 11th February 1999

A more important aspect that indicated enthusiasm was the women's readiness to contribute ideas and make decisions based on what they knew as individuals and what they were prepared to handle collectively. In one weighing session I noted this in my field notes:

"The turn out is impressive. They wait patiently to weigh the children and be talked to individually by community health workers. The room was very crowded and the benches to sit on were not enough so some people were standing. It also became hot. After weighing, they went out outside and sat on the grass under a tree in the compound. Here is where the discussions on income generation were held" [9/10/98].

In a later session I noted in my field notes: *"They are very enthusiastic as they look happy and talk to each other about how they will improve their project"* [8/1/99]. What does income generation mean for the participants of the child growth monitoring program? It is apparent that money is an issue that is necessary to address the food security and nutrition concerns. The enthusiasm with which women handled this activity convinced me that when participants are allowed to make decisions in their existing program, it may shift the set agenda, but it certainly addresses issues that they are willing to spend their efforts to tackle. They analysed critically their situations and went ahead to work on suggested solutions to their problems. Indeed, participation led to action as perceived by the participants themselves. How the income activity was to be handled was to be addressed by the income activity committee. However, it was pointed out that during the growth monitoring sessions, information on the income activity would be reported on.

It has, however, been noted elsewhere that increased incomes do not overcome nutrition problems as the increase in income may go to non-food or non-nutritious foods (Berg, 1973). Nevertheless, it has been shown in Kenya and in parts of Africa that increased incomes in the hands of women tend to go towards meeting the food and care needs of families (Oniang'o, 1992). The starting of the income activity suggests that in order to

meet the nutritional needs of young children, women's other needs require to be addressed. Efforts should be made in a nutrition program to respond to these other expressed needs in order for such a program to be effective.

Allowing participants to make decisions in their program promotes self-initiative as evidenced in this thesis. If a child growth monitoring program is to allow people to take initiative in their program, active participation in making decisions is a necessary condition. The outcome of this participation experience in relation to income generation reflects what has been advocated by Kent (1988), that nutrition education can be used as a means of empowerment to work on the factors that cause poverty and ultimately hunger.

Curriculum development

During the child growth monitoring sessions, women asked a variety of questions. As the research progressed, topics that the people felt were important to them were identified. During the open-ended interviews with them, the topics of concern were also identified. Upon sharing the findings of the study, the participants felt a curriculum should be set up to address the questions that were of importance. The women decided on the topics of priority to be taught. This led to a one day workshop to plan nutrition education topics for the program in 1999. The community health workers and the committee selected to handle income generating activity participated in the program. The nutrition field worker and myself were the facilitators. A summary of the curriculum developed is shown in Table 7.3.

Table 7.3 Curriculum developed for the child growth monitoring program 1999

Date 1999	Topic	Facilitators	Resources
March	Weaning	CHW ¹	Foods & fuel (D) ¹
April	Balanced diet	CHW ²	Foods (D)
May	Diarrhoea & vomiting	CHW ³	Pictures
June	Common illness	NFW	Records (D)
July	Child's growth	CHW ⁴	Cards & posters (D)
August	Diet in pregnancy & lactation	CHW ⁵	Foods (D)
September	Breastfeeding	CHW ¹	Posters (D)
October	Eating	CHW ¹	Mothers (R)
November	Food security	MoA & SACDEP	
December	Evaluation	NFW; CHWs; women; research & collaborators	Writing materials (D & A)

Note:

- CHW refers to community health worker
- MoA refers to Ministry of Agriculture
- NFW refers to nutrition field worker
- SACDEP refers to Sustainable Agriculture Community Development Program

Main method of presentation shown by:

- D1 Demonstrations
- D Discussion
- R Role play
- A Activity

All the presentations of the topics were to be guided by talks. Community health workers felt that the curriculum would help them focus their education to the perceived needs of the people. This was indicated by one of them during the training session by: *"Now we shall dealing with what the mothers want. We can also plan in advance what is required before the lessons"* [16/2/99]. One aspect of the curriculum was that it was flexible and could be adjusted depending on what was felt by the people that they needed. These findings do suggest that a nutrition education curriculum in a child growth monitoring program can effectively arise from engaging participants in the program to identify the knowledge and skills that they think they need. This results in a curriculum as noted by

Wallerstein, (1992, p. 204) that addresses real issues of the participants rather than that of what facilitators think the participants need.

The goal of the program for the year was to increase participation of women in making decisions in the program on a continuous basis, to raise women's incomes and increase activities in the program as identified by the women. Objectives of the program were to reduce underweight status of children attending the program to zero, nutrition education on weaning, contribute to increased incomes for women and mothers attending the program to participate in making decisions in the program. Mothers attending the program to take active part in weighing of children, read weighing scales accurately and record weights and practice interpreting weight changes on the child growth card accurately.

Critical thinking

Critical thinking and decision making was evidenced in this study and this may be attributable to several factors. The research process itself allowed the people to think through their situations and make their own decisions without the nutrition staff, community health workers or myself helping them. At one time, the nutrition staff, thinking the process was too slow, wanted to give suggestions. I stopped her. The process of decision making in itself takes a lot of time. Had the women still come up with no evidence of making their own decisions by the end of the nine months of my fieldwork, I do not know how I would have reacted. One thing we all tried to do was to

let women know that their ideas on how they would like the program to function were important and we would proceed according to their views and their schedule.

In an existing program such as this one, it is apparently necessary to let the people think through and make their own decisions if their participation is being encouraged. This will take time because people already have their own perceptions of what the program is and may have accepted it as such. In order for them to make decisions in the program, therefore, requires time to be emotionally prepared for the changes that they may propose. This takes time.

Another critical factor was that the community health workers did not perceive themselves as 'experts' but were willing to learn and have input from others. The facilitators' perceptions of who they are, is likely to affect the process of participation. When facilitators perceive themselves as 'experts' (as was indicated by one nutrition field worker trying to give suggestions), they are likely to be tempted to help the people think. This is not empowering and the notion of so called 'experts' should of necessity allow the people to think for themselves. If they make mistakes it is acceptable as the process of decision making itself is more important than the eventual decision.

Prior to the research presented in this thesis, the program functioned based on the training received by the community health workers. This was to promote child growth monitoring, to teach health and nutrition and counsel the community members on social problems and operation of the community pharmacy. Their training did not focus on

getting the community to think critically and decide on what they wanted the program to do and how. For a child growth monitoring program to promote critical reflection from the people, facilitators need appropriate training on how to bring this about. Training and exposure of the community health workers, nutrition staff and other health staff to experience participation would enable them be prepared technically and emotionally to promote active participation in their nutrition programs.

Focus in this study was on how the participation of all people in the program can be fostered as it is reflected in Figure 2.3. This was achieved by engaging women and community health workers actively in decision making in the participatory research process itself and their participation in the program. The process is not “taught” in the conventional teaching mode but is taught through experience. There were only two of the nutrition staff who participated in the process itself and they had learned by the end of the field work what it meant to have the people participate in decision making. Nutrition staff and the Ministry of Health personnel who work with the community in primary health care need to experience this process for themselves in order for them to promote it in the community by catalysing the participation to happen but not to help it happen.

Challenges of participation experienced

This research was planned and conducted with active participation of the participants. Although the research generated knowledge and action, it experienced challenges that are unique to the process itself. As indicated by Maguire, (1993) there are challenges inherent in the participatory process itself. In this research the challenges were related to

access to the study population, ethics, formulation of the research agenda, time, language, ownership of generated knowledge and participants' expectations of the research.

Time

To achieve meaningful and durable participation such as the one described in this study, takes time. Participants determine to a large extent the pace of the study. Time was spent to build rapport, to gain trust and confidence and experience with working with the researcher. A significant amount of time was required by both the researcher and the participants in the process. For the researcher, there has to be a lot of time spent in trying to listen and understand what is being said and implied but not stated. Time is also needed to understand what is being done. Participants and the researcher together, spent time in planning the research, developing ideas, taking action and coming to consensus.

The process worked more on the participants' time schedule than mine. When planning for the first meeting to meet women and brief them on the study, one of the community health workers said: *"Let us agree to meet and start the meeting at 10:00am. However, let us tell the people to come earlier say 9:00am so that they come early. When you tell them that the meeting is at 10:00am, that is the time they will start leaving their homes"* [23/6/1998]. There was low turn out in the child growth monitoring sessions during busy farming seasons. This was indicated in the meeting on 11th December 1998 when a community health worker asked: *"Why did people not come? What is the problem?"* [11/12/1998] One of the woman responded: *"Few people came today because of*

cultivation on the farms" [11/12/1998]. Therefore meetings were held depending on availability of the women and community health workers. This is in line with other findings that show that in order for the communities to participate effectively in a participatory process, time is required to discuss and understand their prevailing circumstances and to come to an approach to solving their problems to which they can relate (Hall, 1981, p. 153; Rody, 1988, p. 133).

Actions which the participants arrived at as a result of the process demanded a lot of time. Time was taken to plan and carry out extra meetings to focus on income generating activity that emerged in the participatory process and time to develop the curriculum. Women in Thika already have heavy workloads on a daily basis and participation continued to demand more of their limited time. This meant women had to prioritise their work or work longer hours. Indeed active participation of women in making decisions in the program increased their workload in terms of time available for them. Promotion of participation should, therefore, note that the process can, in itself, overburden women, especially if the outcome activities of the process are time demanding.

There was also a time limit for my fieldwork. I left the fieldwork before materials for the curriculum could be developed as was suggested. I was to be a resource in this process. However, the research was also just a part of my life not my entire life so I left before this could be done. On the whole, this participatory research was time consuming.

Ethical considerations

Ethical considerations were a challenge at two levels. One was during entry in seeking consent and another on the acknowledgment of people's voices in the research. Written consent at the community level was looked at with some suspicion. This was indicated by one woman by: *"If we have told you we are ready to take part in the study, is it not enough? Why do you want us to sign some papers again?"* [7/7/98].

Acknowledgment of voices in the written report was also an issue. Women preferred to be acknowledged in person not by pseudonyms as the latter was considered cheating. Based on the collective nature of the research, the women settled to be acknowledged by their role in the program and research not by individual names. They, therefore, preferred to be acknowledged as community health worker or woman participant or nutrition field worker. The District Nutrition Officer preferred to be identified by that title.

Setting the research agenda, communication and language

When participants are not used to making decisions about the program, to have them actively involved in setting the research agenda needs time. Participants may also feel insecure and this can cause some confusion. If one has an already set agenda, as was in my case, this is likely to shift as it accommodates people's views. The program focus is also likely to shift as people contribute what they think is important for them. The challenge is to allow the process ensure that it contributes to the well-being of the people concerned.

The preferred mode of communication at the university level is written whereas in this community, verbal communication is preferred. In this research, information on dates and times of meetings, interviews and all other communication at the local level was verbal. The verbal nature of communication lays stress for the researcher to be very keen to hear and understand what is being said and implied as there is likely to be no reference to go back to except memory of what was said.

Information generated in this participatory process required to be translated, transcribed, organised and presented in English. For participants to effectively take part in the report writing requires expertise in English language. This in itself can be a cause of helplessness for the participants or else it requires more resources to have the final report be translated into the local language.

Resources, process and final outcomes

Social changes that resulted demanded time, personnel and material resources. In this case the extra weighing scales and bags plus vitamin C supplements were provided by the Ministry of Health. I was able to provide the materials for the curriculum development workshop in form of writing materials and insight on curriculum development. One of the collaborating organisations (SACDEP) provided information on costing and market for the poultry project. In cases where it is not possible to cater for the needs to bring about the desired changes, this could cause frustration for the participants. Increased time in the research means participants forgo economic activities to participate. As pointed out by Hall (1981, p. 454), for people to participate, they must

be highly motivated and quite certain that the efforts for their participation will bring some direct benefits for them.

As the people become engaged in making decisions in the program and the research, this may challenge the way the program is run. This may bring about conflict. Although I did not observe conflict in this research, the contacts I had with the participants may have been insufficient to expose such conflict. This is because conflict is very culture-specific and persons may play up when an outsider is present who may not note the conflict. In addition, I may not have understood the ways they expressed their conflict. In one session, I noted this in my field notes: "*One community health worker was unusually quiet today. I wonder why?*" [8/1/99]. I, however, did not ever get to find out why.

Changes in the program to include income generating activity and the development of a curriculum demanded time and knowledge and skills in these areas. Changes that result from the participatory process not only bring about a shift in the program but also affects power relations and makes demands in the program in terms of time and other resources. Active participation of all persons in the program will require extra time, finances, skills and knowledge. Promotion of participation should note this and be aware of the workload demands of the participants, especially rural women, so that the process does not overburden them. In addition, assessing the workload demands on women may lead to assessing whether participation is the most cost-effective approach for the issue at hand or a different approach would be more appropriate to bring about the required results.

Community expectations of the research and the researcher

Community expectations of the research were to see direct benefits for them. Unless people see direct benefits, they may be unwilling to participate. In this case, the economic benefit was important. Participants may come up with ideas and suggestions where the researcher or facilitators may have no prior information or technical knowhow and this could be frustrating. When these participants suggested an income generating activity I was challenged. This is how I felt and noted in my field notes: *"How will they be able to handle these together? It may require a lot of time may be the whole day. Might this affect attendance?"* [8/9/98] Even when they came up with the idea of having a separate committee for the income generation I wondered how the two committees would work.

As a researcher, participants make demands on your active participation. They expected me to participate in looking for a market for their crafts at the start of the income generation. They also expected me to teach in the nutrition education sessions and make home visits to some families. I also participated in the community social function to raise funds for their local school and provided advice on other social issues. I took part in the events and activities that I thought were pertinent to the program. As a researcher that promotes participation, contribution during the process is important in order to avoid participants feeling that one is using them or wasting their time. Indeed, if participants are prepared to give so much time for the study, I could also be prepared to come out of my comfort zone and address their needs. The judgement on how much to be involved, I think depended entirely on my own values of the events or activities in which they

expected me to take part. The degree to which a researcher responds to the participants should, however, avoid dependency of the participants on the researcher for directing them. Allowing a sense of dependency on one robs the participants experiencing participation themselves and is in essence dis-empowering.

The size of this program was small, therefore, it was easier to get most of the participants contributing ideas. On two occasions when we had many people, organisation and participation of all was difficult. Not all women could contribute effectively to the discussions, sitting was uncomfortable, and crying evidenced discomfort of children. It is likely that a bigger audience would have had different results or required different ways of participation than we did in this study. For effective participation in decision making, a small group is required. However, for a larger group of participants in a program, the participatory process would need to ensure all persons contribute to making decisions in the program.

When a study of this nature is done in form of a PhD thesis, as it is in this case, the authorship of the main work is attributed to an individual, whereas, the community is only acknowledged. It is, therefore, important that the work can be made available in the local language so that the community participants have ownership of the final work. This is important because the participants play a major role especially in planning and carrying out the fieldwork. Only acknowledging them in a written work robs them of their rights to the research. The intended dissemination of the research findings with the community will result into a research report for the community.

Shift in program purpose

Participatory approach changed the set agenda in the program. The ideas generated by the participants included an income component to the program. This was a major shift as extra time was needed for the activity and participants had to plan for extra meetings to attend to the added agenda. This agrees with similar research that have shown that participatory process addresses the social realities of participants and results in modifying ways of doing the familiar (hooks, 1994, p. 35). In this case it was possible to allow for the added time. In situations where either the researcher or participants cannot get such time, it can be a frustrating and de-motivating experience for those concerned.

The shift led to social change not just nutrition change. Facilitators and participants and the researcher need to be technically and emotionally prepared for change that may occur. Since the shift was based on participants' own perceptions, they were able to carry out the suggestions. They were able to plan by themselves, how to organise the income generating component. If participants came up with ideas that could not be supported, the results may be different from what was experienced.

At the beginning of the study, the aim of participation was not clear to all. For all actors to actively participate in a program, time needs to be taken to clarify the purpose of participation. I progressively indicated throughout the research process what I could or could not do. This avoided leaving participants to guess my limits and made all participants understand why they were participating. This enabled them to contribute to the process.

Commitment, leadership and management

The participatory nature of this research required a lot of commitment from the women, community health workers, nutrition staff and myself in terms of time and ideas. I was not just involved during the research time but also in their other activities. A researcher promoting a participatory process should be committed to the continuation of participation and not just to let it be a one time experience. The challenges of the new venture of income will be leadership and management. These among other challenges that may face the program will be addressed as they emerge.

The participatory assertiveness experienced by participants during this research is likely to enable participants to handle such challenges. Participatory research is flexible in its approach. This meant that although plans were made, they shifted as the need arose. Flexibility requires a clear focus on the purpose of what one is doing otherwise one may be carried away by the process.

Measurement of participation

How do you measure individuals' contributions to decision making? The judgement one makes depends on how involved one is with participants in their life outside the program. This is because, some of the ideas are likely to be discussed and agreement reached on who and what to say outside the decision making time. For example the times when women were informed to: *"Go and discuss and come next time with what you think so that we can decide what to do"* [7/8/98]. In addition, the community has its own way of making decisions, and they may actually exclude one from them.

How to measure participation was not addressed together with the participants in this study. I decided on what was participation by myself as I continued to analyse data and write this thesis. What I considered to be participation was women's participation in making decisions and initiating and developing activities that they had not normally done in the program. Networking was also looked upon as a measure of participation. This was interactions they initiated on their own or strengthened with non-governmental organisations and government ministries. This is an area where research is needed. Indeed, the researcher and participants should discuss and agree on what and how they are measuring participation but this should not be a rigid format that deprives the process from emerging.

Cost of participation

Although I did not set out to cost participation, I found that the process has costs that are unique to its nature. These are economic costs related to the researcher/outsider, which can be high, because the person is likely to come from outside the community at the start of the process. There is a high cost of commitment and the time taken to participate in making decisions by all actors in the process. In planning and designing participation in a program, there is an opportunity cost in relation to other techniques, which can be geared to achieve similar results that should also be investigated.

There is the cost of training the community health workers which should also be considered. Although supervision hardly took place in the child growth monitoring program, I recommend it for effective participation especially so because the community

health workers training is not comprehensive and supervision would built more confidence in their work. The cost of supervision, therefore, needs to be assessed. Failure to cost participation together with the participants of the program was a weakness in this research. This is an area that requires to be addressed in the promotion of cost-effective participatory nutrition education approaches.

My main challenge as a researcher was to effectively participate so that I motivated the participation of all persons while at the same time avoided dependency on my knowledge and skills. This was more challenging as the nutrition staff who are meant to oversee the child growth monitoring were also not conversant with participatory process although the government expects them to facilitate it. The fact that the nutrition staff were not conversant with the district focus for rural development strategy or the primary health care concept is a main weakness of promoting nutrition education. Although other health staff were not assessed on knowledge on these policies, they are likely to have similar experiences. In order therefore to promote participation, grassroots personnel in health and nutrition have to be acquainted with the policies and understand what they say and mean so that such policies are interpreted effectively. In order to have this come about, there will be costs for retraining grassroots personnel on primary health care and community participation as promoted by the district focus for rural development strategy, the structural adjustment policies and the implications of these policies for nutrition.

Perceived benefits of participation experienced during fieldwork

At the end of the fieldwork, the participants stated that their participation in the research had benefited them in several ways. The participants indicated social change to be a major benefit of this research. This was summed up by one woman by saying: *"We are now able to discuss our problems more whereas previously we just talked about weighing children"* [5/2/99]. The ability to allow the participants discuss their problems and come to a consensus on how to solve them was a major benefit of the participatory experience for these participants in the program.

Some women said frequent feeding of their children had been achieved. This was indicated by one woman by: *"Now we have been encouraged to bring snacks for children when we are going to stay away for a long time"* [5/2/99]. Another woman said: *"We have now improved our feeding. Now we know why we should feed on fruits and vegetables and not to overcook them"* [5/2/99]. Knowledge on feeding and food preparation are areas that women pay attention to and their participation in the program enables them to gain benefits which are practically applicable in their homes.

Acquisition of resources was stated to be a benefit. This was indicated by one community health worker by: *"We had no weighing bags and scales but we have now got the scales and weighing bags during this research"* [5/2/99]. Participation enabled the community to share the constraints they faced in the program and the collaborators intervened. My presence and that of the nutrition staff served as motivation and recognition for the community health workers and the women. One community health

worker said that: *"Your (referring to me) consistent follow up encouraged us to go on"* [5/2/99]. Another woman said: *"The study enabled us to bring children to the weighing centre on a consistent basis"* [5/2/99]. Being in contact with promoters of participation is an essential component for motivation of the participants. They should feel that they can trust such a person and that the person is there for them because one has confidence in the people's critical thinking about their situation.

Networking was also a benefit that participants expressed had been achieved from taking part in this research. One woman indicated this when she said: *"The nutrition field worker has also been coming. We hope you (addressing the nutrition field worker) are not going to stop coming after the research is finished"* [5/2/99]. Another woman said: *"SACDEP assisted us to write requirements for the poultry project"* [5/2/99]. In essence, participation allowed the participants to be able to go out and establish networks rather than waiting for collaborators to come to them. In outlining the Kenya national guidelines for the implementation of primary health care in the country, Bennett and Maneno (1986, p. 79) noted that nutrition is very important for the nation and is not the responsibility of one sector. Other sectors contribute to the improvement of health and nutrition status of the population and therefore strategies that promote inter-sectoral collaboration are encouraged.

Evidently the participants (both the women and community health workers) think the participatory process had an impact on them as individuals and collectively in the program. It is clear that community participants have expectations of child growth

monitoring program. They see it as a viable focus to address not only nutrition, health and child growth monitoring as it is currently undertaken but their other concerns as well. In particular, the participants viewed the program as addressing their food security and economic well-being, providing education that is applicable and practical by focusing on food preparation demonstrations. The participants also see a need to include other young mothers in the program.

Findings from this study suggest that for growth monitoring to be viable, it should not only address health and nutrition education in addition to monitoring children's growth but also the participants' other needs in particular their economic and food security. Addressing these other needs that are of priority to participants in the program promotes their active participation. In order for the program to do this, it will require active participation of all actors to identify the needs, plan and carry out suggested action according to how they think this can best be achieved in their circumstances. This leads to outcomes that are empowering and that bring about social change in both the participants and the program.

Decision making, authority and control

Decision making, control and authority have implications for the way a researcher or an outsider chooses to work in the program. In this study it was found that the community health workers and the women viewed me and the nutrition field workers as "experts". In order for this "expert" notion to be minimised and to allow participants make decisions

in their program and have the authority and control of what happens in their program, is a challenge that promoters of nutrition education should pursue.

What may be required in this case is that nutrition staff specifically, and health personnel in general, understand and actively promote the concept of active participation. Noting the lack of training nutrition staff have on the concept of participation in primary health care, there is a need that they be trained practically in participation and apply it in their daily work situations before they can be expected to effectively promote the strategy at the community level.

Findings of this study show that the practice of the Ministry of Health tends to be that the child growth monitoring program is initiated by the government in collaboration with non-governmental organisations and the community health workers are left to implement the program on their own without any technical or relevant supporting mechanisms. Community participation in planning tends to be stated in official government policy but is not necessarily the case in practice.

I did not have to understand or know everything about it

Participants were not only prepared to address their incomes through the child growth monitoring program but were prepared to function independently on making the decisions which affect them individually and collectively in the program. In one meeting one of the women said: "You (addressing me and the nutrition staff) leave us to discuss and we shall tell you what we have decided and how next time" [9/10/98]. This

perplexed me. I noted in my field notes: *"I am doing this study, how can I know all about the participatory process that is emerging when I am excluded from some of the activities"?* [9/10/98]. It was only later on upon reflection, that I realised that this was a turning point in the study and that it was an indication of a high degree of empowerment for the participants. It has been observed that behind the back communication is empowering in itself (Rody, 1988, p. 140). This was a clear indication of women's empowerment in this research.

This event was followed by setting aside time to discuss income generation after the child growth monitoring session in November 1998. During the discussion on this day I was present. The importance of the issue was indicated by attendance of 27 women (Table 4.7) who came with enough lunch for their children. During this meeting, one community health worker stated: *"Let us now discuss how to start an activity for ourselves so that we can increase our incomes to buy enough food"* [6/11/98]. The suggestions aired during this meeting included official formation of a group and decisions on election of a separate committee to handle the income generating activity. Issues related to registration of the group, rules and regulations to govern the group and contributions to make towards the group and ideas on activities to be done by the group were also discussed. These were indicated by statements by the women such as: *"We would like to start a group to be registered with the community development assistant so that we can do some activities that bring in money"* [6/11/98]. Another woman stated: *"Let us also plan how to select interim committee members"* [6/11/98], and another one said: *"We can make table clothes, baskets ... and sell"* [6/11/98]. Participants also

discussed and agreed to make initial contribution of 50 Kenya shillings (an equivalent of 1.5 Australian dollars) each to enable them pursue the official registration process of the income activity. In the event of starting an income activity, initial funding is required.

Participants noted that some mothers may not be willing to participate in the income activity and this was agreeable to all. The freedom to choose to belong to the activity indicates autonomy. This also indicates that participation does not mean being the same but actively contributing to the group in decision-making. Indeed autonomous decision making where the group preferred to make decisions alone does indicate empowerment.

A meeting to draw up rules and regulations to govern the functioning of the group on a later date in November 1998 was agreed upon. Clearly the meeting in November made major decisions that affected the future of the program. These decisions were not just as a result of that day's meeting but depended on what was discussed in the previous meeting, which they preferred that I do not attend. In addition they are likely to have made discussions on these ideas between that time and this day about which I do not know.

An issue that I had to be content with is that I did not have to know or understand everything that the participants did, especially as they viewed me as an outsider who was a friend to them. This may be a position that a researcher who adopts a participatory approach should be prepared to accept. The participants one works with may prefer to exclude you from some of their activities. This, in itself, indicates that participants are

empowered and are able to make autonomous decisions that the process desires to promote.

One thing I learned was that when facilitating participation, one needs to be aware that the process is likely to affect your own position as a researcher as the power relations emerge and people are able to speak and make decisions for themselves. At the end of this meeting I noted this in my field notes:

"As long as the program is willing to address income generation and poverty, more mothers are not only willing to come but to contribute their ideas and make concrete decisions on their own. They do not refer to me or to the nutrition officer to make contributions to their decisions contrary to what they did previously" [6/11/98].

Other studies have found that village groups function well during periods of contact with project staff but lack of contact leads to people stopping the work (Oakley, et al., 1991, p. 87). Contrary to this, women decided to exclude me from some of their activities while I was present and this was a clear indication that they are prepared to go on without outside contact.

Barriers and enablers of participation

In this study, barriers to participation included limited resources especially funding to carry out comprehensive curriculum materials development. Participants were very enthusiastic about the income generating activity. If it were not possible to implement, it could have had implications for participation in the program. What emerges can be a

barrier if it is not possible to carry it through. In this study, the District Nutrition Officer was a key government player in the study and therefore needed action and resources that could be easily accessed. Negotiating and networking at the macro-levels of government, however, by the participants would be limited unless persons from the higher offices take part in the study or participatory process. The weak link between the child growth monitoring program and the Ministry of Health is a barrier to enhancing networking at the macro-level.

Participation process reported in this thesis was carried out in an existing child growth monitoring program. An existing program has its own norms. The flexible nature of the program and open dialogue that were already part of the program facilitated the participation process. If participation is being promoted in a program that has norms that are anti-participation, promoting participation is likely to bring about conflict at the beginning, which was not experienced in this study.

Workload of women affects the time available to take part in child growth monitoring. Women's time is already overloaded and actively engaging them in a participatory process makes more demands on their limited time. This was evidenced in this study by women allocating extra time to address the income generating activity. The process is time demanding. Unless the participants see tangible benefits for them as individuals they are likely not to invest much time in participation. Information from non-participants indicated that lack of tangible outcomes from the child growth monitoring was a reason for non-attendance in the program. One woman who we met on our way to

a home to collect data was asked by the community health worker: *"We are visiting those people who come to weigh children in the centre. Why don't you come and you have young children?"* [23/9/98]. The woman responded: *"Just weighing the baby and there is nothing else, what is the use?"* [23/9/98]. Those women who had taken part in the program and had stopped prior to the study said: *"When one sees that the child is not gaining weight, I give up as there is no benefit"* [24/9/98]. Another woman said: *Just going to weigh the child and there is nothing else, therefore, I got tired and stopped"* [25/9/98]. Finding out reasons for non-participation may lead to addressing potential participation obstacles in this program.

Attractive aspects of the growth monitoring program that favour participation

Findings of this study reveal that the child growth monitoring program in Kenya is planned from the government with assistance from the non-governmental organisations and the community that take part are not involved in the program design but only in implementation. Nevertheless, there are positive aspects of the program that favour people's participation in their nutrition well-being. The program is an existing structure therefore it does not require the extra time and effort needed for group formation and leadership. This makes it appropriate for promoting participation of the people. However, in order to do so, the people should be willing to participate in the program. The program focuses on young mothers with children aged between 6 months and 5 years. These mothers have similar experiences that favour participation of all.

This program was small and covered only three villages. Participants shared similar cultural norms. Although the participants were from two different tribes, they have

similar customs and food habits. There were, therefore, fewer obstacles to bridge barriers to participation due to culture. Dialogue was very much used in this particular child growth monitoring program therefore it maintained communication. The program was flexible in organisation, meeting times and on what to teach. This flexibility allowed the participatory process to develop without much disruption of normal program procedures. In spite of these positive attributes, the child growth monitoring program in particular and nutrition education at the community level faces challenges in achieving nutrition well-being.

Participants' engagement in active participation led to planning, making decisions about the program and the research and to implement agreed agenda by consensus. This study worked through an existing child growth monitoring program. An existing structure is likely to contribute to people's participation as the issues of group formation and norms are already in place and one does not have to establish new linkages before initiating the process. As noted elsewhere, participation requires a social political framework that encourages such an approach to succeed (Oakley et al., 1991, p. 53).

Participants had similar social cultural practices and beliefs and this may have facilitated the process although this was not analysed in this research. The child growth monitoring program is flexible, therefore allowed for participation to occur easily as participants made decisions on a continuous basis and adjusted them as was necessary. If an existing program is not flexible in organisation and implementation, promoting participation may actually be an uphill task. This program was fairly small in size. It was easy for me, the

nutrition staff and community health workers who were in essence a research team to meet all participants and have that personal touch. In a program of a larger magnitude, the importance of a team that is available may be a critical factor.

Summary

This chapter has analysed what participation achieved in this study. This includes empowerment as evidenced by starting of the income activity and developing a curriculum in the program. Self-initiative and critical consciousness were experienced by participants. Challenges of participation calls for assessing women's workload in its promotion, ensuring a strong link between the growth monitoring program and Ministry of Health and non-governmental organisations and ensuring grassroot personnel are conversant with government policies on primary health care and the district focus for rural development strategy. This among others will contribute to concerns expressed by participants at the micro-level getting attention. Chapter Eight presents the conclusions and implications of this study for promoting participatory approaches and for nutrition education in a rural child growth monitoring program in Kenya.

CHAPTER EIGHT

CONCLUSIONS AND IMPLICATIONS

This research has reported on the results of women's participation in making decisions in their child growth monitoring program in Kenya. The research confirms observations from other findings that nutrition education has not had desired results in the community as expected as it is stated in policies and approaches outlined in Chapter Two. Specifically, the following research objectives were realised in this thesis:

Objective 1

The government nutrition staff provide nutrition information to patients of nutrition related health problems in the health facilities and rarely in the growth monitoring programs. Community health workers on the other hand, perform a variety of tasks in primary health care in the community. They teach mothers on health and nutrition and weigh their children aged below 5 years in the growth monitoring program. In addition, they sell medicine in the community pharmacy, solicit for resources for the program and are leaders in the community. They do so on a voluntary basis with minimal resource support, supervision, visible motivation and recognition.

Objective 2

The government nutrition field workers are trained before they are employed but undergo in-service training to update them on trends in nutrition knowledge and approaches. Information received from nutrition staff however show that there is no in-service program specifically geared towards training nutrition staff. Additionally none of these

staff had been trained in primary health care or community participatory approaches in spite of the government's promotion of these policies.

Community health workers on the other hand have received training in child growth monitoring and primary health care which have components of nutrition education. These training are supported by non-governmental organisations and the Ministry of Health. Contrary to expectations, Health Centre staff who are meant to supervise the community health workers are sidelined in their training. This makes them reluctant to supervise the community health workers. Contrary to the broad focus advocated by the primary health care concept, the training pays attention to content and curative health and does not address the wider issues of poor nutrition and approaches to tackle nutrition problems.

Objective 3

Analysis of the perceptions of the causes and solutions to nutrition problems suggests that nutrition education has had a narrow focus. Although different causes and solutions were given by women and nutrition educators, nutrition promotion concentrated on provision of nutrition information. It was clear from the participation of women in the program that issues of food supply, economics and other environmental concerns are needed in order to solve nutrition problems.

Objective 4

Nutrition education through the child growth monitoring program is held once a month during which, children are weighed and nutrition and health information communicated to

women. Once the program is set in place however, it is left to function forever without monitoring and evaluating the relevance and women's dynamic changing needs. Furthermore, there is a lack of district or community planning for nutrition education through the program. This lack of planning makes both implementation and assessing of nutrition education process and outcomes difficult. Apart from the community hall, weighing scales and recording books that are given at the start of the program, the program functions with minimal resources. Besides the cost of the program in terms of mothers' and community health workers time and commitment is not assessed.

Objective 5

The child growth monitoring focuses on weighing children, explaining to mothers the possible causes of weight change and providing information to women on general health and feeding based on the three groups. These are carbohydrates, proteins and fruits and vegetables. In contrast women expected the program in addition to address their economic issues and practical skills in food preparation and gardening. Women see the need to diversify the program in order to address their needs. Furthermore, there is a need to address in a tangible way, cases of faltering weight and failure to gain weight so that children's nutrition is improved.

Objective 6

Verbal communication through talks and discussions was extensively used without other instructional aids. At the start this was more from the community health workers to the women although women were given opportunity to speak or ask questions during the

monitoring sessions. However, as participation was increased in the program, participants started to interact more. The use of dialogue was an asset to promoting participation. However, women felt that they required demonstrations to gain practical skills in food preparation and gardening.

Objective 7

Collaboration that exists in nutrition education at the community level was between the Ministry of Health staff and non-governmental organisations in the training of community health workers. It was noted early in the research that these staffs were not involved in the routine child growth monitoring activities. However as participation was strengthened in the program, Ministry of Health and Agriculture staff got involved in the program. The lack of documented plans and monitoring and evaluation records however made assessing of collaboration difficult.

Objective 8

Participation as experienced in this research led to the development of a child growth monitoring program that addresses participants expressed needs. In addition, it engages participants in planning, decision making and implementing of program activities that they feel are appropriate for them. Participation allowed women to reflect on what the program was doing as a way of monitoring and evaluation. The process broadens the focus of program objectives and implementation strategies.

A major outcome of participation was evidence of empowerment as shown by interdependent decision making, sharing responsibilities and power in the program and taking control of the program without leaning on outsiders. An income generating activity was birthed and implemented as a result of women's participation in decision making.

Challenges of participation are that a lot of time is required to initiate and propel the process. In addition ethical considerations are of special concern. Furthermore, the process demands a lot of time and other resources from the participants. Shifts in the program are not only in the goals and purposes but also social. This demands that both facilitators and participants be emotionally prepared to undertake the process.

The continuous cyclic nature of participation of reflection and action involved monitoring and evaluation that was used by participants on an immediate basis for decision making.

Positive aspects of a child monitoring program that favour greater participation include the fact that it is an existing structure and therefore does not require extra time and effort in group formation and leadership. Dialogue and flexible organisation of the program promotes participation as it allows for people's ideas to be incorporated. Strengthening participation in the program provides a clear understanding of the expectations of both the community health workers and the women in their program.

Thesis outcomes

Several outcomes were realised during the research undertaken for this thesis. A prominent outcome of this study showed how participation identified solutions to

address nutrition problems at the micro-level and led to empowerment of women. Partnership between collaborators and all actors is likely to bring this about. Participation diversifies the scope of nutrition education through a child growth monitoring program. In order for participation to be effective, there is need to strengthen the link between the program and the Ministry of Health and collaborating non-governmental organisations.

A notable outcome of this research is that, although there have been policies on nutrition, food security and community participation in Kenya for over a decade, nutrition staff are not conversant with these policies. The lack of awareness of the content of these policies means that these staff are not in a position to promote them. In order for nutrition education to be promoted so that it brings about positive results in a rural setting in Kenya through the Ministry of Health, nutrition staff need to be fully conversant with these policies. The meaning of the primary health care concept and community participatory approaches as reflected in the district focus for rural development strategy and nutrition policies, therefore, require urgent attention. These, in addition to understanding the structural adjustment policies, may contribute to nutrition education facilitators functioning in a realistic manner. Additionally, although inter-sectoral action in nutrition is promoted as a component of primary health care, in practice at the local level such collaboration is minimal.

Nutrition education

Findings of this research reveal that although nutrition education is important in Kenya, it is a low priority agenda within the Ministry of Health. This is reflected in the limited commitment to resource allocation to nutrition programs, lack of professional development strategies for nutrition staff and the weak link of nutrition at all levels of the ministry and child growth monitoring program. A distinct outcome of the research is that nutrition education is important but what enables it to work are economic and food security concerns. Government nutrition staff promote curative nutrition and pay minimal attention to preventive nutrition promotion. Although the perceptions of women, nutrition staff and community health workers indicated that poor nutrition was due to a multiple of factors, nutrition education was narrowly focused on provision of nutrition information and monitoring children's weight. Mothers attending the program felt that education and weighing children alone were insufficient to bring about nutrition well-being. Findings show that knowledge in nutrition education is necessary but not sufficient in empowering people in decision making. It is, therefore, important that in a child growth monitoring program in addition to knowledge and skills decision making should be promoted so that people are assertive enough to make decisions based on what they value as important in nutrition for themselves.

The narrow focus of nutrition education may be explained in part by the training of nutrition education facilitators. Training of community health workers focuses on primary health care content but does not prepare them to promote participants' decision making. Community health workers focus on nutrition education in the program in terms

of food intake and disease to some degree, but the decision making skills that are needed to promote women's participation are lacking. As this study showed, increasing women's decision making in the program leads to the program addressing women's other needs. On the other hand, nutrition staff are limited in their ability to promote participation in nutrition education partly because they have received minimal training in primary health care and none in community participation approaches. In addition, they are not conversant with nutrition policies and community participatory approaches in operation in Kenya. Training of nutrition educators and other health staff to promote decision making skills require attention if participatory approaches are to be deployed in nutrition programs and result in anticipated outcomes as expressed by participants' perceptions and government policies.

This research shows that the perceptions of the child growth monitoring program differ among the key players. The Ministry of Health sees the program as improving nutrition and health education and monitoring children's growth as a child survival strategy, whereas the women and community health workers expect the program to address social change in their lives, not just education and child growth monitoring. Planners of nutrition education need to pay attention to the perceptions of participants in the program if they expect nutrition programs to be successful.

A significant outcome of this study is that although there are policies on nutrition, primary health care and community participation in Kenya, information received from nutrition staff show that grassroot personnel who implement these policies have not

accessed such policy documents; neither are they conversant with them. There is a need to ensure these personnel understand and promote these policies if nutrition of children at the community level is to improve in rural parts of Kenya.

A major finding of this study is that there is potential for a growth monitoring program to address other issues like incomes rather than the narrow focus of nutrition education. Poverty and food security are causes of poor nutrition in rural Kenya and should have a priority focus in a nutrition education program which focuses on improvement of nutrition and child survival. Promoting active engagement of participants in making decisions in what takes place in the program leads to individuals addressing the causes of nutrition at the micro-level. Both costs of food and access to food are major factors for nutrition education at the community level. Participation lets people address the causes that influence other parts of the participants' lives. Given the patterns of poverty and inequalities in incomes in the rural setting in Kenya, a program that addresses nutrition may pay attention to the economics and food security considerations through people's participation.

A further finding of this study was that nutrition education is promoted without any written plans indicating goals, implementation and evaluation strategies. Once the child growth monitoring programs in Thika are set in place, the programs are left to function without assessing their relevance and changing needs. Community health workers are left to function alone with no follow-up after training. The nature of the participation in this research through the cyclic nature of reflection and action involved evaluation that

was used by the women and community health workers on an immediate basis to make decisions and to take action. Although participatory approaches may be promoted as a means to address the phases of planning, implementation and evaluation in nutrition education, there is need to have documented plans. These will enrich the implementation, evaluation processes and further planning.

Community health workers play an important role in nutrition education through the growth monitoring program. Once trained, they perform a variety of duties on a voluntary basis. They carry out these responsibilities with minimum resource support, supervision and visible motivation and recognition. Although they have the knowledge and skills needed to communicate and educate women within the child growth monitoring program, they require resource support and supervision. Given the high state of poverty in Kenya, organisation of a child growth monitoring program cannot expect to succeed if it has to rely on the rural poor for resource support.

This study revealed that the child growth monitoring program functions with no supervision. Although the community health workers play a crucial role in child growth monitoring in particular and primary health care in general, there are no mechanisms set in place to recognise them or sustain their motivation. This is worsened by the weak linkage between the child growth monitoring program and the government health sector. If nutrition education through the program is to be successful, community health workers need to be recognised and motivated. This may be discussed and agreed upon by the community so that the recognition is culturally appropriate and appreciated by both the

community health workers and the community. In addition, there is need to strengthen the link between the program, the health sector and collaborating non-governmental organisations.

An important outcome of this study is that although nutrition staff are supposed to oversee the functioning of the child growth monitoring program, in practice they do not. Their lack of training in primary health care, of which nutrition is a component renders them unprepared and not confident to carry this out. What is required is to expose nutrition staff to the primary health care concept.

Although the child growth monitoring program is promoted to address child growth monitoring for all children aged 6 months to 5 years in the community, not all such children and their mothers attend the program. Attention in the program needs to focus on tangible measures to address cases of faltering weight and failure to gain weight and to promote growth rather than just provide information. This is likely to encourage participation from the community.

This study addressed only one local situation in Kenya. Issues at the macro-level that greatly influence food security and nutrition such as food prices, economics, limitations of food production and time demands of women in relation to their multiple responsibilities will need to be addressed. This should be at both the micro and macro-policy levels in order to foster nutrition. In order for the concerns at the micro-level to be

addressed, a strong link between the growth monitoring program, the health sector and other collaborators needs to be strengthened.

Participation

Overall, the philosophy of the child growth monitoring program was compatible with the participatory initiative. The program already incorporates many aspects of participation. This includes open dialogue and community health workers instructional strategies used as shown by "tell me", "tell us" questions and paraphrasing. What is required is to identify gaps that need to be strengthened in the program in a participatory manner so that the program impacts on the community. Increasing community capacity and empowering the individual may be achieved through participatory approaches at the community and individual levels.

A distinct outcome of this research is that participation diversifies the scope of nutrition education in the child growth monitoring program by addressing participants' perceptions of solutions to the problem of malnutrition. This was reflected by incorporating an income activity and making decisions on the education topics to be covered in the curriculum for the program. Participation allowed the expressed expectations of women in the program to be reflected upon and action taken to address them. In order to let participation allow this diversity, training of nutrition education facilitators at the community level should have a strong component on decision making skills. Participation allows a broader perspective of nutrition education and showed that nutrition is more than just food intake. The approach allowed the program not only to

address 'nutritional' needs but also other needs. Findings of this study show that there is potential for nutrition education program to address issues such as incomes. Although participation in a local program broadens the scope of nutrition education, it is limited in that it focuses on the solutions at the micro-level only. Strategies that address macro-level issues such as food prices, economics and training of nutrition educators will also need attention.

A significant outcome of this research is that, although the Kenya government promotes participation in policy, nutrition education facilitators are not conversant with community participation policies. Neither are they adequately trained to promote decision making in nutrition in practice. There is need to promote decision making skills in addition to the training on content in primary health care in community participation so that they are prepared to activate the process of participation.

One notable outcome of this research is that nutrition promotion through the growth monitoring program should not be in terms of some pre-determined agenda but should ideally be developed to respond to the realities such as food accessibility and household incomes of the people for whom the program is intended. This is critical as a majority of Kenya's population is poor and food access is a need in the rural setting.

These findings reveal that although nutrition education through the child growth monitoring program is one of the areas women can effectively handle in a participatory manner at the community level it demands a lot of time and commitment from all actors.

In order for participants to comprehend the participatory process, time is needed in discussions, informal conversations and feedback on a continuous basis. Time is taken to plan, build rapport and develop trust and to dialogue on all issues. Commitment and time of the researcher and participants is required for an extended period of time. This research shows that an important element of participation is that it is an expensive process in terms of time and this should be born in mind when proposing a participatory approach in the community.

A more significant outcome of this study is that participation of women in the program leads to their empowerment. High empowerment had occurred at the point where the participants used results generated during the process to initiate action. This was evident, through interdependent decision making, sharing responsibilities in the program and taking control in the program without leaning on outsiders. The process builds self-esteem and assertiveness as was evidenced by women making their own decisions. Participation enables women to exercise power as noted in the critical incidents when they told me and the nutrition staff to leave them make their own decisions and plans about the income activity. It is an empowering orientation that can be accommodated within an existing child growth monitoring program as long as the participants are committed to participation. The findings of this study show that the benefits of empowered women can occur rapidly. For example the rate at which the income activity emerged and took off was spectacular. Women establishing their own networking mechanisms and their criticism of dependency were signs of empowerment. Empowerment was also shown in self-initiative and determination.

The self-initiative and enthusiasm of participants in income generation was evidenced by women committing more of their time and effort in the activity. It should be noted, however, that changes that occur in the program as a result of women participating in the program may make further demands on women's time, efforts and other resources. This, if not well assessed, can be a source of overburdening people. Women have heavy workloads on a daily routine basis, it is necessary to pay attention to reducing time spent on their other duties for them to effectively participate in such programs.

One outcome of this research is that participation allows the women to identify and recognise their own resources and strategies which enable them to attain their goals and priorities in the child growth monitoring program. The process contributes to acknowledge capabilities of women in the program shown through the selection of the income committee and a person to go and make a market search for them. Women developed their own rules and regulations of handling income activity which showed that they have competencies to function with appropriate sensitisation.

An important outcome of this research is that participation leads to purposeful experience for the participants as evidenced in this study by the income generating activity and development of a curriculum to address women's expressed needs. Income generation through the child growth monitoring program is necessary if mothers with young children are to participate effectively in the program and use knowledge gained through the program to improve nutrition well-being of themselves and their children. Although there are other activities in this community which women engage in to increase their incomes, mothers with young children, who are also poor, are not able to take part

in them. This is due to the high amount of money required for membership in such activities and the extended time required to participate in such activities. This, as the women noted, would reduce the time available for these women to care for their children. However, noting the time demands of income generating activity experienced during this research, the time demands for the women may still be costly in the long term through this program.

Findings showed that participation allowed the program to extend its collaboration networks. Collaboration that existed prior to this study was due to initiative of non-governmental organisations. This collaboration was weak. It tended to be sporadic and not organised or consistent. A strategy of collaboration may be enhanced through purposive dialogues not just when a need arises.

Participation in the research leads to culturally appropriate methods of data collection and a satisfying learning experience for the researcher, and participants. This results in practical action during the study process. Participation leads to the use of research findings as was evidenced by initiating an income activity and development of their curriculum for the next year based on the women's own criteria.

A major finding of this research is that priorities in the growth monitoring program should be negotiated between the program participants and nutrition facilitators. In order for participants to actively engage in participation, they should see it as contributing direct benefits to them. Perceived benefits are important as they motivate people to

participate. Unless people see individual benefits, they may not be prepared to commit so much time and effort in participation.

An important outcome is that in the process of participation, participants come up with suggestions that the facilitators may have no prior knowhow. Caution is needed in venturing in these new arenas as the shifts may contribute either positive or negative results. There is, therefore, need for facilitators to be emotionally prepared for the shifts that may occur in their normal routine in a program that promotes decision making of participants.

Although dialogue is a key in the participatory process, some of the decision making is done behind the scenes depending on the participants culture or way of doing things and this should be allowed to happen. Authorship and ownership of a participatory research report when initiated by an external researcher for a PhD study is a challenge. A separate report written with the people in a language they are comfortable with is necessary for participants to own and use the research report.

Suggested model of participation

Based on the outcomes indicated in this thesis, I propose a model of participation for existing programs that maximises participants' active decision making and planning and that allows nutrition education strategies to extend beyond knowledge and skills to address social concerns such as poverty. Nutrition problems addressed in a program should be based on the needs of participants as expressed by them. In so doing, the

positive aspects that the program achieves should be highlighted as a source of motivation to the facilitators and participants who are engaged in the program. In this study, women, saw the child growth monitoring program as a centre for social change in their lives and the community. It is likely that most child growth monitoring programs in Kenya are viewed in the same context and that makes this model of participation applicable to them.

The planning and design of participatory initiatives should be done with active engagement of the participants. Such design should focus on what the program could do or can do better. An outsider (collaborator, in this case researcher) would be a valuable asset to catalyse this process as the participants may be so familiar with the way things are that they do not see the possibilities. Such a person is a source of motivation and provides an outsider's perceptions plus a possible source of knowledge, skills and networks. However, such a person should not allow a sense of dependency to develop.

In the event where a curriculum is proposed and developed as was in this research, education materials should be designed to go with it. Education materials that the community can relate to promotes their learning. This calls for resources to be available in order to promote people's participation. The participants should also identify target audience who do not take part in the program and see ways of motivating them to participate. This is important if such a program is to have impact in the community in the short and long term.

Strategies that promote participation should be allowed to cater for the diversity that emerges as the process continues to unfold. In this case, the income generating activity required input from outside the normal realm of the child growth monitoring program and mutual collaboration to cater for it was necessary. Participation is dynamic and should be allowed to continue. The cost of participation and of the program in terms of material resources, mother's time and commitment are concerns that require to be addressed to identify whether participation is the most cost-effective approach in specific contexts.

Reflection on the goals, process and achievements should be part of the continuous process of the program. How different persons are actively participating in the program should be incorporated. Actors (researcher/collaborator, participants, and facilitators) engaging in all the stages of participation should ideally be committed to participation. As new networks emerge, they should be encouraged but should not be imposed. Local support groups or institutions like the school, churches, health centre that participate say in making announcements for meetings should be encouraged to take a more prominent part in the program. This is likely to enhance the program's credibility. The process is a very collaborative one and an outsider who initiates it in an existing program should be prepared to see it continue not just to let it be a one-time experience.

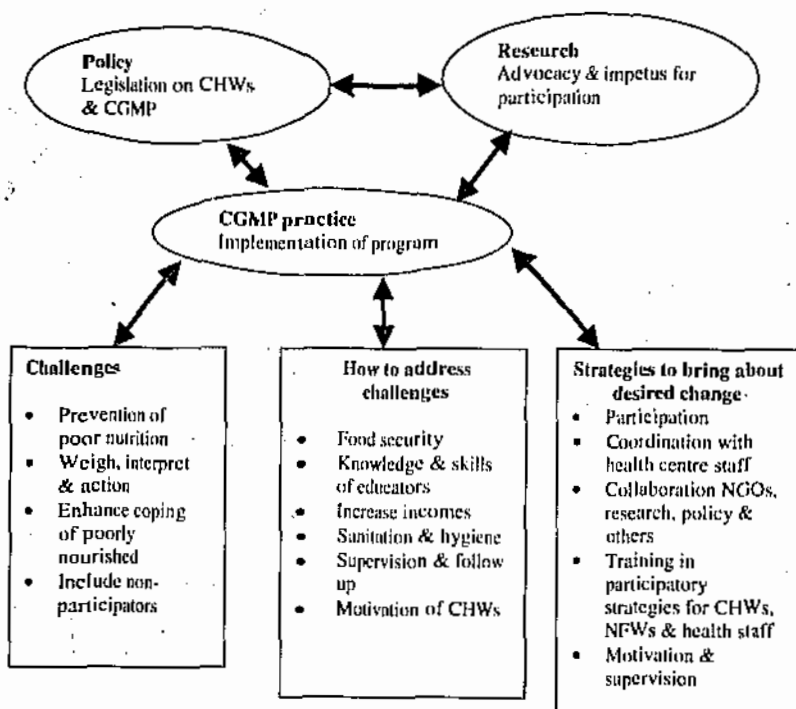
A catalyst for the process is necessary for an existing program to help motivate people see what they can do for themselves. In essence, people, as was in this case, knew what could be done but did nothing about it. They required a catalyst to help them see that

they can actually do something about their situation. Such a catalyst should be committed to the process of active participation whereby the position of such a person will be challenged and shift as participants become empowered to make decisions, and take control and authority in their program. The person should then withdraw and allow participation to continue. Such a person should be in contact through visits or writing to keep the motivation going and to participate where need be.

With the above in mind, this model that I propose could be suitable in any other existing child growth monitoring program. For a program, however, with a rigid leadership structure, and that suppresses dialogue or self-expression, the catalyst will have to work through breaking structural barriers before the process can start to propel itself, which, in my case, I did not have to face. Figure 8.1 shows the proposed model of participation.

The model of participation represented in Figure 8.1 addresses nutrition problems at a micro-level in a program. This includes what the program can address as it functions and what can filter into policy and research in addition to strategies to address the challenges in the program. This model is limited in that it is suitable for addressing issues that the community can be able to handle with their available resources not what the central government and wider community should do. Unless there is a link with the macro-level, the model would fail to address nutrition problems that are beyond the control of community.

Figure 8.1 Suggested model of participation in the child growth monitoring program



Note:

CHW refers to Community health workers

CGMP refers to Child growth monitoring program

NFW refers to Nutrition field workers

NGO refers to Non-government organisation

Concerns such as food prices, poverty, economics and unreliable weather conditions will of necessity be handled at the central government level. Promotinn of networking in such a program and a strong link between the program, the Ministry of Health and collaborators may lead to concerns of the community being voiced at the macro-level.

Participation of the District Nutrition Officer in this research was such a link. Although the non-governmental organisations did not feature prominently in this research, their association with the program is likely to be a voice for the community concerns. The summary report which will come out of this research to the government and research dissemination of the results is a way of bringing the community's concerns to the higher levels of government and the broader society.

My experiences

The participatory research process was an education experience for me in terms of how people perceive their problems and how to solve them. I learned that people appreciate being enabled to address their problems but not being made to be dependent as was shown by them excluding me and the nutrition staff in the modalities of their income activity. It was also an education experience for the nutrition staff and the participants in how to approach their nutrition and work related problems. The process challenges and changes the way all actors in the process think and participants see that they have a role to play in the program.

A researcher is a committed participant and a learner in the research process. I had to be conscious of my motives, expectations and review the purpose of my research from time to time or else the process can carry one away. A leader of participatory initiative should aim to raise the self-esteem of the participants and assist them in making decisions and be concerned more with the process than the outcomes. Such a person should also be willing to learn and have integrity so that she can be trusted by people.

This study shows that a collaborator may be required to assist with the initiation of participation as a source of information and let the people themselves move to achieve their aims. As a researcher, participants must see you as contributing otherwise they may feel you are using them or wasting their time. Leadership of participation at the start may require an external person to initiate and to propel the process. This is especially so where there is a history of decision making where leaders make most of the decisions in the program and the community. However, the power in this leadership role at the start should gradually diminish to the point where the initiator's voice is hardly heard. Caution should be taken, however, because the researcher also participates in the process, there is therefore a possibility of influencing participants' decisions'.

Limitations experienced

There were limitations experienced in this study that need attention when analysing nutrition education and participation in a rural community in a developing country like Kenya:

- Policy on nutrition education may be useless unless those at all relevant levels especially grassroot government personnel and the community are actively engaged to plan and implement such programmes.
- The process of participation may lead to a shift in child growth monitoring goals and procedures which may or may not be in line with programme purposes.
- Perceptions people have of who you are as a facilitator of the process can be limiting. If the perceptions positively promote participation this is a big asset. However, if the perceptions are negative, this can stagnant an otherwise worthwhile venture.

- Time is a crucial element essential for effective participation. If participants are women as was the case in this study, acknowledging their workload demands should be born in mind. This is especially important for women in developing nations. The process can be hindered if time commitments of all participants is not catered for. This is because to achieve meaningful and durable participation takes time.
- Expectations of the researcher and the process of participation by the participants can hinder or promote the process. There may be a danger when the process fails to satisfactorily accommodate people's expectations. When promoting participation, care should be taken to avoid dependency on the researcher as this in essence would be dis-empowering.

Implications for practice, policy and research

The findings of this research have significant implications for nutrition education in practice, policy and research in Kenya. However, results may also be applied to countries with similar socio-economic structures and nutrition problems.

Practice

- There is a need to encourage active participation in nutrition education in Kenya. This will lead to a diversified nutrition education program extending beyond the narrow focus of knowledge and children's weight monitoring to encompass the realities of people. Attention needs to be paid to the daily realities of food availability and accessibility, incomes to purchase food and skills in food preparation in the program in addition to nutrition knowledge and weight monitoring.

- Attention should be paid to facilitate nutrition education within the primary health care framework. In so doing, potential for training should be explored in primary health care and participatory approaches. This should be for the nutrition and health staff and community health workers to be able to learn how to function in a participatory and collaborative manner.
- For effectiveness of the recommended participatory process, the training of the community health workers should go further in working with them in the communities to develop project designs and clarify implementation, monitoring and evaluation aspects through reflection within the context of the community.
- Community health workers are committed volunteers who are a resource for stimulating useful research, networking and participation at the community level. For them to continue to play this critical role, they require to be recognised, motivated and supported to carry out the efforts of nutrition education through the child growth monitoring program specifically and primary health care in general.
- There is a need to monitor and evaluate the effectiveness of nutrition education programs at the community level so that they do not go on forever but serve the participants changing needs.

Policy

- Mechanisms should be put in place to determine how nutrition education programs are performing and make decisions and changes that may be necessary to keep up with the dynamic needs of the community.
- If participatory approaches are to have satisfactory impact at the community level, analysis of the cost-effectiveness and accessing the resources required for implementation of these approaches is necessary.
- Links between the child growth monitoring program and the Ministry of Health should be strengthened in order for concerns of nutrition through the growth monitoring program to have appropriate policy backup and be reflected at the macro-level.
- Government policies on nutrition, primary health care and community participation should be accessible to grassroot personnel. Mechanisms should be put into place to ascertain that nutrition personnel not only understand these policies but contribute to make such policies realistic at the local level.

Research

- The participatory approach in this research was effective in reaching women who participated in the child growth monitoring program but not non-participants. Research to focus on non-participating mothers who are not motivated to attend the program is needed if the program is to have impact at the community level.
- Strategies to increase opportunity in planning, implementation and evaluation of nutrition education in the Ministry of Health and through the child growth monitoring program and that link food security, economics, time and nutrition at the program level would enrich nutrition education at the community level.
- Studies that analyse approaches promoted in nutrition education in the training institutions and the extent to which participatory approaches are part of such training are needed in order to foster participation from the training level.
- This study focused on the process of participation. Studies focusing on the goals, benefits and measures of participation would enrich the promoters of participatory processes in research and practice in similar settings.
- This research focused on a single child growth monitoring program. Studies comparing the participatory process in different contexts of the child growth monitoring programs are suggested in order to make positive decisions that can influence policy.

- Research that pays attention to the complexities of nutrition education on the one hand and the food security, economics, workload, time and food preparation skills would enrich the field of nutrition education at the community level.

These issues deserve more in-depth study if nutrition educators are to face the realities of promoting nutrition through primary health care in Kenya.

A final conclusion of this research is that government policies on nutrition and participation in primary health care are important. However, policies alone do not indicate what happens at the community level. What is required to bring about genuine participation is ensuring that these policies are accessible to grassroot personnel who work with rural people so that policies are interpreted, understood and implemented by them. As evidenced by this research, participation diversifies the scope of nutrition education to solve nutrition problems through means that empower people. Genuine participation should therefore be pursued for improvement of nutrition in rural communities in Kenya.

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¹³ Mburu is editor of the document, there are no other authors.

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APPENDIX A

Research authorisation, Office of the president, Kenya



OFFICE OF THE PRESIDENT

Telegraphic address: "RAES"
Telephone: Nairobi 227411
When replying please quote

Ref. No. OP/13/001/25C 33/2
and date

~~PERSONNEL SECTION~~
P.O. Box 30510
NAIROBI

4th June 1998

Elizabeth Nafula Kuria,
Kenyatta University,
Department of Foods,
Nutrition and Dietetics,
P.O. Box 43844,
NAIROBI.

Dear Madam,

RESEARCH AUTHORIZATION

Please refer to your application for authority to conduct research on "Participatory Community Nutrition Education: A Kenyan Experience". I am pleased to inform you that your application has been considered and approved. Accordingly, you are authorized to conduct research in Thika District as from June, 1998 to August the year 2000.

You are advised to pay courtesy call on the District Commissioner, Thika before embarking on your research project. You are further advised to avail two copies of your final research findings to this office upon completion of your research project.

Yours faithfully,


A. G. KAARIA
FOR: PERMANENT SECRETARY/
PROVINCIAL ADMINISTRATION

cc: The District Commissioner,
THIKA.

APPENDIX B

Research authorisation, Office of the president, Thika

OFFICE OF THE PRESIDENT

Telegrams: "DISTRICT", Thika
Telephone: Thika 21222 and 21224
Fax: 31199
When replying please quote
Ref. No. CoRR.3/4/Vol.I/262
and date.



THE DISTRICT COMMISSIONER

P.O. Box 128

THIKA

11th June 1998

M.O.E.

All Divisional District Officers

THIKA DISTRICT

RE RESEARCH AUTHORIZATION:

Ms Elizabeth Mafula Kuria has been authorized by the Permanent Secretary/
Administration vide his authority letter Ref; OP/13/COI/250 33/2 dated
4th June 1998 to conduct research on "Participatory Community Nutrition
Education; A Kenyan Experience" in Thika District as from June, 1998
to August 2000.

Kindly accord her necessary assistance when she reports to you.



INER

DISTRICT THIKA
W. K. CHEUNYOT
FOR: DISTRICT COMMISSIONER
THIKA

APPENDIX C

Letter of introduction from the Ministry of Health, Thika

MINISTRY OF HEALTH

DISTRICT HOSPITAL,
P.O. BOX 227,
THIKA.

Date.....

Dear Madam,

This is to inform you that we have Mrs Kuria a Lecturer in the Home Economics Department Kenya University - with us for sometime this year. She is doing her PhD in Nutrition in a University in Australia. She is interested in meeting all Nutritionists at their stations and the programme is as follows:-

Thika District Hospital	-	Wednesday 3rd June, at 9.30a.m.
Gatundu Hospital	-	Thursday 4th June at 10.00a.m.
Igegaia H/C.	-	" 4th June, at 2.00p.m.
Ruiru Wam H/C.	-	Tuesday 9th June at 10.00a.m.
Juja Farm H/C.	-	Thursday 11th June at 10.00a.m.
Mururu H/C.	-	Wednesday 17th June at 10.00a.m.
Kgoliba H/C.	-	Friday 19th June at 10.00a.m.
Kakuzi Div.	-	Tuesday 30th June, at 10.00a.m.
Kirwara H/C.	-	Friday 25th June at 10.00a.m.

The Nutritionist at Keratu should come to Gatundu on 4th June and to

Nutritionist at Gatundu H/C should come to Kirwara H/C. on 26th

June. Please be punctual.

Yours.

G.M. MUGAMBI
DISTRICT NUTRITIONIST
THIKA DISTRICT HOSPITAL.

APPENDIX D

Open ended interview schedule for nutrition fieldworkers

Demographic characteristics

1. How old are you _____ years.
2. What is your marital status?

3. What is the highest level of formal education you attained?

Pre-service training

What is the level of your professional training?

In-service training

1. Have you attended any in-service training? _____
2. If yes, what in-service training have you received on nutrition?

3. What in-service training have you received on teaching and learning methods?

Years of service

1. How many years have you worked as a nutrition educator in the Ministry of Health?
_____ years.
2. How many years have you worked in your present station? _____ years.

Knowledge communicate

1. What knowledge do you communicate on nutrition?

2. To whom do you communicate this knowledge?

3. How do you communicate nutrition information?

Information like/dislike to communicate

What nutrition information do you like to communicate?

How communicate nutrition information

1. In what ways do you communicate nutrition messages?

2. Why do you communicate nutrition messages that way?

3. What ways of communicating with the community do you find most useful?

4. Why do you find these ways useful?

Constraints

1. What problems do you encounter in communicating nutrition messages?

2. How do you think these constraints can be overcome?

Audience

Who are the audiences of your nutrition messages?

Workload

What work do you do?

Planning, implementation, evaluation of work

1. How do you plan your work?

2. How do you implement your work?

3. How do you evaluate your work?

Nutrition policy

1. Are you aware of any nutrition policy documents in operation? _____. If no go to comments.

2. If yes, what documents are you aware of?

3. What information on nutrition are you aware of?

4. How adequate do you think nutrition aspects are covered in the policy?

5. What other aspects of nutrition would you like to see addressed in the policy?

Causes of nutrition problems

What do you think are the causes of nutrition problems in your area of work?

Solutions to nutrition problems

What do you think are the solutions of nutrition problems in your area of work?

Comments

You can now make any comments you like related to this session, your work or anything else.¹⁾

APPENDIX E

Open-ended interview schedule for women participants

Demographic characteristics

1. How old are you? _____ years
2. What is your marital status? _____
3. What is the highest level of formal education you have attained?

4. How many children do you have?

5. What is your religion?

Work

1. What work do you do to earn money?

2. What activities do you perform in a day on a routine basis?

3. How often do you participate in your child growth monitoring activities?

Child growth monitoring program

1. When did you join this program? _____ year.
2. How did you join it?

3. Why did you join it?

4. What benefits have you received from this program since you joined it?

5. What messages on nutrition have you got from this program?

6. What messages that you have got from this program have you adopted?

7. Why have you adopted them?

Sources of nutrition information

What other sources do you get nutrition information from?

Means of communication

How are nutrition messages communicated in your program?

Constraints

What constraints do you face in using nutrition messages?

Causes of poor nutrition

What are the causes of poor nutrition?

What are the solutions to poor nutrition?

Nutrition concerns

What nutrition concerns would you like to see addressed in this program?

Comments

You can ask any questions or make any comments you like related to your program or anything else.

APPENDIX E*

Maswali kwa akina-mama

Kuhusu wenyewe

1. Una miaka mingapi? _____
2. Umeolewa au la _____
3. Umesoma mpaka darasa gani? _____
4. Una watoto wangapi? _____
5. Una abudu wapi? _____

Kazi

1. Unafanya gazi gani kupata pesa?

2. Unafanya gazi gani kwa kila siku?

3. Una enda kwa mradhi wa kupima watoto mara ngapi?

Mradhi wa kupima watoto

1. Ulijiunga na mpango wa kupima watoto mwaka gani?

2. Ulijiunga kwa njia gani?

3. Kwanini ulijiunga na huu mradhi?

4. Umepata faida gani kutoka kwa huu mpango?

5. Umeelemishwa nini kwa huu mpango?

6. Ni nini umelemishwa kuhusu lishe bora ambayo umetumia?

7. Kwa nini umeyatumia haya masomo?

Mahali unapata elimu juu ya lishe bora

Unapata kuelenishwa kwa lishe ya chakula bora wapi pengine?

Vile unaelemishwa

Unaelemishwa kwa njia gani kupitia kwa huu mpango wa kupima watoto?

Shida kuhusu lishe bora

Ni shida gani unapata kutumia elimu kuhusu lishe bora?

Sababu ya shida za lishe bora

Ni nini sababu ya shida kuhusu lishe ya chakula bora?

Kutatua shida za lishe bora

Ni nini inaweza kufanywa kutatua shida za lishe bora?

Maono ya lishe bora

Ni nini ungependa ifanywe katika huu mpango wa kupima watoto?

Mawaida

Unaweza kuuliza mwaswali au kusema lolote kuhusu huu mpango wa kupima watoto ama kitu kingine yeyote.

APPENDIX F

Open-ended interview for community health workers

Demographic characteristics

1. What is your age? _____ years
2. What is your marital status? _____
3. What is the highest level of your formal school education?

4. What is your religion?

Selection as community health worker

1. When did you start working as a community health worker? _____
2. How were you selected?

Workload

1. What work do you do as a community health worker?

2. What work do you do to earn money?

3. What activities do you perform in a day on a routine basis?

Training

1. What training have you received in relation to your work as a community health worker?

2. Who trained you in these courses?

Sponsors _____

Trainers/facilitators _____

3. In what areas do you think you need further training in?

History of child growth monitoring program

1. When did the child growth monitoring program start in your community?

2. How did it start?

3. What were the original aims of the program?

4. What changes have occurred since the program started?

Planning, implementation, monitoring and evaluation of the program

1. How do you plan your work?

2. How do you carry out your work?

3. How do you monitor your work?

4. How have you had your program evaluated?

Nutrition messages

1. What nutrition messages do you communicate on nutrition?

2. To whom do you communicate these messages?

3. How do you communicate nutrition messages?

4. What are the major causes of malnutrition in your area?

5. What do you do when malnourished children drop out of your program?

Benefits

1. What have been the benefits of the program to you?

2. What have been the benefits of the program to the community?

Supervision

How are you supervised in your work?

Collaboration

1. What people, organisations and government Ministries do you collaborate with in your work?

2. In what ways do you collaborate with them?

Remuneration

How are you paid for the work you do as a community health worker?

Improvements

What do you think can be done to improve this program?

Comments

You can make any comments about your work or anything else

APPENDIX G

Focus group interview guides for nutrition staff

Interviews held on 3rd June, 1998

- How were you trained?
- What work do you do?
- How do you carry out your nutrition education activities?
- What constraints do you face in your work?
- What have we discussed today?
- Give a summary of our discussions.
- Reflect on comments after each point summarised.

Interviews held on 3rd December 1998

- Presentation of the summary on data collected through the open-ended interviews.
- Comments after each point.
- For each point raised, what do the findings indicate?
- What can we do to promote effective nutrition strategies in our work?

APPENDIX H

Focus group interview guides for participants

Held on 8th September, 1998

- How joined the child growth monitoring program.
- Benefits have got from the program.
- Changes would you like to see take place in this program.
- How would like these changes to happen.

Held on 5th November 1998

- Presentation of the summary on data collected through the open-ended interviews.
- Comments after each point.
- For each point raised, what the findings indicate.
- Changes think need to be done to improve the child growth monitoring program.
- How these changes can come about.

APPENDIX B*

Orodha ya mazungumzo na wa-akina mama

Mazungumzo tarehe ya 8 mwezi wa Septemba 1998

- Vile ulichiunga na huu mpango wa kupima watoto.
- Faida umepata kutoka kwa huu mpango.
- Mabadiliko ungependa iwe katika huu mpango.
- Namna ya kufanya haya mabadiliko.

Orodha ya mazungumzo na wa-akina mama

Mazungumzo tarehe ya 5 mwezi wa Januari 1999

- Maelezo juu ya maswahili iliyojibiwa.
- Maono kuhusu majibu.
- Maanane ya majibu.
- Mapendekezo ya mabadiliko katika mpango wa kupima watoto.
- Vile haya mabadiliko yanaweza kufanywa.

APPENDIX J

Focus group interview guides with community health workers

Held on 23rd June 1998

- How was selected as a community health worker.
- Work do.
- Constraints in your work.
- How constraints can be resolved.

Held on 10th November 1998

- Changes would we like to see happen in the child growth monitoring program.
- How to promote these changes.
- How to involve people more in making decisions on what goes on in this program.

APPENDIX J*

Orodha ya mazungumzo na wafanyikazi wa vijiji

Mazungumzo tarehe ya 23 mwezi wa Juni 1998

- Vile ulichuguliwa kama mfanyikazi wa afya katika kijiji.
- Kazi unayofanya.
- Shida unaona kazini.
- Vile hizi shida zinaweza kutatuliwa.

Orodha ya mazungumzo na wafanyikazi wa vijiji

Mazungumzo tarehe ya 10 mwezi wa Novemba 1998

- Mabadiliko ukependa ifanywe katika horodha ya mpango wa kupima watoto.
- Vile Mabadiliko yanaweza kufanywa.
- Vile waakina mama wanaweza kuhuzishwa katika huu mpango wa kupima watoto.

APPENDIX K

In-depth interview guides with participants

With active participants

- What nutrition education have you been involved in?
- How did you join this child growth monitoring program?
- What benefits have you received since you joined this program?
- What shortcomings do you find in this program?
- How do you think these can be minimised?
- How would you like to be involved in making decisions in this program?

With participants who had dropped out of the program

- Why did you stop coming for the child growth monitoring program?
- What prompted you to start coming again?
- What benefits have you found now that you did not have previously?
- How would you like to be involved in making decisions in this program?

With participants who joined the program during the research program

- How did you join this program?
- Why did you join it?
- What benefits have you got from this program?
- What changes would you like to see take place?
- In what ways would you like to be involved in making decisions on what goes on in this program?

APPENDIX L

In-depth interviews with collaborator

- How did you come to be involved in this program?
- What is your role as an individual and as an organisation in this program?
- How do you think participation of women in decision making in what goes on in the child growth monitoring program can be promoted.

APPENDIX M

Observation guide¹

With participants during the child growth monitoring sessions

- What was said
- How it was said
- What was asked
- How it was asked
- Who asked
- Activities done
- What participants did
- Decisions made
- How decisions were made
- Non-verbal communication such as laughter, crying, eye-contact, and at what times
- Length of sessions

APPENDIX N

Observation guide²

With the community health workers during the child growth monitoring sessions and visits to the homes of participants

- What messages communicate.
- How communicates
- How involve participants
- What activities do
- When do each activity
- How organise weighing sessions and nutrition education sessions
- How pass information to participants
- Education materials use and how they are obtained
- Decisions make
- How make the decisions

With nutrition field workers

- What work do
- How do it
- What said
- How said it
- To whom communicate nutrition messages
- When and how communicate these messages
- Materials use and how they are obtained
- How make decisions about their work

APPENDIX O

Research biography

Date	Place	Activity
5 th May 1998	Nairobi	Application for research authority
11 th May 1998	Thika	Application for research authority District Commissioner, Thika
13 th May 1998	Thika	Permission from Ministry of Health & District Nutrition Officer Thika
18 th May 1998	Thika	Consent nutrition field workers
20 th May 1998	Thika	Meeting with District Nutrition Officer
3 rd June 1998	Thika	Focus interview with nutrition staff
4 th June 1998	Gatundu	Open-ended interview nutrition Research authorisation Office of the President Nairobi
5 th June 1998	Igigania	Open ended interviews nutrition staff
9 th June 1998	Ruiru	Open ended interviews nutrition staff
11 th June 1998	Juja Farm	Open ended interviews nutrition staff Research authorisation Office of the President Thika District
17 th June 1998	SACDEP	Consent
19 th June 1998	Ngoliba	Open ended interview with nutrition staff Consent from community health workers
23 rd June 1998	Ngoliba	Observation of Maternal Child and Health Clinic Meeting with community health workers seek consent And set research agenda
26 th June 1998	Kirwara	Open-ended interview nutrition field worker Discussions with District Nutrition Officer
7 th July 1998	Ngoliba	Consent from women participants and set research agenda
14 th July 1998	Thika Munyu	Observations nutrition field worker Open-ended interview nutrition field worker
15 th July 1998	Thika	Observation of nutrition field workers Observation child growth monitoring session
22 nd July 1998	Ngoliba Thika	Seek consent from non-governmental organisations Plan International & Sustainable Agriculture Development Program (SACDEP)
7 th August 1998	Ngoliba	Observations of child growth monitoring program

2 nd September 1998	Thika	Interview District Nutrition Officer Discussions with nutrition field workers
3 rd September	Thika	Interview nutrition field workers
8 th September	Ngoliba	Observations child growth monitoring program Planning field work with women and community health workers
15 th September	Thika	Observations Maternal and child clinic
16 th September	Thika	Planning micronutrient workshop
17 th September	Thika	Observations of nutrition field workers
18 th September	Thika	District Officer Thika Municipality
21 st September	Ngoliba	Open ended I interviews with women
22 nd September	Ngoliba	Open-ended interviews
23 rd September	Ngoliba	Open-ended interviews
24 th September	Ngoliba	Open ended interviews
25 th September	Ngoliba	Open-ended interviews
28 th September	Kiliman bogo	Micronutrient workshop
29 th September	Kiliman bogo	Micronutrient workshop
30 th September	Kiliman bogo	Micronutrient workshop
1 st October	Kiliman bogo	Micronutrient workshop
6 th October	Ngoliba	Meeting with community health workers
9 th October	Ngoliba	Observations of child growth monitoring Discussions on what to do in the program
15 th October	Thika	Observations nutrition field workers Assessment of nutrition records Nutrition Association of Kenya meeting Open ended interviews nutrition staff
16 October	Thika	In-depth interviews SACDEP
16 th October	Thika	Observations Paediatrics Ward
20 th October	Thika	SACDEP
21 st October	Ngoliba	Planning for focus interviews
23 rd October	Ngoliba	Community health workers
26 th October	Kasarani	SACDEP WORKSHOP on capacity building
27 th October	Kasarani	SACDEP workshop

28 th October	Kasarani	SACDEP workshop
29 th October	Kasarani	SACDEP workshop
30 th October	Kasarani	SACDEP workshop
1 st November	Thika	Observations Maternal and Child Clinic
4 th November	Thika	Observations Maternal Child Clinic
6 th November	Ngoliba	Nutrition counselling Observations child growth monitoring program
10 th November	Thika	Discussions to start income generating program Observations Maternal Child Clinic
13 th November	Ngoliba	Observations of nutrition field workers counselling Focus interviews community health workers
16 th November	Thika	Observations nutrition field workers SACDEP discussions on in-depth interview
18 th November	Thika	Discussions with District Nutrition Officer and nutrition staff Observations of nutrition field workers
3 rd December	Thika	Contacting Plan International Nutrition records at hospital Discussions on preliminary findings of open-ended interviews & observations with nutrition field workers
11 th December	Ngoliba	Observation child growth monitoring Discussions on income generating activity Discussions on preliminary findings
8 th January 1999	Ngoliba	Observations of child growth monitoring program Discussions on income generating activities Discussions on topics to be taught in the program
12 th January	Nairobi	Market search for income generating activity
19 th January	Nairobi	Market search with one participant
5 th February	Ngoliba	Observations of child growth monitoring program Discussions on income generating program Reflections on the research process
8 th February	Ngoliba	Curriculum development
16 th February	Ngoliba	Reflections on future plans

APPENDIX P

Child health and nutrition information system (Chanis)

ORIGINAL

MINISTRY OF HEALTH

CHANS J
Moll 704A

CHILD HEALTH AND NUTRITION INFORMATION SYSTEM FACILITY MONTHLY REPORT FORM

DISTRICT NAME _____

MONTH _____ YEAR _____

FACILITY NAME _____

From Tally Sheets and Monthly Work Sheet

Children aged 0-11 months

- _____ 1. Number underweight
_____ 2. Total children weighed this age

Children aged 12-35 months

- _____ 3. Number underweight
_____ 4. Total children weighed this age

Children aged 36-59 months

- _____ 5. Number underweight
_____ 6. Total children weighed this age

Children of all ages (0-59 months)

- _____ 7. Grand total of children weighed

From Clinic Register of Children Needing Follow-up

- _____ 8. Kwashiorkor cases
_____ 9. Marasmus cases
_____ 10. Others (e.g. Anaemia, Vit. A. Deficiency, Pellagra)
_____ 11. Constant weight for 3 months or more or faltering growth

From Child Welfare Clinic Attendance Records

- _____ 12. New children attending M.C.H. Clinic
_____ 13. Total children attending this month

Answer each item. Put 0 (zero) if there are no such cases. Put DK if you do not know the value.

Filled by _____ Date _____

Designation _____ Signature _____

APPENDIX Q

Women participants who responded to the open-ended interviews

1. Virginia Wairimu
2. Christine Muthoni
3. Judith Ndegi
4. Veronica Wangeshi
5. Lydia Wanjiru
6. Elizabeth Wanja
7. Martha Nzola
8. Josephine Ngina
9. Jacinta Ruguru
10. Fresha Wangui
11. Teresia Wambui
12. Anna Njeri Wamuru
13. Suzun Wangui
14. Anastasia Wanjiku
15. Winifred Wangare
16. Grace Muthoni
17. Judy Muthoni
18. Pauline Wanjera
19. Catherine Wanjua
20. Benka Victoria Titus
21. Lucy Wanjiru

APPENDIX R

Community health workers who participated in the focus group discussions

1. Jane Njoroge
2. Margaret Wanjiku Kamau
3. Ruth Asoko Kiarie
4. Jane Njoki
5. Mary Wangui
6. Patricia Mbiu
7. Mama Peter

APPENDIX S

Community health workers who participated in the open-ended interviews

1. Jane Njoroge
2. Margaret Wanjiku Kamau
3. Ruth Aseko Kiarie
4. Jane Njoki

APPENDIX T

Nutrition staff who participated in the open-ended interviews

1. Rosalind N. Mukoma
2. Philomena W. Kimani
3. Janet Kinyungu
4. Caroline Kinywa
5. Carolyn Mbogori
6. Jane Kinyanjui
7. Pascaline Wamiti
8. Teresia Kimeni
9. Rhodah Chesang
10. Gladys Mugambi
11. Lucy Kamau
12. Monica A. Otinde
13. Alice Mwaura
14. Ann Nduta Kariuki
15. Zerafina Kamau
16. Gladys Mugambi

APPENDIX U

Nutrition staff who participated in the focus group interviews

1. Gladys Mugambi
2. Philomena W. Kimani
3. Mary Kimuru
4. Rhodah Chesang
5. Pascaline Wamiti
6. Caroline Mbogori
7. Carolyne Kinywa
8. Lucy N. Kamau
9. Jane Neruko
10. Janet Kinyungu
11. Alice Mwaura
12. Zerafina Kamau
13. Rosalind N. Mukoma
14. Nancy N. Muchuhi

APPENDIX V

Preliminary data analysis with nutrition staff on 3rd December 1998 at Thika District Hospital Nutrition Office.

Purpose

To present summary data analysis so that participants:

- Contribute to data analysis and discuss the findings
- Validate the accuracy of data collected
- Clarify issues raised
- Provide necessary explanations for the data
- Provide perceptions of the data

Mode of presentation

Researcher to present each item and let the participants respond to it.

Use newsprint (large papers where write information and pin it on the walls as discussions proceed) for presentation. This will make people see information as it is presented and can also compare it.

Conclusion

Re-discuss how information will be presented in the research report

At end of the discussion agreed that:

Verbatim quotes used will have dates when data was generated and indicate that it was stated by a nutrition staff. In the case of the District Nutrition Officer, will be referred to by that title but will have access to transcriptions on what said to validate it before information is used in the report.

Requested that I discuss with the Medical Officer of Health the report and pinpoint issues in particular on in-service training and training of community health workers.

APPENDIX W

Preliminary data analysis with women and community health workers on 5th February 1999 at Ngoliba child growth monitoring centre.

Purpose

To present summary data analysis so that participants:

- Contribute to data analysis and discuss the findings
- Validate the accuracy of data collected
- Clarify issues raised
- Provide necessary explanations for the data

Mode of presentation

Researcher to present each item in *Kiswahili* and have the nutrition field worker translate it into *Kikuyu* and let the participants respond to it.

Use newsprint (large papers where write information and pin it on the walls as discussions proceed) for presentation. This will make people see information as it is presented and can also compare it.

Conclusion

Re-discuss how information will be presented in the research report.

At end of the discussion agreed that:

Verbatim quotes used will have dates when data was generated and indicate that the information was stated by a woman participant or community health worker in the research report.

Have the final written research report discussed at the community level so that it can be used in the area.

Child health card

Date	Symptoms	Treatment
11/1/01	Headache, dizziness, nausea	Rest, hydration
11/2/01	Headache, dizziness, nausea	Rest, hydration
11/3/01	Headache, dizziness, nausea	Rest, hydration
11/4/01	Headache, dizziness, nausea	Rest, hydration
11/5/01	Headache, dizziness, nausea	Rest, hydration
11/6/01	Headache, dizziness, nausea	Rest, hydration
11/7/01	Headache, dizziness, nausea	Rest, hydration
11/8/01	Headache, dizziness, nausea	Rest, hydration
11/9/01	Headache, dizziness, nausea	Rest, hydration
11/10/01	Headache, dizziness, nausea	Rest, hydration
11/11/01	Headache, dizziness, nausea	Rest, hydration
11/12/01	Headache, dizziness, nausea	Rest, hydration
11/13/01	Headache, dizziness, nausea	Rest, hydration
11/14/01	Headache, dizziness, nausea	Rest, hydration
11/15/01	Headache, dizziness, nausea	Rest, hydration
11/16/01	Headache, dizziness, nausea	Rest, hydration
11/17/01	Headache, dizziness, nausea	Rest, hydration
11/18/01	Headache, dizziness, nausea	Rest, hydration
11/19/01	Headache, dizziness, nausea	Rest, hydration
11/20/01	Headache, dizziness, nausea	Rest, hydration
11/21/01	Headache, dizziness, nausea	Rest, hydration
11/22/01	Headache, dizziness, nausea	Rest, hydration
11/23/01	Headache, dizziness, nausea	Rest, hydration
11/24/01	Headache, dizziness, nausea	Rest, hydration
11/25/01	Headache, dizziness, nausea	Rest, hydration
11/26/01	Headache, dizziness, nausea	Rest, hydration
11/27/01	Headache, dizziness, nausea	Rest, hydration
11/28/01	Headache, dizziness, nausea	Rest, hydration
11/29/01	Headache, dizziness, nausea	Rest, hydration
11/30/01	Headache, dizziness, nausea	Rest, hydration



CHILD HEALTH CARD

HEALTH FACILITY NAME	
CHILD'S NAME	SEX
CHILD CLINIC NO	DATE FIRST SEEN
DATE OF BIRTH	BIRTH ORDER
FATHER'S NAME	
MOTHER'S NAME	
DISTRICT	
LOCATION	
SUB-LOCATION/VILLAGE	

(BROTHERS & SISTERS)

(BROTHERS & SISTERS)			
	NAME	YEAR OF BIRTH	SEX ALIVE DIED
1			
2			
3			
4			
5			
6			
7			
8			

EVERY CHILD MUST HAVE A BIRTH CERTIFICATE

SHOW THE CARD ON EVERY VISIT

IMMUNIZATIONS

**PROTECT
YOUR CHILD**



TUBERCULOSIS (BCG - VACCINE) at birth	DATE GIVEN			
BCG - SCAN	DATE CHECKED	<table border="1"><tr><td>PRESENT</td></tr><tr><td>ABSENT</td></tr></table>	PRESENT	ABSENT
PRESENT				
ABSENT				

DIPHTHERIA/WHOOPING COUGH/ TETANUS OPT VACCINE	
DOSE	DATE GIVEN
1st dose at birth	
2nd dose	
3rd dose	

POLIOVIRUSISTIS (ORAL POLIO VACCINE)	
DOSE	DATE GIVEN
Birth dose (before 8 weeks)	
1st dose after 8 weeks	
2nd dose	
3rd dose	

MEASLES VACCINE	DATE GIVEN
given at 8 months	

[illegible]

HAVE YOUR CHILD WEIGHED EVERY MONTH

Child health card (backside)

Punching Progress

Watch the progress of the boy punching the clock's face in

GOOD
Punching the clock's face in 10 seconds

BETTER
Punching the clock's face in 15 seconds

VERY GOOD
Punching the clock's face in 20 seconds

REASONS FOR SPECIAL CASE

1. ☐ Too much food
2. ☐ Too little food
3. ☐ Too much sleep
4. ☐ Too little sleep
5. ☐ Too much play
6. ☐ Too little play
7. ☐ Too much work
8. ☐ Too little work
9. ☐ Too much rest
10. ☐ Too little rest

RECORD ON THE CHART

1. ☐ Good
2. ☐ Better
3. ☐ Very Good

4. ☐ Bad
5. ☐ Very Bad

6. ☐ Too much work
7. ☐ Too little work
8. ☐ Too much rest
9. ☐ Too little rest

GROWTH CHART

NAME OF CHILD: _____

BIRTH WEIGHT: _____

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APPENDIX Y

An example of how codes, categories and themes were developed Phase I

Code	Categories	Themes developed
Need for increase in food supply	Need for incomes	Income
	Group formation	Generating
	Purchase of food	Activity
	Need for officials for the group	
	Selection of officials	
	Types of activities for incomes	
	Make Crotchet to sell	
	Tables clothes for sale	
	Make ropes	
	Make baskets	
	Register the group	
	Make monetary contributions	
	Merry go round	
	Rules & regulation for the group	
	Time of meetings	
	Meetings to discuss income activity	
	How to officials	
	Leave to select officials	Autonomy
	Let us discuss income activity by our selves	
	Development of rules and regulations	
	Opening of bank account	
	Independent decision making	
	Interdependent decision making	
	Kitchen gardening	
	Preservation of food	Food availability & accessibility
	Marketing of excess food	
	Marketing of items from income activity	
	Teach on kitchen gardening	
	Demonstrations on kitchen gardening	

Note:

From the code of "need for increase in food supply" several categories were identified from which three major themes were developed. These were income generating activity, autonomy and food availability/accessibility. Next follows how these themes were developed from the categories.

Phase 2

Development of the themes from the categories

- **Development of the theme of "income generation" from the categories**

Need for incomes

Money to purchase food

Income for other needs

Group formation

Registration of group to handle money

Need of officials for the group

Selection of officials

Contributions

Rules & regulations

Activities for the group

Make ropes for sale

Make crotchet for sale

Make baskets for sale

Contribute money for merry go round

Market search

Do a market search

Identified different markets

Time

Extra time for meetings

Extra meetings to discuss incomes

Leadership

Need of officials for the group

Selection of officials

Roles of officials of group & monitoring activity

Requirements for income activity

Stationary

Registration of members

Selection of officials

Roles and responsibilities of selected officials

Results of starting income activity

Opening bank account

Development of rules and regulations

Membership contributions

Increased attendance

- **Development of the theme of "autonomy" from the categories identified**

How to select officials

Exclusion of researcher and nutrition officer from discussions and making decisions

Development of rules and regulations

Independent and interdependent decision making

Opening of bank account

- **Development of the theme of "increase food availability and accessibility"**

Teach on kitchen gardening

Demonstrations on kitchen gardening

Preservation of food

Marketing

Purchase of food

APPENDIX Z

An example of a transcript

Transcript of the meeting with six community health workers, one nutrition officer and the researcher/myself held on 23rd June 1998 at Ngoliba Health Centre.

After the room was arranged and all persons were seated. The meeting started at 11:30am.

Transcript

Nutrition fieldworker	I thank you all for coming. It is good that you could make it even though we gave you a very short notice. We shall now start with a word of prayer. Mama a, (address mother by the name of one of the children's names, that is "mother of") you lead us in prayer.
CHW 1	Let us pray. Father in the name of the Lord Jesus Christ, we thank you for bringing us here today. Thank you that you have given us visitors that can come here to help us. Our Father, we pray that you help us so that what we talk about today will help us in our work. This will help us so that we help people in our villages and that our children (refers to all the children from the villages) will grow well. Help us as we talk together and guide us in your wisdom. In Jesus name we pray.
All	Amen (in chorus)
Nutrition fieldworker	I thank you all for coming. The purpose of our coming today is because of our visitor. Last week she came here with our District nutrition officer and we met with two of you mama x and mama y. She explained to us why she had come and we planned so as to meet here today. Therefore, we shall all hear what she has to tell us. Our visitor is n. She is a lecturer at Kenyatta University in the department of Foods Nutrition and Dietetics. She is now studying abroad in Australia. May be she will tell us what is good there and what she has brought us. I think there are nice things there.
Several	Laughter
Nutrition fieldworker	Now, before we I ask her to greet us and tell us why she has come, let us each introduce ourselves. We shall start here (pointed to her immediate right) and go round.
CHW 1	I am mama a, and I am saved. I come from Iriguini village where I work as a community health worker. I have been working since 1996. I am happy that the visitor has come to see us and tell us good things.

CHW 2	I am mama h., You all know me except our visitor. I have been working as a community health worker since 1995 in Iriguini village.
CHW 3	I greet all of you in Jesus name. My names are c, I come from Duk village. There we have a lot of young mothers who have young children. Although most of them do not always bring them for weighing.
CHW 4	I am called d., I was happy when they told me that we come to talk about our work. I like working as a community health worker although sometimes you feel that people do not appreciate what we do. Anyway, God will reward us.
CHW 5	My names are e, or sometimes they call me f., I have not seen many for sometime. The last time we weighed children I was not around because I had traveled to see my people in Nairobi.
CHW 6	I am called g., I always feel good when people come to see us because I know that they like what we are doing here. I come from Thoghoto village. The mothers from this village have not been bringing their children often for weighing. I do not know why yet they have a lot of problems.
Nutrition fieldworker	You all know me. I am h. I have been working here for two years now. Although I have not been to the weighing centre, I have met you all when you come here. We have come today because of our visitor. We shall let her explain to us the purpose of her visit and then you shall ask any questions. Now you (addressing me) tell us why you have come. I think we are all eager to hear what you have to tell us.
Researcher	Thank you very much. It is good to see that all of you have turned up even when you were only informed a few days ago. As you have been told, I am n., I teach at Kenyatta University in the department of Foods, Nutrition and Dietetics. The main focus of my teaching is in food science, food preservation and nutrition. In nutrition I teach community nutrition and nutrition education. Currently I am studying at Edith Cowan University in western Australia. As part of my program, I am undertaking a research for my thesis on participation in nutrition education. I have been in Australia since August 1997. I have now come back to do my research. Now you may wonder why I am here.
Several	laughter
CHW 3	Yes, how did you know us?

Researcher	<p>It is a long story. You see when you are doing a research in Kenya, there are some government rules and regulations that must be followed. One must get permission from the government to do such a research. I therefore applied for clearance to do the research to the Office of the President to do the research. They gave me clearance and then I came to Thika District where the District Commissioner cleared me to undertake the study. Then I liaised with the Medical Officer of Health in Thika and the District Nutrition Officer on the modalities of the research. All these people gave me permission as can be seen by these letters. (Showed them the clearance letters). During the discussions with the District Nutrition Officer and other nutrition staff from the district, they made several suggestions about a possible group for the research. Eventually they settled for Ngoliba as an appropriate group for the research. Why do you think they chose you?</p>
CHW 1	How can we know?
CHW 2	We do not know. You tell us.
Researcher	<p>They selected you as an appropriate group for the study because:</p> <ul style="list-style-type: none"> • They said you are hardworking and they feel that you will be a good group for the study • You also hand in your reports to them regularly • Whenever they come to you, you are always available and willing to take part in what they have to offer. • They also felt that if this study succeeds in this group, it is likely to be promoted in other areas. But more importantly is that if it does not succeed in this group, it is not likely to work in other areas in the district because other groups are not as self motivated as you are. • Are all these true?
CHW 3	<p>We are happy to know that the Ministry thinks well of us. You know sometimes you think nobody cares when you work. I think in this area, we always do our very best.</p>
Researcher	<p>When I came here, I have also confirmed what they said to be true. That is the reason why I am here. Now my purpose of the research is that I would like to know how you carry out nutrition education in your child growth monitoring program. To do so, I will need to find out how the program started, how</p>

	<p>you have been involved and what benefits you have got from the program. I also want to find out what will happen if everybody who takes part in the program is engaged in making decisions on what goes on in the program.</p> <p>I will therefore like to see how you work and the people you interact with. Of major concern is how you make decisions in the program and the results of engaging women actively to make decisions in the program.</p> <p>This is my purpose of the study. But this is meant to be your research so that you can use the findings to improve your program. I would therefore like all of you including the women who attend the program to think of what they would like the research to address so that we can carry out this study together as a joint venture. But before you make your contributions, I would like to explain a few things related to this study.</p> <p>One is that I have only one year in which to undertake the fieldwork. This is from April 1998 to March 1999. Which means as at present, I have only nine months in which to carry out the fieldwork. Secondly, I would like to inform you that whatever information I gather is confidential and will only be used for the purpose of this study. Thirdly, although I have planned how to carry out this study, we shall all discuss and come to an agreement on how actually to do the research. Now based on what I have said so far, let us hear your opinion before we proceed.</p>
CHW 6	<p>I am happy that the office in Thika (meaning the Ministry of Health) notice our work and appreciate that we are doing something good. Actually we sacrifice a lot. When we started, Plan (meaning Plan International is a non-governmental organisation) used to give us supplements. Now they do not, so people do not come for the growth monitoring. When plan was involved, very many people used to come. I think it is good to do this research so that it can help us.</p>
CHW2	<p>You know we are just weighing children and teaching mothers. Sometimes women feel it is a waste of time so they do not respect us. You know</p>

	we just volunteer and when the community does not respect you, you get tired of working for them.
CHW 3	Another thing is that when SACDEF (meaning Sustainable Agriculture Community Development Program a local non-governmental organisation) trained three of us, we were told to ask every mother to contribute five (Kenya) shillings for maintenance. The women do not want to pay the five shillings just for weighing their children. Although we never collected the money, most of them got discouraged and stopped coming. But we also lack motivation. Nobody appreciates our work.
CHW 2	You know if there are no food supplements, women do not want to come. So if you do this research, it will help us so that we can continue with our work.
Researcher	Now based on what I have said about the research, would you like to take part?
CHW 5	Yes, we are ready for the research because it will help us. Don't you think so?
All	Yes (in chorus)
Researcher	So if you would like to participate in the research what would you like the research to do or find out?
CHW 3	Ask the mothers why they do not always bring their children for weighing. Let them say what they want so that we can help them.
CHW 6	Let the women tell you. Find out why people sometimes do not come so that we know what to do to help them. Or what are the problems which make them not come. May be it is ourselves or how we do things.
CHW 1	What can you help us with? For example, can you help us get weighing bags as some of them are torn. Even the bath room scale for weighing bigger children because they do not want to be put in the bags.
Nutrition fieldworker	We shall ask the District Nutrition Officer. It may be possible to get some.
Researcher	I think I will see her today so I can let her know and when I come next time, we shall let you know.
CHW 5	I think we all think the research is good. We shall learn a lot from it. You will also help us to do our work well.
Researcher	If so what exactly do you want the research to do?
CHW 6	I think although we all agree to have the research, we should ask the women first.
CHW 3	Yes, let us ask them. But anyway they will all agree.

Nutrition fieldworker	But we cannot plan for them. They should be informed.
Researcher	Yes they should be told about the research and requested to participate. We can then plan the research together if they agree to participate. May be I need to repeat here the purpose of this research. I would like to know how you carry out nutrition education in your child growth monitoring program. To do so, I will need to find out how the program started, how you have been involved and what benefits you have got from the program. I also want to find out what will happen if everybody who takes part in the program is engaged in making decisions on what goes on in the program. So you say you would like to be engaged in this study?
CHW 4	Yes, that is what we have said.
Researcher	Then how can we go about it?
CHW 3	Let us ask the women to come and you explain to them about what you want to do and then we can plan how to do it after they agree.
CHW 1	But when can they come?
CHW 6	I think if we announce in the church and school, they will hear and come.
CHW 3	Yes, I think let us announce in the church that we shall meet in our community hall, the pharmacy.
CHW 2	A good day is Tuesday because we have other meetings on Monday and Wednesday. Even on Friday there will be another group meeting.
CHW 4	Let us announce to meet on 7 th July. We can meet at 10:00am. But let us announce to meet at 8:00am so that they come early and by 10:00am we start the meeting.
Nutrition fieldworker	I will be available on that day so that is OK.
CHW 6	I think it is fine if we meet on that day.
CHW 4	When we tell them, let us also tell them what we have heard so that when they come, they will have an idea of what they want.
CHW 1	In fact, encourage all of them to come because it is for their own good.
Nutrition fieldworker	Let then all of us be in a position to come. Even if you have a pressing need to attend to, if it can be postponed, do so, so that we can all hear what this research is all about and how we can do it.
CHW 3	I think it is fine, we shall come. Now I would like to

	go because I have to see mama g, whose children were sick.
Woman 2	How is she?
CHW 4	She is ok. She says "I feed my children meat, beans so I do not need any help". The last time we went there, she just refused and said food supplements are from the devil so she does not want them. When we asked her when we can go to see her next she said that she cannot be found because she is looking for casual work. In fact that day, she left us in the house and went to the shop to get flour for the children.
CHW 3	I think we should try and visit her again because sometimes those children suffer. You know (addressing me) that mother is somehow mentally sick and she stays alone with her children. But she sometimes refuses people to help her. Now I think let us finish for today
Nutrition fieldworker	Yes let us go but remember to announce to all persons through the church and the school. Who will say in the churches? I
CHW 2	I will say in our church. You (addressing another community health worker) inform the people in your church. I think I will also tell the teacher at school. Now let us pray and finish
Nutrition fieldworker	Thanks all of you for coming. Mama a, please close for us with prayer.
CHW 1	Lord we thank you for this meeting. As we asked you at the beginning, we thank you that we have discussed many things and you have helped us. Now even as we plan for the next meeting, continue to be with us and to bless us. As we go to our homes, go with us and protect us. Even when we come for the next meeting, help all of us. In Jesus name we pray.
All	Amen.

In my field notes:

Meeting ended at 1:55pm. At this point, I had not started to tape record the meetings. The above transcription therefore was hand written in shorthand and some details may be lacking. However, most of what pertains to the research was noted. I was happy with the information but I thought we could have achieved more in terms of starting the actual fieldwork. You see this is the third month but I have not yet embarked on data collection or have not been cleared by the community to start the research. This is an issue of concern. To talk to my supervisors about it.

Child health card (backside)