

TITLE: INCORPORATION OF CHILD SURVIVAL
STRATEGIES AMONG MOTHERS IN ZAMBIA:
A KNOWLEDGE, ATTITUDE AND PRACTICE SURVEY.

BY

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STATEMENT

I hereby certify that this study is in all entirely the fruit of my own independent and laborious investigations. The various sources to which I am indebted to are gratefully acknowledged in the text and in the references.

Signed by: HB Mody

(Student)

DECLARATION (COPYRIGHT)

I hereby declare that the work in this study for the Master in Public Health has not been presented either wholly or in part for any other Master in Public Health Degree and is not being currently submitted for any other Degree.

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DEDICATION

I whole heartedly dedicate this study to my dear husband Mussa who gave me the valuable support and encouragement, who also lovingly offered to be denied of my presence, and to my dear children Zifa, Chipu and Ada who missed my motherly touch and care.

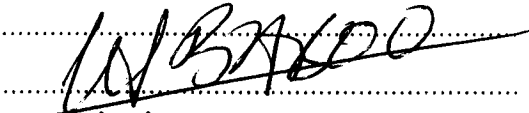
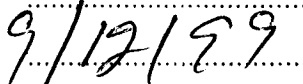
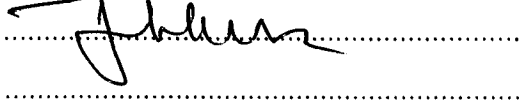
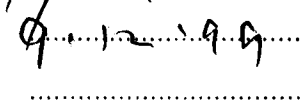
"GLORY BE TO THE LORD GOD"

APPROVAL

This dissertation of Dorothy H. S. M. Banda is approved in partial fulfilment of the requirements for the award of the Degree of Master in public Health by the University of Zambia.

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ABSTRACT

The study sought to determine mothers' knowledge, attitude and practice of child survival strategies in rural Zambia, in respect to growth monitoring immunisations, breast feeding nutrition/weaning, oral rehydration therapy, Family Planning and Malaria prevention

A total number of 100 mothers, with children of 18 to 36 months, were selected from Chipata District of Eastern Province from both the rural and semi-urban, by multistage lottery sampling of clinics and residential areas, and quota sampling of respondents.

Data was collected from January to April 1998 and a semi-structured interview schedule and focus group discussion guides were used to collect data.

The main findings showed that:

Knowledge of the importance of growth monitoring is good in that 92% knew its purpose. On the contrary, attitude and practice are poor since only 55% took their children regularly for growth monitoring.

Knowledge, attitude and practice of breast feeding especially exclusive breast feeding is poor in that 58% of mothers felt that exclusive breast feeding was bad. 75% of respondents introduced weaning food to their babies at less than 6 months old and most of these gave water other than breast milk, indicating that proper exclusive breast feeding is nearly non-existent.

Only 53% of those who were still breast feeding their under 24 months children were semi-urban respondents. The knowledge about breast feeding patterns is poor in that the

majority, 53% felt that the suitable age to stop to breast feed a child is 18 months. Majority of children, 76% were fully immunised although the coverage is below the recommended 80%. About 62% were not aware of immunisation schedules.

Knowledge, of good feeding and weaning are poor. Although 94% could identify some foodstuff (e.g. groundnuts) as essential for child growth, only a few gave it to their children.

The weaning practice is poor in that 75% of mothers introduced their children to weaning food at less than 6 months and mostly at three months old. Only 67% gave porridge with groundnuts as first weaning food. 73% of these were rural mothers. The poor feeding and weaning practice is evidenced by the children's growth curves among which a good number (45%) were below the "Road to Health".

Knowledge of recommended child spacing is very good (100%). On the contrary, child spacing/family planning practice is very poor, as only 19% used modern family planning in spite of one's parity, and literacy status. This signifies a very big gap between knowledge and practice. 73% of family planning users, used contraceptive pill.

Knowledge of appropriate home diarrhoea management is poor in that 71% of mothers knew the constituents needed for making home made ORSS (salt, sugar solution). Unfortunately, only 37% managed diarrhoea, at home appropriately, signifying poor practice.

Knowledge and practice of malaria prevention are both poor. Very few mothers used bed nets, mosquito repellents and insecticides (10%), 11% and 6% respectively). It was however established that hardly any health talks were given to mothers on malaria prevention and home diarrhoea management at health centres.

It was observed that the practice of child survival strategies is good in villages where MCH outreach activities are still implemented and where community health workers are very active.

This indicates that to some extent, health care providers' commitment to service and availability of logistics such as transport have an impact on mothers' knowledge, and practice of child survival strategies, because most findings tested statistically have not proved the presence of any significant relationship.

Location seemed to have an impact on family planning and weaning practices while literacy status determined preventive measures against malaria. The P.value were 0.03, 0.02 and 0.003 respectively.

There is urgent need for policy makers and programme planners to pay particular attention to their intensification of health education (IEC) programmes and implementation of child survival strategies, especially family planning, malaria prevention, exclusive breast feeding and oral rehydration therapy. Both mothers and fathers should be involved.

There is also need to expand the roles of Community Health Workers regarding dissemination of scientific knowledge (IEC) of child survival strategies. In addition they should be equipped with the know-how of simple procedures such as growth monitoring and ORSS preparation.

There is need for a health and social policy that will empower women to make decisions about practices that promote their own health and the health of their children. It is hoped that mothers would therefore incorporate child survival strategies in their child rearing and this will in turn improve child health and promote child survival in rural Zambia.

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LIST OF ABBREVIATIONS

1. UNICEF - United Nations International Children's Emergency Fund.
2. WHO - World Health Organisation
3. MOH - Ministry of Health
4. MCH - Mother Child Health
5. MPH - Master in Public Health
6. U. T. H. - University Teaching Hospital
7. F. G. D. - Focus Group Discussion
8. G. R. Z. - Government of the Republic of Zambia
9. I. E. C. - Information, Education and Communication.
10. ORS - Oral Rehydration Salt
11. ORT - Oral Rehydration Therapy
12. RHC - Rural Health Centre
13. PHC - Primary Health Care

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CHAPTER 1

INTRODUCTION

BACKGROUND

For many decades now, a lot of efforts have been put together to promote and improve child health and child survival, under the leadership of International Organisations such as WHO, UNICEF and World Bank, just to mention a few. This is evidenced by an article written and presented by Grant (1992) at a summit, where several key health goals which promote child health and child survival and create an environment that is caring for children were adopted.

Many goals were set and adopted which included, global polio eradication, increased immunisation coverage of the infants, reduction of measles, diarrhoea related diseases, moderate and severe malnutrition, institutionalisation of growth monitoring and promotion of breast feeding up to the second year of life. All these goals were given indicators.

In order to achieve these goals, aspects given the acronym “GOBIFFF” have been adopted as the strategy to be implemented by the individual countries. These are:-

- Growth Monitoring,
- Oral Rehydration Therapy,
- Breast Feeding,
- Immunisation,
- Feeding/Nutrition,
- Female Education and
- Family Planning.

These strategies are very important because they affect children who make up 40% of the world population. In addition, the world under five mortality and

morbidity rates are very high as confirmed by a report from a world congress that took place in Geneva (1994) where 6 specific world-wide childhood problems were highlighted. The most pertinent problems discussed were diarrhoeal diseases and the rising figures of chronic malnutrition, which now stands at 190 million under- five children (Grant 1994). Several countries in the sub Saharan Africa to which Zambia belongs, have incorporated these strategies in the Primary Health Care (PHC) programme adopted in 1982, which emphasises community participation in the health issues of their own families. To achieve this, the Government of Zambia has injected 70% of its health expenditure into Mother and Child Health (MCH) activities. This is because children and women make up 60% of the Zambian population and 40% of these are children under the age of 5 years old out of which 60% live in rural Zambia.

Zambia which gained her independence in 1964 has a population estimate of about 9.1 - 9.5 million, with a growth rate of 3.2. The population may double in 20 years. The total fertility rate is 6. It is highest in Chipata, the headquarters of eastern province, as it is estimated at 7 births per woman (ZDHS 1996).

In view of this, the Health Reform programme in Zambia has therefore placed much emphasis on the peripheral areas especially the districts, in order to enable the communities to participate in the running of their health programmes. Health care delivery in these areas is by PHC approach.

While the government directs its efforts in delivering child health services, it is the responsibility of parents to work in partnership by ensuring that they incorporate the child survival strategies in the rearing of their children, also known as modern child rearing. This partnership is supported by Morley (1996) who emphasised that child illness can be prevented by actions taken in the community. This is a very important determinant of child health and child survival.

STATEMENT OF THE PROBLEM

For a long time now, in Zambia mothers, have been sensitised to the core aspects of child survival strategies by World Health Organisation (WHO), UNICEF, the government through the MCH programme and the selected non-governmental organisations (NGOs) such as the YWCA and Care International. It is assumed that most mothers and care givers have consciously or sub consciously incorporated some, if not all, aspects of child survival strategies in their traditional up bringing of their children.

In fact, it was government expectation that with the adoption of the PHC programme in 1982, mothers' health and child survival would improve. It is no wonder that the PHC approach became the major tool for the present health reform programme which began in 1992 (Kalumba 1992).

Child survival in Zambia has however continued to steadily decline over the years. More children are dying than they did a decade or so ago, and a significant number of those who survive, do so in poor health. (DHS 1992).

According to UNICEF and ZDHS, the under-five mortality rate in 1981 was 152 per 1000 live births. It was 191 in 1991 and 197 in 1996 (Mutemwa 1996, ZDHS 1996). This implies that in Zambia today, one in every four children, dies before reaching their fifth birthday.

In the Eastern Province of Zambia, the under-five mortality rate was among the highest in the country (Nsemukila 1994). The major causes of mortality were similar country-wide, i.e.:-

- malnutrition, 19.9%
- malaria, 19.2%,
- pneumonia, 7.2% and

- diarrhoeal diseases, 7.2% of all causes

(Nsemukila 1994). Given the scenario and despite the long history of MCH programmes in Zambia, it is questionable whether child survival strategies are seen as an important component of child rearing in Zambia.

There are several factors that may be responsible for poor child survival, i.e.

- poor feeding practices,
- poor child immunisation patterns,
- inconsistent growth monitoring,
- poverty
- poor or incorrect home diarrhoea management and
- poor malaria preventive measures.

However, the impact of the HIV/AIDS pandemic can not be ignored.

Care givers' knowledge and attitude towards child survival strategies may also play a role. There is therefore need to determine knowledge, attitude and practice of care givers regarding child survival strategies in child rearing.

JUSTIFICATION OF THE STUDY

The population of children under-five years in Zambia is 22.23% of the whole population confirming the importance of ensuring that these children receive the care that promotes their health and survival. Most of the causes of morbidity and mortality are preventable and avoidable. This implies that intensification of the child survival strategies in child rearing would greatly improve child health and child survival thereby reducing mortality rates.

The findings from this study will therefore provide vital information, to relevant authorities, for drawing plans to improve child health and child survival in Zambia.

CHAPTER 2

LITERATURE REVIEW

CHILD SURVIVAL STRATEGIES

In developing countries, 13 to 15 million children die before reaching the age of five, an indication that child survival in developing countries is unacceptably low (Robey et al 1992).

The six childhood infectious diseases which kill about 3.7 million of these children can be prevented by immunisations, while diarrhoeal diseases with dehydration can be treated with Oral Rehydration Therapy (ORT).

Zambia happens to be among the 4 countries in Africa with the highest under-five mortality rate (Robey et al 1992).

In Zambia, child survival strategies have been in existence for over ten (10) years now. Services offered at MCH clinics are no different from "GOBIFFF". Perhaps those that were not greatly emphasised are exclusive breast feeding covered in feeding and the issue of female education which is now aggressively being looked into at national level. Despite the long history of these services in Zambia, the under-five mortality rates have continued to be on the increase in the last decade. Sadly, most of the causes of these deaths are highly preventable (UNICEF 1996). This explains the urgency of the matter in vigorous incorporation of child survival strategies in child rearing in Zambia. This is supported by Morley (1996) who emphasised that child illnesses can be prevented by actions taken in the home and in the community by ensuring good nutrition and full immunisation which gives a child under five years protection against the six major childhood diseases.

FACTORS RESPONSIBLE FOR POOR CHILD SURVIVAL.

Poor health and survival status of infants and children under five years of age in several developing countries can be attributed mainly to lack of adequate scientific knowledge, attitude and practice of mothers with regard to several areas that have an impact on child health (Sossamo 1995).

KNOWLEDGE, ATTITUDE, PRACTICE AND EDUCATION.

As a child grows, parental knowledge, attitude and behaviour regarding preventive and curative health care appear to become increasingly important to the child's survival (Robey et al 1992). This is evidenced by several surveys that consistently report that mortality rates are lower among the children of more educated mothers. For example, in Bolivia, the mortality rate among children whose mothers have at least nine of schooling is about one third of that among children whose mothers have almost five years of schooling (Robey et al 1992). Infact, several researchers have emphatically stated that the mothers' level of education alone has a substantial direct impact and is perhaps the most important of all social and economic influences on child mortality and child survival (Robey et al 1992).

GROWTH MONITORING

It is generally agreed that a child's growth pattern is a very sensitive indicator of their health while nutrition rate often precedes any other signs of ill health (Luke 1984).

Growth monitoring programmes aim at detecting malnutrition at the earliest possible time in order to employ remedial action that puts the child back to its upward growth trajectory.

In Zambia, despite a long standing growth monitoring programme, (since 1967) there have been no encouraging data as reported by (Nsefula 1993) who established that growth monitoring was a problem both at service and mothers' levels. Mothers, on the average, make three visits in the first half of the baby's life, five in the second half and almost nil in the subsequent four years. The attendance patterns fit with the immunisation schedules. This in fact tallied with the responses they gave on reasons for attending children's clinics. 77% of the occasions, mothers gave getting a child immunised as the reason (Nsefula 1993).

It has been documented that children's weight starts to falter as early as four months extending to eighteen months which points to them for early and continuous growth monitoring. This helps to reveal the less obvious cases of malnutrition (Nsemukila 1993). However, available districts' data in Lusaka Province indicates that the Urban Health Centre growth monitoring programmes are mainly reaching the under one year age group because of immunisations (Kauppins undated).

All these findings do confirm the vital importance of continuous growth monitoring for early detection of any growth problem and early illnesses in children.

ORAL REHYDRATION THERAPY

Dehydration resulting from diarrhoea is the major killer of the world's children today. In Zambia for example, diarrhoea is one of the major seven causes of deaths in both infants and children. A recent study from the ZDHS (1992) has given an overall incidence of 22% of children under five as having had diarrhoea during the two weeks before the survey. As for the under fives, it is a number three (3) killer disease (Nsemukila 1994).

Oral Rehydration Therapy (ORT), introduced to the world a quarter of a century ago, is now saving over one (1) million young lives a year.

ORT means increased fluid intake and continued feeding when a child has diarrhoea. This has proved to be the best safeguard against the often deadly dehydration that drains away the body's vital fluids (UNICEF 1994).

Therefore, management of diarrhoea episodes is more successful when there is immediate administration of an Oral Rehydration Solution (ORS) and continued feeding. Although this solution can be made with ingredients at home, World Health Organisation recommends the use of prepacked salts which reduce the risk of confusion between the amount of sugar and salt to be added to water (WHO undated).

To prepare this type of ORS, the ingredients needed are a litre of clean drinking water, or what is famously known as two banana cups full of clean drinking water, and one (1) sachet of ORS to be dissolved in this water using clean utensils (WHO 1990).

However, many countries including Zambia, the availability of this type of treatment at home is not always possible, especially in rural areas where ORS sachets are given only at a clinic when a baby is taken for treatment. For this reason, (WHO 1990) has recommended alternatives which are equally effective unless diarrhoea and vomiting persist.

In the absence of ORS, diarrhoea and vomiting are treated at home by giving the child more fluids than usual, such as cereal gruel and plain water. In addition, the child must be given plenty of starchy foods, vegetables, meat or fish, fresh fruit juice or mashed banana, served frequently in small amounts, at least six times per day. If the baby is breast feeding, this should be continued (WHO 1990).

Home made ORS is made using one (1) litre clean drinking water, eight (8) teaspoons of sugar and a quarter teaspoon of salt. This should be mixed well and should be given to the baby just like the conventional ORS solution. However, WHO does not recommend the use of this ORS especially in homes where mixtures could easily be confused. (WHO 1990).

In Zambia, one survey conducted in 1994, revealed that almost 95% of mothers with births in five years prior to the survey knew about ORS while almost 80% of the mothers used ORS packets or the recommended home solution (RHS) prepared from sugar, salt and water (Nsemukila 1994).

In view of this therefore, it is very vital to establish mothers' knowledge on precise preparation of ORS and its utilisation and other measures employed.

9. BREAST FEEDING.

Breast feeding is almost universal in developing countries where 90% of all mothers breast feed their babies (J Hussein and Hadler 1993).

Zambia recognises that breast feeding is the most effective way to provide a baby with a caring environment and complete food, which protects against infectious diseases. Breast feeding promotion, protection and support have been adopted as one of the key strategies that improve child survival. (Siyandi 1996).

In view of these findings, UNICEF and WHO have recommended that exclusive breast feeding be practised for the first six months of life and should continue in the second year of life (Siyandi 1996). This practice would greatly reduce diarrhoea episodes and malnutrition in children thereby improving their health and survival.

10. IMMUNISATIONS.

In the 1980's and early 1990's, there has been a rise in immunisation levels from under 20% to approximately 80% which is one of the greatest public health achievements in the century. As a result, there has been tremendous reduction of deaths due to Whooping cough, Diphtheria, Polio, Measles, TB and Tetanus although measles and TB are still public health priority in several developing countries (UNICEF 1994).

There are however still problems associated with failure to complete the three (3) doses of the vaccinations that offer full protection. There are several factors that are responsible for dropping out. For example, a study conducted in India to assess immunisation coverage and reasons for drop outs between first (1st) and third (3rd) dose revealed 30% drop outs.

The reasons given by respondents for this were as follows:

- 20 - 44% were not aware of childhood immunisation
- 9 - 29% said the times were inconvenient
- 3 - 9% said the vaccination centres were very far
- 3 - 7% feared the vaccinations
- 16% did not know about the need for second (2nd) and third (3rd) doses. (Basu 1995).

Drop out rates vary substantially among countries. In Botswana for example, DPT immunisation coverage is the highest of any surveyed country in Africa, at 88% and only 5% of children do not complete all the three doses of DPT after receiving the first dose. In the same report, it is documented that only 59% of children 12-23 months are fully immunised in Zambia (Robey et al 1992).

According to epidemiological statistics, targets of any immunisation programme should ensure a minimum coverage of 80% - 90% in all perspectives (WHO 1990, UNICEF 1992)

The Zambia Demographic Health Survey (ZDHS 1996) reported on immunisation coverage in Zambia as follows:-

- BCG for Tuberculosis, 97.4% of children,
- DPT and Polio, 85% and 84% all three doses respectively,
- Measles 86% with birth place.

As for 1992 data, the highest proportion of children who were fully vaccinated is among mothers with secondary education (83%) and the lowest proportion was among mothers with no formal education ((49%) ZDHS 1992).

According to epidemiological statistics, targets of any immunisation programme should ensure a minimum of 80 - 90% of coverage (Mall 1992). Statistics are showing low coverage in Polio and measles. It is very fortunate that Polio has been covered under the eradication initiatives.

11. FEEDING/NUTRITION AND WEANING PATTERNS.

Infant feeding has an impact on both the child and the mother. Feeding practices are important determinants of the child's nutritional status which in turn influences the risk of dying, although the first line of defence against childhood malnutrition is breast feeding (ZDHS 1992). Poor nutritional status of children is a contributing factor in approximately 60% of all childhood deaths (Galway et al 1987).

It is recommended that new or weaning food be commenced after six months of the baby's life before which exclusive breast feeding should be practised (Siyandi

1996). Unfortunately, various supplements are introduced mostly when children are two to three months old, while only 5% are exclusively breast fed. By age four to five months, seven out of ten breast feeding children would have been introduced to supplement food.

For weaning food to be nutritious, it must comprise water, major electrolytes, proteins, vitamins and carbohydrates (Gaza and Butte 1995). However, one study conducted in Zambia revealed that on the whole, weaning food was mainly cereal (Chibuye et al 1996).

Secondly, the weaning process must be gradual with introduction of food in fluid form, then semi fluid and finally, mashed solids until the child is able to chew alone, because abrupt weaning is associated with psychological trauma (UNICEF 1994, Morley 1993). In another study carried out in urban Africa on infant feeding, the researcher recommended that it is very important to find out who actually feeds the child in all studies on feeding habits (Cheung et al 1992).

In conclusion, it is important to find out the exact details of weaning practices, with special reference to food prejudices and taboos, the length of breast feeding, feeding methods, who feeds the baby and the type of food. All these aspects need to be investigated before attempts to improve weaning practices, methods of feeding and type of diet can be made (Gaza and Butte 1991, UNICEF)

12. FAMILY PLANNING/CHILD SPACING

Family planning or child spacing is the principle that people should space their children by allowing a time interval of at least two years between live births. Repeated close up pregnancies and heavy family loads put great strain on the mother and the whole family nutritionally (Caurtright and Minanga 1994). It has been established through research that the majority of mothers are aware about

family planning while very few use the modern methods. For example, a study conducted in Malawi in 1994 among rural mothers sought to establish whether or not mothers with children less than 72 months of age desired additional children and whether they used any modern child spacing methods. The study revealed that only 19% used clinic based child spacing services. The majority of these were advanced in age. 42% of women who stated that they wanted additional children had a birth in the previous year. The researcher concluded that while many women reported that they have no desire for additional children, few used modern family planning. The researcher attributed this to literacy problems and the powers vested in husbands to decide on family planning practices (Phiri 1993).

In another study conducted in Uganda, community members were asked to provide the aspects needed to promote child health. They put almost all the child survival strategies except for family planning. The interviewers concluded that the community did not link child spacing to the promotion of child health (Karamagi 1990).

In Zambia only 19% of child bearing age women use family planning for child spacing (ZDIHS 1996).

Almost half of all users of modern contraceptive methods in Zambia use Oral contraceptives despite the poor quality of services associated with uneven and irregular delivery coupled with the obvious disadvantages and problems associated with their use. After the pill, condoms are the next popularly used. This could be due to the regular availability including in rural areas.

13. MALARIA PREVENTION

Malaria is the number one cause of hospital and health facility attendance throughout Zambia with an incidence of 330/1000 population (MOH and WHO

1997). It has the second highest under-five mortality rate (19.2%) after malnutrition (Nsemukila 1994).

Recently, Chloroquine sensitivity studies show that resistance to it is rising (3 - 24%) in Eastern Province. With this trend of events, the Government has emphasised that training of health workers, guideline development and community involvement in malaria prevention, control and management should be the only way forward (MOH and WHO 1997).

Use of insecticide impregnated bed nets in high malaria epidemic areas has been recommended as a very effective malaria prevention measure. Eastern province is one of the beneficiaries of this initiative and pilot programmes are already in place under the initiative of USAID/BASICS. However, not much has been put in place regarding large scale vector control strategies.

14. CONCLUSION

While mothers have strongly attached traditional values to child rearing practices, it is of vital importance that modern practices are incorporated, such as the child survival strategies which are vital components in the promotion of child health and survival. For the practices to change or expand, there is need to have the modern knowledge, positive attitude and the drive which can influence change in behaviour. This is possible with formal education. The result of this will be reduction in child mortality rates.

The intensive review of literature has revealed that inputs and attempts by various donors to contribute towards the survival and health of children are successful. The increase of child morbidity and mortality raises a very big question. It is for this reason that special care has been taken to find out what the knowledge and attitude of women are like and their behaviour. Perhaps, the recommendations that

will ensure promotion of child survival in mothers child rearing practises could be made.

DEFINITION OF OPERATIONAL TERMS

MODERN CHILD REARING PRACTICES

In this study, modern child rearing practices shall mean incorporating the aspects that promote child health and child survival in the traditional child rearing practices such as:-

- Growth Monitoring,
- Oral Rehydration Therapy,
- Breast Feeding,
- Immunisation,
- Feeding/Nutrition,
- Family Planning,
- Malaria Prevention.

CHILD HEALTH

This shall be used to include all children under five years old.

MODERN CHILD REARING

This term will be used synonymously with “Health Modernity” which was defined by Sossamma et al (1987) as scientifically correct information, attitudes and behaviour in relation to physical and mental health, family planning, child care, personal hygiene and environmental sanitation.

KNOWLEDGE

Awareness about the existence and importance of child survival strategies. Knowledge of any good aspect under study concluded as good if at least 80% of the respondents are knowledgeable about it.

ATTITUDE

A tendency to feel, think and respond either positively (favourably) or negatively (unfavourably) towards certain persons, issues or situations (Morgan 1956). The attitude was concluded as good if 70% of the respondents have a positive view.

PRACTICE

Incorporation by a mother of the child survival strategies in her child rearing patterns. Incorporation was concluded as being done if at least 80% of the respondents practice half of the variables under study.

LITERACY STATUS

In this study, a respondent that has either no formal education or only dropped at grade 8 was categorised as illiterate, while those with education from the 9th grade and above shall be categorised as literate.

PARITY

In this study, parity meant only the number of living children.

LOCATION

It implied either rural or semi-urban.

OTHERS

In the questionnaire, this stood for an answer given other than what has been listed and is of very little significance.

ROAD TO HEALTH

This is a graph drawn on the under-five clinic card for plotting child weight. It shows the minimum and maximum normal weight for the child.

BELOW THE ROAD

This is the graph of the weight of a child below the "Road to Health" indicating under nutrition.

WITHIN THE ROAD

This is the graph of the weight of a child within the "Road to Health" indicating good nutrition and normal growth.

CHAPTER 3

OBJECTIVES

GENERAL OBJECTIVE

The study sought to establish mothers' knowledge attitude and practise regarding child survival strategies in their child rearing in Chipata District.

SPECIFIC OBJECTIVES

1. To assess mothers' knowledge of child survival strategies
2. To determine mothers' attitude towards the child survival strategies.
3. To establish whether or not mothers do incorporate child survival strategies in the rearing of their under five children.
4. To gather mothers' demographic profile relevant to child rearing and child survival.
5. To establish whether or not literacy status influences their knowledge, attitude and practice.
6. To assess the impact of relevant demographic indicators on mothers' ability to adopt child survival strategies.

VARIABLES

The variables explored are those related to knowledge, attitude and practice of the child survival strategies and personal profile. (Annex I).

CHAPTER 4

METHODOLOGY

RESEARCH DESIGN

A descriptive, qualitative, cross section study design was used. WHO (1988) defined this study design as one that involves the systematic collection and presentation of data to give a clear picture of a particular situation by identifying and exploring a number of often mutually related variables that give insight in the nature and causes of certain problems or situations and in the consequences of a problem for those affected in a specified time. This study design was chosen because it was found to be the most appropriate for this kind of investigation.

RESEARCH SETTING

The study was conducted in Chipata District - both semi-urban and rural.

Chipata District serves as the Provincial Headquarters for Eastern Province, and is one of the provinces in rural Zambia. It comprises Chipata semi-urban and rural settings. This research setting was chosen because of its proximity to the investigator's place of work. It was hoped that the findings would then be better utilised.

Chipata district is unique in that other than being the provincial headquarters, it has the highest fertility rate. On the average, each woman has 7 births in her child bearing period (ZDHS 1996).

The District has a population of around 400,000 by projection (1990 Census CSO), 30% of the Eastern Province's population. The population of the under-five

was estimated at 72,480, (18.12% of the total population). There are approximately 93,640 women in child bearing age (15 - 49 years), 23.41% of the total population.

The Central Statistical Office, (CSO 1990) estimated that 66.66% of the total population in Chipata District is in the rural area. Therefore, in 1995 for example, 43,775 children under five years were in rural Chipata with 21,888 in the semi urban.

The major occupation in Chipata is small scale or peasant farming, trading, with a few private and governmental jobs. However, the majority of people are either unemployed or marketeers who spend most of their time at the market selling farm produce as well as groceries. Most of these people at the market are women. The township is also a trading area with several Asian owned shops.

Chipata Township has 3 classified residential areas; the low, medium and high density areas. The high density area is overcrowded and has small woody - muddy and grass thatched houses.

There are three (3) hospitals, twenty-five (25) Health Centres, and two (2) privately owned clinics. Twenty-three health centres and one hospital are in the rural area. They are however not evenly spread out as the walking distances to the nearest centre from the village range from 30 minutes to as long as three hours or more.

Almost all the Government run health centres offer Maternal and Child Health (MCH) services.

SAMPLE SIZE AND SAMPLING METHIOD

STUDY POPULATION

The study population comprised women of child bearing age from Chipata District.

STUDY UNITS

The study units were women with a child of 18 - 36 months. Mothers with children of this age group were selected because their children were expected to have gone through all the variables under study. They were therefore the most appropriate for inclusion in the study.

The sample was drawn from both the rural and the semi-urban.

SAMPLE SIZE

The sample size was calculated as follows:-

$$n = z^2 \frac{P(100-P)}{d^2}$$

- d = Sampling error = 10%
- Statistical power = 90%
- Proportion = Literacy for incorporation,
- P = 50%

Factor for power from normal distribution = z = 1.645

$$n = \frac{1.645^2}{2} \times 50 \times 50 = 67.65$$

The figure was then pushed up to 100 for strong generalisation of the findings and to reduce the chances of making type 1 error.

SAMPLE SELECTION

Separate sampling methods were used for the semi-urban and the rural Chipata.

Semi-urban: The medium density area was conveniently selected while the low and high density areas were selected using lottery method.

Mothers who met the criteria were conveniently selected as follows:-

- 8 from the low density area.
- 9 from the medium density area
- 12 from the high density area

Thus, 29 mothers from the semi-urban were included in the study.

Chipata Rural: Rural Health Centres (RHC) were used to work out the sample villages. Chipata rural comprises 21 rural health centres with distances ranging from 12 km to 160 km away from Chipata town. Due to limited resources and accessibility problems, health centres that are more than 30km away from town and those not easily accessible were not included in the lottery sampling box. After this exclusion, only seven (7) RHCs remained and using the lottery sampling method, the four (4) clinics were selected:

1. Jerusalem RHC 30 km
2. Madzimoyo RHC 16 km
3. Mnoro RHC 17 km
4. Magwero RHC 25 km

Each RHC staff conveniently selected villages that were easily accessible with a lot of mothers. Seventy one (71) mothers were included in the study as follows:

1.	Jerusalem RHC	30 km	16 mothers
2.	Madzimoyo RHC	16 km	16 mothers
3.	Mnoro RHC	17 km	17 mothers
4.	Magwero RHC	25 km	22 mothers

DATA COLLECTION TECHNIQUE

An interview schedule and focus group discussion guide were used to collect data.

DATA COLLECTION

Data was collected from February to April 1998. The period of data collection was this long because of busy schedules of mothers in the fields especially those of Chipata Rural.

INTERVIEWS

Interviews with mothers were conducted by the researcher and each interview took approximately 10 minutes.

FOCUS GROUP DISCUSSION

Two focus group discussions were conducted: one with 6 mothers from Chipata town at Chipata General Hospital, MCH department and another, with the MCH staff (Midwives) of the same institution.

ETHICAL CONSIDERATION

The research proposal was presented to the Department of Community Medicine for discussion. Clearance was obtained from the Ethical Committee of the University of Zambia. It was approved by the Directorate of Research and Graduate Studies of the University of Zambia.

Permission to undertake the study was granted on request from Chipata District Health Board. Clearance was also obtained from the School of Medicine, University of Zambia, Research and Ethical Committee. Written consents were obtained from each participant after explaining fully the aim of the study. Anonymity of the respondents was ensured and maintained in order to achieve confidentiality.

PILOT STUDY

A field study was carried out on the 28th November, 1997 at the University Teaching Hospital (UTH) Paediatric Ward. Five mothers with hospitalised children of the age group under study were interviewed to enable the investigator ascertain the following:

- Feasibility of the study
- Validity of data collected in relation to objectives
- Logical consequences and appropriate wording of questions.

Following the field test, the following changes were made:

- Some questions were rephrased while others were dropped
- Two new questions were added and tested
- The sequence of some questions on feeding and breast feeding were rearranged.

LIMITATIONS OF THE STUDY

1. Time for data collection was pushed forward in wait for proposal approval by the Directorate of Research and Graduate Studies of the University of Zambia.
2. The study was not funded at all, except for transport grant, that was given by Chipata General Hospital Management during data collection. Non funding of the research made the progress very slow and the process very difficult.
3. Data was collected during the rainy season when farmers are very busy in the fields. This delayed the progress of data collection especially in Chipata Rural.
4. No study site and stage supervisions were made due to shortage of staff at the Department of Community Medicine and lack of funding. This made the progress of the data analysis and report writing very difficult and taxing.
5. Chipata District represents the rural Zambia implying that the study findings only represent this kind of setting.

CHAPTER 5

4.0 PRESENTATION OF FINDINGS AND ANALYSIS OF DATA.

The findings were presented in frequency tables, cross tabulations, figures and as comments. These forms of data presentation were found suitable for use because they summarise results in a meaningful way, making the reader understand the author's intention in the study.

Findings from mothers through interviews were presented in section A. Section B(I) consisted of findings from health care givers, by focus group discussion, while section B(II) contained findings from mothers in focus group discussion.

DATA PROCESSING AND ANALYSIS

All data processing and analysis was done using EPI-INFO and a scientific calculator. Raw data was first checked for completeness and internal consistency, after which it was entered into EPI-INFO. Responses from focus group discussions were recorded as comments.

CHI - SQUARE STATISTICS

If the P - Values were 0.05 and less, there was a relationship between the two variables (dependent and independent) being tested. If it was more than 0.05, there was no relationship.

CROSS TAB ULATIONS

Several cross tabulations were done to establish relationships between dependent and independent variables and to compare the findings. The independent variables cross tabulated were; literacy status, location and parity.

T - TEST STATISTICS

Results indicate a true representation of the general population by the sample. If the P - value was 00.00, then the findings were a true representation of the general population. If more than this, the sample was not a true representation of the population

4.1. SECTION A

DEMOGRAPHIC CHARACTERISTICS

A total of 100 mothers were interviewed. Their average age was 27.790 years old (SD = 6.270 SE = 0.627, Range = 17 - 44 years). A total of 82 (82%) were married while only 1 (1%) was widowed. The majority 67 (67%) were illiterate with either no formal education at all, or primary school education only. About 69 (69%) of the respondents were peasant farmers with 1 (1%) an accountant.

4.2 SELECTED CHARACTERISTICS

- Majority of the respondents 78 (78%) had between 1 - 4 children and most of them had all their children still living (SD = 2.08, SE = 0.208, t - test = 16.4, P. value = 00.00). Respondents with a child of the age between 18 - 36 months met the inclusion criteria. Only 35 (35%) had children with the age group of 18 - 20 months. Ninety seven 97(97%) did not have regular monthly income. (SD = 17664.6, SE = 1766.462, t - test = 1.721, P. value 0.0845). The majority 52 (52%) had between 6 - 10 people sharing then same living quarters while only 3 (3%) had between 16 - 20 people sharing quarters (table 2) (SD = 6.354, SE = 0.635, t - test = 11.99, P. value 00.00).

4.3. SELECTED VARIABLES RELATED TO KNOWLEDGE, ATTITUDE AND PRACTICE.

Most of the respondents 94 (94%) were able to identify groundnuts as food essential for child health. A large number of respondents 43 (43%) grouped mangoes into food that is not essential for child health.

Seventy-eight (78) respondents (78%) had the under-five clinic cards for their children readily available out of which 60 (78%) children were fully immunised with 1 (1.75%) having missed measles vaccine.

Only 10 (13%) stopped to monitor the weight of their children after completing immunisations while 25 (32%) did not monitor the weight regularly. Only 38 (48%) mothers had their children's growth monitoring curve on the card, within the "road to health", while 22 (28%), had curves below the "road to health" (table 3).

TABLE 1: DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

AGE GROUP	FREQUENCY	%
15 – 20	10	10
21 – 25	32	32
26 – 30	29	29
31 – 35	15	15
36 – 40	8	8
41 – 45	6	6
TOTAL	100	100
MARITAL STATUS	FREQUENCY	%
SINGLE	9	9
MARRIED	82	82
SEPERATED	2	2
DIVORCED	6	6
WIDOWED	1	1
TOTAL	100	100
LITERACY STATUS	FREQUENCY	%
LITERATE	33	33
NON LITERATE	67	67
TOTAL	100	100
OCCUPATION	FREQUENCY	%
ACCOUNTANT	1	1
BUSINESS WOMAN	1	1
PEASANT FARMER	69	69
SECRETARY	2	2
HOUSE WIFE	25	25
NONE	2	2
TOTAL	100	100
LOCATION	FREQUENCY	%
RURAL	71	71
SEMI-URBAN	29	29
TOTAL	100	100

AGE GROUP STATISTICS**SD = 6.27****SE = 0.627****T - TEST = 44.3****P.value = 0.00**

TABLE 2: PERCENT OF RESPONDENTS SELECTED CHARACTERISTICS

NUMBER OF LIVING CHILDREN	FREQUENCY	%
1 - 4	78	78
5 - 9	21	21
10 - 14	1	1
TOTAL	100	100
AGE OF THE UNDER - FIVE CHILD (IN MONTHS)	FREQUENCY	%
18 - 24	35	35
25 - 30	27	27
31 - 36	38	38
TOTAL	100	100
REGULAR MONTHLY INCOME (ZK)	FREQUENCY	%
126,000.00	1	1
96,000.00	1	1
82,000.00	1	1
00	97	97
TOTAL	100	100
NUMBER OF PEOPLE LIVING WITH RESPONDENTS	FREQUENCY	%
1 - 5	36	36
6 - 10	52	52
11 - 15	6	6
16 - 20	3	3
TOTAL	100	100

T-TEST STATISTICS FOR NUMBER
OF LIVING CHILDREN

SD = 2.08

SE = 0.208

t - TEST = 16.4

P.value = 00.00

NUMBER OF PEOPLE LIVING
WITH RESPONDENTS

SD = 6.354

SE = 0.635

t - TEST = 11.992

P.value = 00.00

T-TEST FOR AGE OF UNDER-FIVE
CHILDREN

SD = 6.16

SE = 0.61

t - TEST = 44.92

P.value = 00.00

TABLE 3: PERCENT OF MOTHERS SELECTED VARIABLES RELATED TO KNOWLEDGE, ATTITUDE AND PRACTICE

KNOWLEDGE OF FOOD ESSENTIAL FOR CHILD HEALTH	FREQUENCY	%
Groundnuts	94	94
Plain maize meal porridge	6	6
TOTAL	100	100
RESPONSES ABOUT IDENTIFICATION OF FOOD NOT ESSENTIAL FOR CHILD HEALTH	FREQUENCY	%
Nshima	11	11
Fanta	46	46
Mangoes	43	43
TOTAL	100	100
MOTHERS WITH CHILDREN'S CLINIC UNDER-FIVE CARD AVAILABLE	FREQUENCY	%
Available	78	78
Not Available	22	22
TOTAL	100	100
CHILD'S IMMUNISATION STATUS (BYCARD)	FREQUENCY	%
Fully immunised	60	76
Missed Measles	1	2
Missed DPT and Polio	16	20
Missed 3rd DPT and Polio	1	2
TOTAL	78	100
CHILD'S GROWTH MONITORING PATTERN THROUGH CARD CHECK	FREQUENCY	%
Done every month	43	55
Not done regularly	25	32
Stopped after immunisations	10	13
TOTAL	78	100
NATURE OF CHILD'S GROWTH CURVE ON THE CARD	FREQUENCY	%
Within the Road	38	48
Above the Road	5	7
Almost below the Road	13	17
Below the Road	22	28
TOTAL	78	100

**TABLE 3 cont.: PERCENT OF MOTHERS SELECTED VARIABLES
RELATED TO KNOWLEDGE, ATTITUDE AND PRACTICE**

FAMILY PLANNING PRACTICE	FREQUENCY	%
Practising	19	19
Not Practising	81	81
TOTAL	100	100
BREAST FEEDING STATUS (n = 36)	FREQUENCY	%
Still Breast Feeding	19	53
Stopped Breast Feeding	17	47
TOTAL	36	100
WEANING PATTERNS	FREQUENCY	%
Starts at Less than Six months	75	75
Starts at Six months, and Over	25	25
TOTAL	100	100

TABLE 4: RESPONDENTS' LITERACY STATUS BY LOCATION

LOCATION	LITERACY STATUS		TOTAL
	LITERATE	NON LITERATE	
RURAL	15 (45.45%)	56(83.58%)	71
SEMI-URBAN	18(54.55%)	11(16.42%)	29
TOTAL	33(100%)	67(100%)	100

$\chi^2 = 16.86$

DF = 1

P value = 00.00001

It was observed that 56(83.58%) of the illiterate lived in rural Chipata.

TABLE 5: MOTHERS' KNOWLEDGE STATUS OF REASONS FOR TAKING THEIR CHILDREN FOR GROWTH MONITORING BY LITERACY STATUS

LITERACY STATUS	KNOWLEDGE STATUS		TOTAL
	KNOWLEDGEABLE	NOT KNOWLEDGEABLE	
LITERATE	32(34.78%)	1(1.5%)	33
NON LITERATE	60(65.22%)	7(98.5%)	67
TOTAL	92(100%)	8(100%)	100

X^2 (Fishers' Exact) = 0.80

P.value = 0.71

Majority, 92(92%) out of 100 knew the reason for growth monitoring. However, 62.22% of these were illiterate.

TABLE 6: GROWTH MONITORING PATTERNS BY LOCATION (ON CARD)

LOCATION	GROWTH MONITORING PATTERNS			TOTAL
	DONE REGULARLY	NOT DONE REGULARLY	STOPPED AFTER IMMUNISATION	
RURAL	39(86.67%)	13(72.22%)	12(80%)	64
SEMI-URBAN	6(13.33%)	5(27.78%)	13(20%)	14
TOTAL	45(100%)	18(100%)	15(100%)	78

$X^2 = 1.8840$

Df = 2

P.value = 0.54

The majority (86.67%) of the respondents that regularly monitored the growths of their children were from the rural setting. It was also observed that 72.22% of those

that did not monitor the growth regularly and 80% of respondents who stopped after completing immunisations were from the rural setting.

TABLE 7: CHILDREN'S GROWTH CURVES BY MOTHERS' PARITY

PARITY	GROWTH CURVES		TOTAL
	WITHIN THE ROAD	BELOW THE ROAD	
1 – 4 CHILDREN	34(53.98%)	8(53.33%)	42
>4 CHILDREN	29(46.03%)	7(45.67%)	36
TOTAL	63(100%)	15(100%)	78

$$X^2 = 0.00$$

$$Df = 1$$

$$P.value = 0.9645$$

Nearly half, 53.17% children with growth curves within the road and 53.33% of those with growth curves below the road belonged to mothers with parity 1 – 4 children.

TABLE 8: MOTHERS OPINION ON EXCLUSIVE BREASTFEEDING PRACTICE BY LITERACY STATUS

LITERACY STATUS	MOTIERS OPINION		TOTAL
	IT IS GOOD	IT IS BAD	
LITERATE	17 (40.48%)	16(27.59%)	33
NON LITERATE	25(59.52%)	42(72.41%)	67
TOTAL	42(100%)	58(100%)	100

$$X^2 = 1.83$$

$$Df = 1$$

$$P.value = 0.176$$

The majority, 58(58%) felt that exclusive breast feeding was bad and 72.41% of these were illiterate. However, 59.52% of the respondents that felt that this practice was good were non illiterate.

TABLE 9: MOTHERS' BREAST FEEDING STATUS OF CHILDREN 24 MONTHS OLD AND UNDER BY LOCATION

LOCATION	BREAST FEEDING STATUS		TOTAL
	STILL BREAST FEEDING	STOPPED BREAST FEEDING	
RURAL	7(36.84%)	7(41.20%)	14
SEMI-URBAN	12(63.16%)	10(58.80%)	22
TOTAL	19(100%)	17(100%)	36

$$X^2(\text{YATES}) = 0.01$$

$$Df = 1$$

$$P.value = 0.939$$

Just over half 19(52.77%) respondents, with children 24 months old and under were still breast feeding. 63.16% of these were from the semi-urban setting.

TABLE 10: MOTHERS' RESPONSES ON THE SUITABLE CHILD'S AGE TO STOP BREAST FEEDING BY LITERACY STATUS

LITERACY STATUS	SUITABLE CHILD'S AGE			TOTAL
	AT 18 MONTHS	AT 24 MONTHS	AT > 24 MONTHS	
LITERATE	20(37.74%)	11(27.5%)	2(28.57%)	
NON LITERATE	33(62.26%)	29(72.5%)	5(71.43%)	
TOTAL	53(100%)	40(100%)	7(100%)	100

$$X^2 = 2.64$$

$$Df = 2$$

$$P.value = 0.67$$

53% felt that the ideal age of a child to stop to breastfeed was 18 months. 62.26% of these were illiterate.

TABLE 11: CHILD'S AGE AT WHICH WEANING FOOD IS FIRST INTRODUCED BY MOTHER'S LOCATION

LOCATION	WEANING AGE		TOTAL
	<6 MONTHS	>6 MONTHS	
RURAL	52(67.33%)	19(66%)	71
SEMI-URBAN	23(32.67%)	6(24%)	29
TOTAL	75(100%)	25(100%)	100

$$X^2(YATES) = 0.15$$

$$Df = 1$$

$$P.value = 0.702$$

The majority, 75(75%) out of 100 weaned their children before they reached 6 months old. 67.33% of these were from the rural setting.

FIGURE 1: PERSON WHO FED THE CHILD AT THE INTRODUCTION TO WEANING FOOD

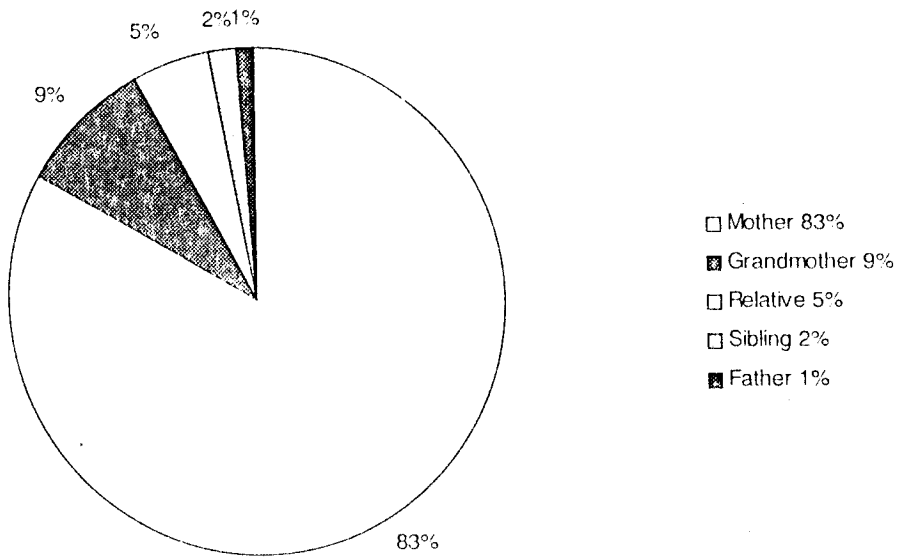


FIGURE 2.

CHILDS AGE AT WHICH WEANING IS FIRST INTRODUCED TO THE CHILD

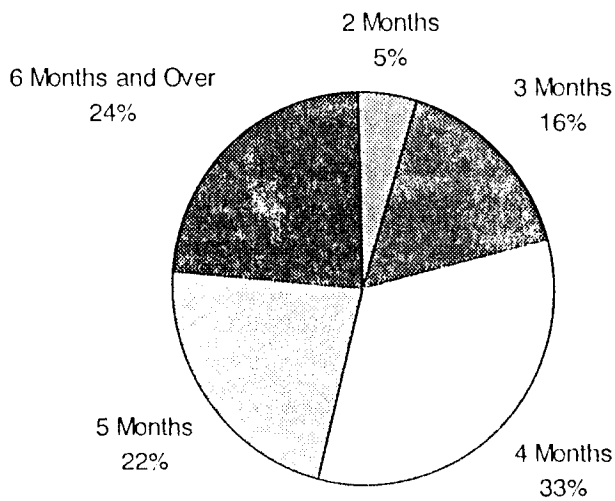


TABLE 12: TYPE OF FIRST WEANING FOOD GIVEN TO THE CHILD BY MOTHERS' LOCATION

LOCATION	FIRST WEANING FOOD				TOTAL
	PLAIN MAIZE PORRIDGE	MAIZE PORRIDGE WITH MILK	MAIZE PORRIDGE WITH GROUNDNUTS	OTHERS	
RURAL	13(65%)	6(80%)	49(73.13%)	3(60%)	71
SEMI-URBAN	7(35%)	2(20%)	18(26.87%)	1(40%)	29
TOTAL	20(100%)	8(100%)	67(100%)	5(100%)	100

$$X^2 = 9.59$$

$$Df = 3$$

$$P.value = 0.03$$

The majority, 67(67%) out of 100 gave maize meal porridge with groundnuts as first weaning food. 73.13% of these were rural respondents. However, 65% of respondents that gave plain maize meal porridge were also from the same setting.

TABLE 13: MOTHERS' KNOWLEDGE STATUS OF CHILD'S AGE FOR MEASLES VACCINE ADMINISTRATION BY LITERACY STATUS

LITERACY STATUS	KNOWLEDGE STATUS		TOTAL
	KNOWLEDGEABLE	NOT KNOWLEDGEABLE	
LITERATE	11(28.95%)	22(35.48%)	33
NON LITERATE	27(71.05%)	40(64.52%)	67
TOTAL	38(100%)	62(100%)	100

$$X^2 = 0.46$$

$$Df = 1$$

$$P.value = 0.49$$

62% did not know immunisation schedules especially that of measles. 64% of these were illiterate. Nevertheless, 71.05% of those who knew were also illiterate.

FIGURE 3: IMMUNISATION STATUS AND THE VACCINE MISSED

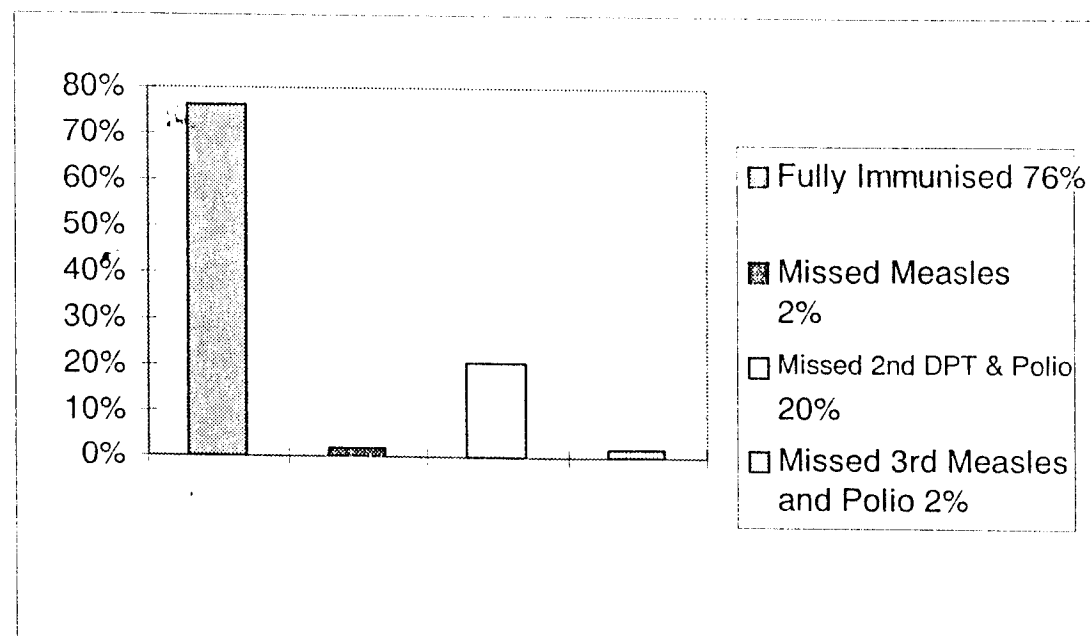


TABLE 14: MOTHERS' VIEWS ON THE SUITABLE AGE OF THE YOUNGEST CHILD AT WHICH THEY COULD SAFELY CONCEIVE BY LITERACY STATUS

LITERACY STATUS	CHILD'S AGE		TOTAL
	2 YEARS	>2 YEARS	
LITERATE	16(33.33%)	17(32.69%)	33
NON LITERATE	32(66.67%)	35(67.31%)	67
TOTAL	48(100%)	52(100%)	100

$$X^2 = 0.00$$

$$Df = 1$$

$$P.value = 0.90$$

Almost all respondents felt that the suitable time to conceive was when the youngest child was two years and more. However, 67.31% of the respondents that felt that over two years was suitable were non illiterate.

TABLE 15: MOTHERS MODERN FAMILY PLANNING STATUS BY LITERACY STATUS

LITERACY STATUS	FAMILY PLANNING STATUS		TOTAL
	PLANNING	NOT PLANNING	
LITERATE	7(36.84%)	26(32.10%)	33
NON LITERATE	12(63.15%)	55(67.90%)	67
TOTAL	19(100%)	81(100%)	100

$$X^2 = 0.16$$

$$Df = 1$$

$$P.value = 0.69$$

Only 19(19%) out of 100 were practising modern family planning. 63.16% of these were illiterate. Similarly, 67.90% of those not practising were equally illiterate. It was also observed that 73% of respondents practising family planning used contraceptive pills (figure 4).

FIGURE 4: FAMILY PLANNING METHOD

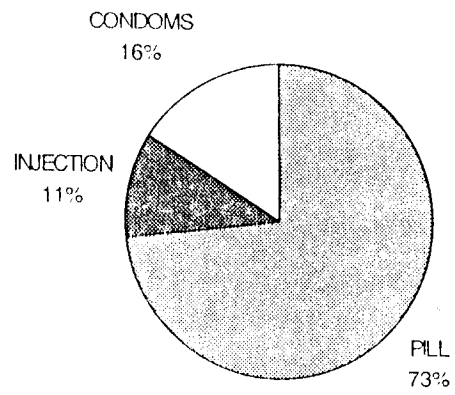


TABLE 16: RESPONDENTS' FAMILY PLANNING STATUS BY PARITY

PARITY	FAMILY PLANNING UTILISATION		TOTAL
	WERE USING	WERE NOT USING	
1 – 4 CHILDREN	12(63.16%)	53(65.43%)	65
>4 CHILDREN	7(36.84%)	28(34.57%)	35
TOTAL	19(100%)	81(100%)	100

$$X^2 = 0.01$$

$$Df = 1$$

$$P.value = 0.936$$

63.16% respondents who were using modern family planning had parity 1 – 4 children while majority of those that were not practising modern family planning, (65.43%) were of the same parity.

TABLE 17: RESPONDENTS' FAMILY PLANNING STATUS BY LOCATION

LOCATION	FAMILY PLANNING STATUS		TOTAL
	WERE USING	WERE NOT USING	
RURAL	9(47.37%)	62(76.54%)	71
SEMI-URBAN	10(52.63%)	19(23.46%)	29
TOTAL	19 (100%)	81(100%)	100

$$X^2 = 6.3620$$

$$Df = 1$$

$$P.value = 0.02$$

Regarding location, 52.63% of the respondents that practised family planning were from the semi-urban . Majority, 76.54% of the non users were rural respondents.

TABLE 18: RESPONDENTS' KNOWLEDGE STATUS OF CONSTITUENTS FOR HOME MADE ORS SOLUTION BY LITERACY STATUS

LITERATE STATUS	KNOWLEDGE STATUS		TOTAL
	KNOWLEDGEABLE	NOT KNOWLEDGEABLE	
LITERATE	27(38%)	6(20.69%)	33
NON LITERATE	44(62%)	23(79.31%)	67
TOTAL	71(100%)	29(100%)	100

X^2 (YATES)= 2.07

Df = 1

P.value= 0.150

Many, 71(71%) out of 100 knew the constituents as sugar, salt and water. 62% of these were illiterate.

TABLE 19: DIARRHOEA MANAGEMENT AT HOME BY LOCATION

LOCATION	DIARRHOEA MANAGEMENT AT HOME				TOTAL
	GIVE PLENTY OF FLUIDS	GIVE TRADI- TIONAL MEDICINE	GIVE HOME MADE ORS	RUSH CHILD TO THE CLINIC	
RURAL	2(40%)	26(70.27%)	16(72.73%)	27(75%)	71
SEMI- URBAN	3(60%)	11(29.73%)	6(27.27%)	9(25%)	29
TOTAL	5(100%)	37(100%)	22(100%)	36(100%)	100

$$X^2 = 2.4149$$

$$Df = 3$$

$$P.value = 0.4$$

Only 22(22%) out of 100 gave home made ORS to manage diarrhoea at home. 72.73% of these were from the rural setting. 60% of respondents that gave plenty fluids, regardless of the kind were from the semi-urban setting.

TABLE 20 PREVENTIVE MEASURES TAKEN BY MOTHERS AGAINST MALARIA ATTACKS IN CHILDREN BY LITERACY STATUS

PREVENTIVE MEASURE	LITERACY STATUS		TOTAL
	Literate	Non Literate	
Use Mosquito nets	10 (30.3%)	2 (3.0%)	12
Burn Mosquito coil	3 (9.1%)	3 (4.5%)	6
Use Mosquito repellent	2 (6.1%)	9 (13.4%)	11
Spray insecticide	4 (12.1%)	2 (3.0%)	6
Close windows early	3 (9.1%)	5 (7.5%)	8
Keep the yard clean	3 (9.1%)	11 (16.4%)	14
Others	3 (9.1%)	14 (20.9%)	17
No step taken	5 (15.1%)	21 (31.3%)	26
TOTAL	33 (100%)	67 (100%)	100
$\chi^2 = 20.86$ Df = 7 P. Value = 00.003			

Only 35(35%) took measures that could effectively prevent mosquito bites and malaria attacks. 30% of the literate mothers used mosquito nets.

4.4.0. SECTION B: FOCUS GROUP DISCUSSION

4.4.1. WITH HEALTH CARE PROVIDERS

PROVINCE: EASTERN.
TOWN: CHIPATA.
SPECIFIC SITE: CHIPATA GENERAL HOSPITAL MCH DEPARTMENT.
LANGUAGE USED: ENGLISH.
DATE: 24 APRIL, 1998.
TIME STARTED: 11:29hrs
TIME ENDED: 12:47hrs
NUMBER OF PARTICIPANTS: 5 (CONVENIENTLY SELECTED)

CHARACTERISTICS OF THE GROUP

<u>PROFESSION:</u>	ALL NURSE MIDWIVES.
<u>AGE GROUP:</u>	FROM 35 YEARS AND ABOVE.
<u>MARITAL STATUS:</u>	MIXED

OBJECTIVES OF THE FOCUS GROUP DISCUSSION.

The objectives of the focus group discussion were:

- Factors that could be responsible for mothers' failure to continue monitoring the growth of their children.
- The use of "road to health" graphs.
- Reasons for mothers' failure to have their children fully immunised.
- Exclusive breastfeeding.
- To obtain information about steps that could be taken to improve mothers' incorporation of child survival strategies.
- Their difficulties in teaching ORT to mothers.
- About factors leading to mothers' failure to use modern family planning.
- To confirm whether or not mothers are taught preventive measures against Malaria.
- To assess their knowledge about the appropriate weaning food.

TOPICS DISCUSSED

TOPIC 1: CHILD SURVIVAL STRATEGIES.

Most participants were able to mention the services that are offered at MCH clinics as child survival strategies and those mentioned were:

- immunisations

- family planning
- child weighing
- nutrition

TOPIC 2: GROWTH MONITORING.

A: REASONS FOR FAILURE TO REGULARLY MONITOR CHILD'S GROWTH.

Almost all the participants agreed that the following were the possible reasons for mothers' failure to continue monitoring the growth of their children after immunisations:-

- laziness.
- burden of closely spaced pregnancies.
- inadequate health education.
- ignorance about the use of the growth curve.
- mothers with healthy babies not encouraged or praised.
- lack of mother-Nurse discussion on growth monitoring.

TOPIC 3: IMMUNISATIONS.

REASONS FOR MOTHERS FAILURE TO TAKE THEIR CHILDREN FOR ALL IMMUNISATIONS

The majority of participants commonly agreed that some mothers either do not take their children, at all, for immunisations or do not complete them because of the under listed reasons:

- some mothers fear that their children will become ill.
- some husbands forbid their wives for fear of being disturbed in the night by the crying child.

- some parents are discouraged by the fever that develops after the vaccination.
- occupation at the market becomes prime
- postponements by the outreach team after confirming the appointments discourages some mothers.

TOPIC 4: BREAST FEEDING:

A: VIEWS ABOUT EXCLUSIVE BREAST FEEDING

Most participants had this to say in agreement :

- it is not good because breast milk is inadequate for most babies.
- milk production from the breasts has gone down in most mothers because of hunger.
- they are ignorant about the origin and the benefits behind the concept as they have not had any official talk on it.

B: AGE OF CHILD AT WHICH BREAST FEEDING IS STOPPED

Almost all the participants stopped to breast feed their children between the age of 12 months and 24 months.

INTRODUCTION TO SUPPLEMENTARY FOODS: TYPE OF FOOD AND CHILD'S AGE.

Most participants gave their babies porridge, either plain or with groundnuts. One (1) gave nshima or any thing light. Nearly all the participants introduced supplementary food to their children before the babies reached the age of 4 months.

- d.
 - (i) Unsatisfactory knowledge of good weaning food and weaning process
 - (ii) Feeding children with unnutritious food
 - (iii) Children being under-weight

- e.
 - (i) Bad attitude towards family planning
 - (ii) Very few mothers practicing modern family planning methods

- f.
 - (i) Unsatisfactory knowledge of ORS solution preparation and constituents
 - (ii) Inappropriate diarrhoea management at home

- g.
 - (i) Very poor knowledge of malaria preventive measures.
 - (ii) inappropriate and non practice of preventive measures against malaria

There is no significant association between mothers' literacy status and one's knowledge, attitude and practice of child survival strategies except the following:

- type of first weaning food and location
- knowledge of constituents of home made ORS solution (salt, sugar and water)
- malaria preventive measures taken

It was also established that information about the two variables related to literacy status was rarely communicated by health care providers at MCH departments.

When this information is delivered effectively, mothers' knowledge would improve. This would in turn positively influence their attitude and practice

TOPIC 9: INCORPORATION OF CHILD SURVIVAL STRATEGIES IN CHILD REARING AND POSSIBLE SOLUTIONS

All the participants agreed that some mothers did not fully incorporate child survival strategies in their child rearing because of:

- having large families.
- long distances between their villages and the nearest clinic.
- laziness.
- non involvement of fathers.
- bad attitude of staff.
- erratic stocks of vaccines.
- stoppage or non functioning of mobile clinics
- busy schedules at home especially in the farming season.

All participants emphasised that in order to improve the situation, the following must be done:

- intensification of health talks (health education).
- visits to defaulters.
- regular availability of vaccines.
- individualised health talks at the clinics
- Nurses reception and attitude must improve.
- health education in work places and villages for men must start.

4.4.0. SECTION B: FOCUS GROUP DISCUSSION

4.4.1. WITH MOTHERS

<u>PROVINCE:</u>	EASTERN.
<u>TOWN:</u>	CHIPATA.
<u>SPECIFIC SITE:</u>	CHIPATA MCH CLINIC.
<u>LANGUAGE USED:</u>	CHEWA.
<u>DATE:</u>	27 APRIL, 1998.
<u>TIME STARTED:</u>	10:23hrs
<u>TIME ENDED:</u>	11:29hrs
<u>NUMBER OF PARTICIPANTS:</u>	7 (CONVENIENCE SAMPLING DONE)

CHARACTERISTICS OF THE GROUP

<u>MOTHERS WITH AT LEAST 2 CHILDREN WITH AN UNDER 3 CHILD</u>	
<u>AGE GROUP:</u>	FROM 21 YEARS TO 40 YEARS
<u>MARITAL STATUS:</u>	VARIANT

OBJECTIVES OF THE FOCUS GROUP DISCUSSION

The objectives of the focus group discussion were:

- to obtain views from mothers on disadvantages of partial child immunisation or partial immunisation status.
- to obtain their opinion about exclusive breast feeding.
- to obtain information about the weaning food readily available.
- to gather information about benefits of regular growth monitoring of a child and problems that hinder mothers from regular child weighing.

- to obtain their views about advantages and disadvantages of family planning.
- to obtain information about diarrhoea management at home.
- to collect information about malaria prevention.

TOPIC 1: DISADVANTAGES OF INCOMPLETE IMMUNISATION

When asked about what problems could arise when a child did not complete immunisations, several views were expressed:

- measles attacks in such a child would be more serious than those fully immunised.
- children would suffer paralysis of legs.
- serious coughs would develop easily.
- child would become constantly sick.

TOPIC 2: EXCLUSIVE BREAST FEEDING

When asked about their views on exclusive breast feeding, half the group felt that it was a good thing because:

- abdominal discomforts would minimise in babies.
- child would eat well after 6 months when the intestines are ready for new food.

The other group felt that:

- 6 months was too late.
- the baby would be crying of hunger.
- other women have very little breast milk.

TOPIC 3: WEANING FOOD READILY AVAILABLE

Almost all the participants agreed that the food that is readily available and accessible for weaning babies was porridge (maize meal) although some added groundnuts. Those who could afford added milk.

TOPIC 4: BENEFITS OF, AND HINDRANCES TO REGULAR GROWTH MONITORING.

A: BENEFITS

Most participants revealed that regular growth monitoring was beneficial because:

- it made the mother know how the child is growing
- it served as an early sign of ill health
- it made the mother assess the nutritional quality of food given to the child.

B: HINDRANCES

Various factors hindering mothers from regular growth monitoring were cited as:

- laziness.
- lack of time especially marketeers.
- ignorance about its importance.
- fear of harsh nurses especially after a spell of defaulting.
- too many under-fives because of early pregnancies.
- peer pressure.

TOPIC 5: BENEFITS AND PROBLEMS RESULTING FROM MODERN FAMILY PLANNING

A: BENEFITS.

Only 3 participants had this to say:

- the mother is given enough time to look after her child well
- the child is allowed to grow well.
- mothers rest from frequent burdens of pregnancy.
- the uterus is served from tearing.
- the husband is kept at home as he knows he can have sex with his wife without any disturbances (“it serves as a marital security measure” one of them said).

B: PROBLEMS

Almost all participants agreed on:

- irregular periods.
- wateriness during sex.
- mass formation in the abdomen.
- insecure marriage especially where the husband is not in its favour.
- barrenness
- fear in husbands that their wives would become promiscuous.
- hypertension.

TOPIC 6: DIARRHOEA MANAGEMENT

A: MAKING SUGAR, SALT, SOLUTION FOR ORT.

On this, the group was divided. One group agreed on the following:

- 1 bottle boiled cooled water (750ml), 2 table spoons sugar and 1 table spoon salt

The other group argued and listed the constituents as follows:

- 1 teaspoon salt, 8 teaspoons sugar and 4 cups water (type of cup not specified).

B: MEASURES TAKEN WHEN A CHILD HAS DIARRHOEA

- One participant said she made the home made ORS (sugar, salt solution.
- Another participant said she bought capsules (white) for her baby and sometimes a syrup that is combined with chloroquine were given
- Two participants said they did herbal sitz baths; and 2 still gave oral herbal medicine.
- they all agreed that when these other measures fail, they rushed to the hospital or clinic.

TOPIC 7: MALARIA PREVENTION

Various measures were given such as:

- keeping the child clean.
- burying water logged places.
- cutting the grass short around the yard.
- closing the windows early.
- buying mosquito nets.
- spraying insecticide.
- putting herbal mosquito repellents in the bedrooms.

CHAPTER 6

DISCUSSION OF FINDINGS

INTRODUCTION

The study sought to establish mothers' knowledge, attitude and practice regarding incorporation of child survival strategies in their child rearing in Zambia. This was a cross sectional study conducted in Chipata District of Eastern province.

The information obtained included the demographic data, knowledge, attitude and practice regarding growth monitoring, breast feeding, weaning (nutrition), child immunisations, family planning, home diarrhoea management and Malaria prevention in children.

To supplement the information given by mothers, the researcher also conducted a focus group discussion with health workers at MCH clinic on their views about mothers' incorporation of child survival strategies and their views on how utilisation of the MCH services could improve in order to encourage more mothers to incorporate the strategies in the care of their children.

Majority of the respondents came from the rural setting considering the population they had to represent. Most of the respondents from the semi-urban were house wives which could be due to the timing problems. It would have been more interesting to include working mothers and marketeers to ensure adequate representation of the semi-urban Chipata. However, time was inadequate.

A sample size of 100 was reached making a response rate of 100%.

Two focus group discussions were done: one with health care providers and another with mothers, both from Chipata semi-urban. It would have been more representative if the other two were conducted in rural Chipata. Although the response rate was good, it would have been more helpful if more catchment areas were included than only four Health Centre catchment areas for rural Chipata and three residential areas for the semi-urban. A very interesting finding was similarity in knowledge and practice among mother belonging to the same rural health centre.

DEMOGRAPHIC PROFILE.

Only ten (10) respondents were twenty years old and below. The capability of this age group to rear a child in a manner that will ensure survival and health is quite debatable. In fact, it would have been beneficial if the relationship between mothers' age and practice were established.

The majority of respondents were married. Husbands are very influential in decision making regarding modern child rearing practices as supported by information gathered from both focus group discussions.

Only one third of the respondents were literate, a factor that is very vital for conceptualisation of the health education topics as confirmed by one author who reported that researchers have emphatically stated that mothers' level of education alone has a substantial direct impact and is perhaps the most important of all social and economic influences on child mortality and perhaps survival (Robey et al 1992). However, one's literacy seemed to determine one's location, at a P.value of 00.000 and this could have an impact on over practice.

Moreover, the kind of education the respondents have can not be broadened as literacy for if it was, then the majority of them would have been working as

bankers, teachers, nurses, secretaries and so on. The kind of education they have seems to be mediocre.

GROWTH MONITORING

Nearly all respondents were knowledgeable about the importance of regular child weighing with no association to literacy status.

Just over fifty percent of respondents regularly took their children for growth monitoring. There was no association to one's location. In fact, it was also observed that mothers within the same catchment area of a clinic, where MCH outreach activities were still carried out, had almost all the children regularly weighed. The findings from the focus group discussion with the health workers have revealed that health workers often neglected the aspect of growth monitoring and emphasised only on the importance of having a child fully immunised. This is supported by a study conducted in Uganda where parents were requested to prioritise aspects they regarded as important for child health and survival. Four aspects were listed with immunisation put first and growth monitoring last (Karamagi 1990).

About 81% of children's' growth curves were within normal reflecting poor nutritional status. Children's nutritional status, in turn, reflects feeding practices among other things (ZDHS 1992). However there was no association between mother's parity and child's growth curves.

BREAST FEEDING AND FEEDING/WEANING

Half the number of respondents felt that exclusive breast feeding was bad. There was no significant association with one's literacy status. These findings are not surprising in that even health workers in the focus group discussion had mixed feelings about this concept and openly stated that the concept was new to them.

They did not know its origin or benefits. This could perhaps explain why the majority of mothers introduced weaning food to their children at less than 6 months of age, the period recommended for exclusive breast feeding only. However, literacy status had no significant relationship with the respondents' practice.

This concurs with the findings in the study conducted in Zambia in 1996 where exclusive breast feeding accounted for only 13%. Supplementary liquids and foods were mostly introduced at either two or three months (Siyandi 1996).

The majority of children were fed by their mothers. Very few were fed by either their fathers, elder sibling, grand mother or any other relative. It is not known whether the person feeding the child had any influence on the amount of food taken except in children that tended to refuse to eat.

Almost all respondents first introduced maize meal porridge to their babies out of which few (20%) added nothing, with the rest adding either groundnuts or milk. This practice had a significant relationship with one's location at a P.value of 0,03. In fact, even in both focus group discussions, the weaning practice was not different in any way. It was however interesting to establish that some mothers gave even nshima or anything available as first supplementary food. Similarly, one study conducted in Zambia revealed that on the whole, weaning food was mainly cereal (Chibuye et al 1996).

Almost fifty percent of the respondents felt that the most ideal age of the child to stop breast feeding was 18 months. Neither literacy status nor location seemed to have had any significant influence on this opinion. It was however observed that respondents belonging to the same health centre gave the same answers. It is assumed that the answers they gave could have been according to what they were taught at their respective health centres. This perhaps explains the other findings that established that only about 52.77% of mothers with children of 24 months

and below were still breast feeding with no significant difference in the two locations.

Interestingly both practices of weaning and breast feeding seemed contrary to UNICEF and WHO, who have recommended that exclusive breast feeding be practised for the first six months of life and it should be continued into the second year of life while weaning food must comprise water, major electrolytes, proteins, vitamins and carbohydrates for it to be nutritious (Siyandi 1996, Garza and Butle 1995).

IMMUNISATION

The majority of respondents (62%) did not know the child's age at which measles vaccine is administered. There was no association between one's knowledge and literacy status. The factor responsible for this could be lack of health education by some health workers.

Most of the children, 76% were fully immunised although this is less than the 80% recommended immunisation coverage. The full immunisation status seemed to largely depend on regularity and commitment to outreach activities by health workers especially in the rural setting. Majority of the children missed DPT and Polio boosters. These findings concur very well with the ZDHS (1996) survey that reported that 78% of infants were fully immunised according to National Immunisation Policies. The percentage of children who missed the vaccination seemed small in that the current policy directs health workers to give the vaccine which the child missed at possible earliest contact at the OPD (Out Patient Department). The other possible reason could be the much emphasis made by health workers on the importance of immunisations as commented by the health workers in the focus group discussion. This is also supported by a study conducted in Uganda that revealed that parents placed immunisation first on the

priority list of aspects that are important for child survival and child health (Karamagi 1990).

FAMILY PLANNING/CHILD SPACING

All the respondents were knowledgeable about the suitable age of the youngest child at which they could safely conceive. Their knowledge was not significantly related to their literacy status. However, it was not established whether mothers attach family planning to child health and child survival.

Very few mothers (19%) were using modern family planning. There was no association with both literacy status, parity and location. Interestingly, a research was done in Malawi where similar findings were attributed to literacy problems as well as powers vested in husbands to decide on family planning practices (Phiri 1993). The latter problem was however clearly spelt out in the focus group discussion of this study in which mothers mentioned that husbands are presently decision makers on whether or not the wife should use family planning. The findings concur with a survey done in 1996 which revealed that only 19% of child bearing women use family planning for child spacing (ZDHS 1996). Like in the ZDHS (1996) survey, the majority of the family planning users used the oral contraceptive despite the obvious problems associated with its use. There was a significant relationship with one's location at a P.value of 0.02.

DIARRHOEA HOME MANAGEMENT

The majority of respondents who did not know the constituents of home made ORS solution were illiterate. Literacy status had no significant influence on their knowledge. This opposes with an observation made by (WHO undated) who recommends the use of prepacked salts which reduce the risk of confusion between the amount of sugar and salt to be added to water. However, this

observation was expressed in both discussions with mothers and health workers, who did not agree on how to make ORS solution at home.

Very few mothers gave fluids in the absence of ORS to children with diarrhoea, while some gave their children traditional medicines. The findings were not significantly related to literacy status. This could mean that perhaps very few mothers are aware of the recommendations made by WHO (1990) who have emphasised the importance of treating diarrhoea and vomiting at home with administration of more fluids than usual such as cereal gruel and plain water unless the problem persists.

A small number of mothers gave their children home made ORS Solution made from sugar, salt, and water although the appropriateness in mixtures still remained questionable. Interestingly, these findings are opposed to those from a study conducted in Zambia in 1994 that revealed that 80% of the mothers used ORS packets or the recommended home made solution prepared from sugar, salt, and water (Nsemukila 1994).

It was established by both focus group discussions that rarely were talks given on diarrhoea management.

MALARIA PREVENTION

Almost 50% of the respondents either took no step at all or employed measures that did not protect the child from catching malaria. The findings revealed a significant association between one's literacy status and the preventive measure taken at a P.value of 0.003. It was also revealed in the focus group discussions with health workers that no health talks were given to mothers on malaria prevention at MCH departments.

5.1 IMPLICATIONS OF THE STUDY

The findings from the study revealed that some mothers had some limited knowledge, positive attitude and incorporated some child survival strategies in their child rearing.

Lack of adequate information about the importance of growth monitoring, family planning, exclusive breast feeding, Oral Rehydration Therapy, malaria prevention, lack of knowledge about food stuffs essential for the growth of their children were some of the hindrances to positive attitude, to knowledge and full incorporation of child survival strategies.

It has also been revealed in this study that some mothers from the same catchment area have similar attitude, knowledge and practice regardless of their literacy status except for malaria prevention and knowledge of ORS constituents. This shows that mothers with low formal education are teachable if given effective health education by using appropriate teaching skills.

While studies have shown that mothers' education status is perhaps the most important tool associated with child mortality and survival, it is also evident that the majority of mothers would incorporate child survival strategies once they are made to understand that when they do this, their children will not die and will lead relative healthy lives.

There is therefore hope that while female education is still very low in Zambia, mothers can be educated on the importance of incorporating child survival strategies. This is possible as long as they are empowered to decide to practice what they perceive as vital for child health and survival, and especially if they receive effective health education. The importance of these findings is that as long

as incorporating child survival strategies in child rearing is not achieved to the full measure, child mortality rates will continue to be on the increase and children will continue to grow in ill health regardless of their mothers' attitude, knowledge and educational status.

CHAPTER 7

CONCLUSION AND RECOMMENDATIONS

CONCLUSION

Knowledge and attitude have a very big impact on one's practice and behaviour. Availability of vital information and literacy status of mothers are among the important aspects that play a major role in the knowledgeable, development of positive attitudes and adoption of strategies that improve child health and child survival. This study has established that education/literacy status of women in rural Zambia is still very low. The few women with formal education are largely in the group within mediocre cohort which is below grade 12 full certificate.

Mothers have a fair level of knowledge about the importance of child survival strategies. They however, have poor knowledge about exclusive breast feeding making salt sugar solution for diarrhoea management (although they are able to mention its constituents).

Knowledge of malaria prevention measures is quite poor. Two factors seem to be responsible for these findings:-

- their mediocre education status and
- lack of vital information on issues that should be incorporated in child rearing as well as their impact on child health and child survival.

Mothers' attitude towards child survival strategies is negative especially regarding exclusive breast feeding, family planning. The attitude exhibited seems to be linked with the level of knowledge they have about the importance of the particular strategies, although this was not statistically tested.

Mothers in rural Zambia do incorporate poorly child survival strategies, in their child rearing practices inspite of their relative good knowledge and positive attitude about them. Their incorporation is very poor more especially in exclusive breastfeeding, weaning feeding, use of sugar and salt solution for diarrhoea, family planning and malaria prevention. It was also established that very little information is given to mothers by health care providers about the importance of some of these strategies. The reason for this scenario seems to be deficient knowledge among health care providers especially concerning exclusive breast feeding, home diarrhoea management and malaria prevention. This finding is worth exploring further as it was established from a very small scale (FGD). There is some evidence that mothers are not empowered to make decisions about health practices that promote child health and survival. This is because husbands are the main decision makers of issues related to reproductive health and child rearing in a family.

Immunisation coverage and growth monitoring are fairly good in villages where outreach programmes are still implemented, with very active community health workers. This is regardless of mothers literacy status. The quality of service and degree of commitment on the side of health care providers has a direct reflection on mothers practice.

Literacy status and one's parity have very little impact on the outcome of this study. However, the kind of literacy mothers have in rural Zambia is not very broad otherwise the majority would have been on formal employment such as teaching, management, secretarial work and nursing just to mention a few. On the contrary, very few are on such kind of employment, indicating that although some of them are literate, its degree is quite low. Similarly, one's location seems to predict only family planning and weaning practices such as food given. Literacy status seems to determine one's location.

Nevertheless, every mother would love her child to keep healthy and survive. Therefore, any vital information that ensures this will surely compel her to change her attitude and practice. Since no mother would love to go through the struggle of pregnancy, and labour, only to see her child die.

RECOMMENDATIONS

1. Mothers need more information on the importance of child survival strategies. Health providers will therefore require special training on effective delivery health education to clients of various educational status.
2. Incorporation of child survival strategies in places where MCH outreach activities are carried out is quite effective. Measures that would intensify MCH outreach activities need to be seriously addressed. Logistics and local needs will have to be looked into such as expanding the roles of the community health worker.
3. MCH I. E. C. Policy need to be drawn in order that important aspects that are not taught (such as importance of exclusive breast feeding, growth monitoring, diarrhoea management) are included in the health education campaigns.
4. Training programmes of health workers, community leaders and community health workers on Malaria prevention and home diarrhoea management should be put in place soonest.
5. A policy that will empower programme managers, service providers and community leaders to incorporate and educate men on their parental responsibility in promoting child survival and health such as provision of nutritious food and child spacing practice be drawn immediately.
6. Health and Social policy that will empower women to make their own decisions that promote the health of their own children should be put in place.

The present study should be considered a pilot study on which a larger one should be based with other variables added, that were not explored and possible factors responsible for poor incorporation of child survival strategies with setting comparison.

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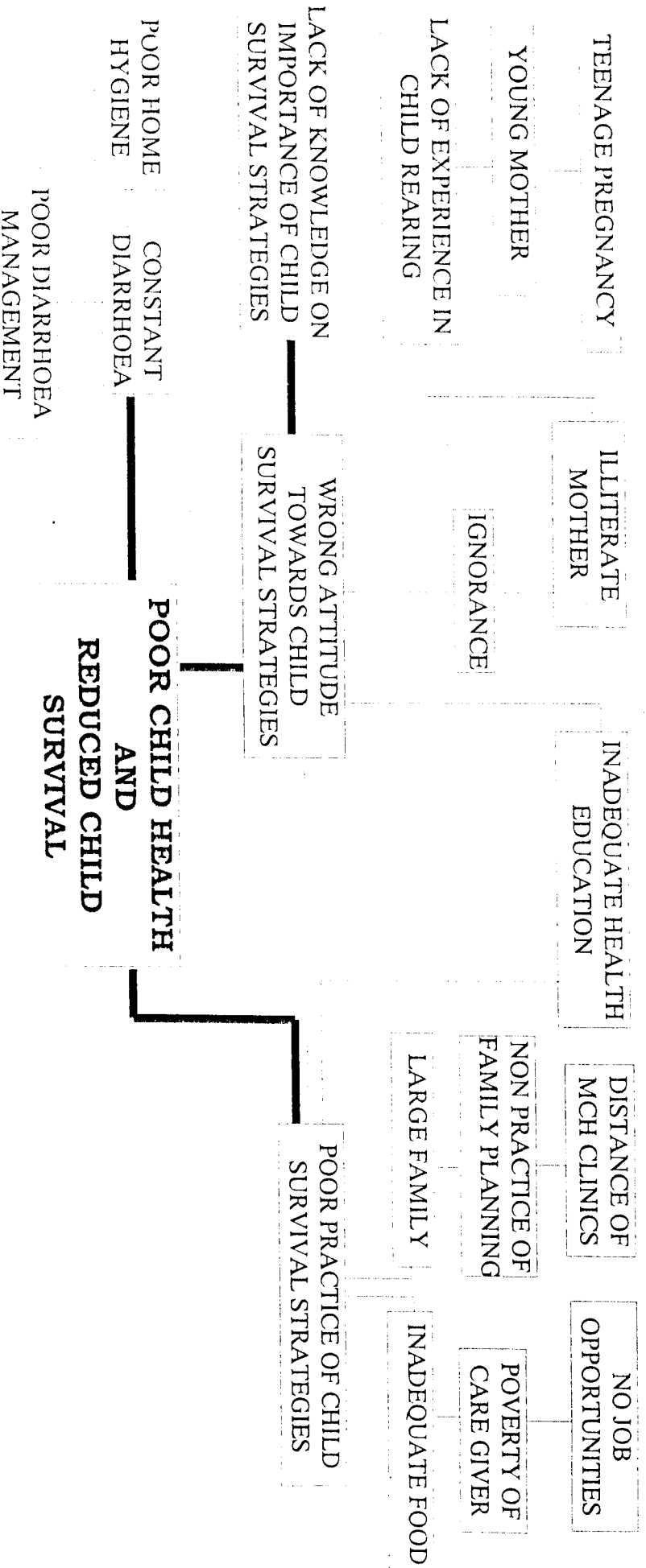
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ANNEX 1

VARIABLES

FACTORS CONTRIBUTING TO POOR CHILD HEALTH AND REDUCED CHILD SURVIVAL



*(SOME VARIABLES NOT EXPLORED)



NORTHERN PROVINCE

LUNENBURG PROVINCE

N/WESTERN PROVINCE

CIBOLA PROVINCE

LUSAKA PROVINCE

WESTERN PROVINCE

SOUTHERN PROVINCE

CENTRAL PROVINCE

EASTERN PROVINCE

CHITIMA

LUSAKA

CHIPATA

KATIMA MULILO

CHIPILO

PETAUKE



ANNEX 4

QUESTIONNAIRE No.
QNUM.
CLASSIFICATION OF
AREA OF RESIDENCE
LOCATION 1 = RURAL
2 = SEMI URBAN

UNIVERSITY OF ZAMBIA
SCHOOL OF MEDICINE
DEPARTMENT OF COMMUNITY MEDICINE
SEMI-STRUCTURED INTERVIEW SCHEDULE

TITLE OF THE STUDY

INCORPORATION OF CHILD SURVIVAL STRATEGIES IN MODERN CHILD
REARING AMONG MOTHERS IN CHIPATA DISTRICT - ZAMBIA:

A KAP STUDY

INSTRUCTIONS TO INTERVIEWERS

1. Firstly, introduce yourself to the respondents
2. Explain the purpose for collecting information
3. Let the respondent sign the consent form accordingly
4. Make sure the respondent meets the inclusion criteria
5. Do not write the name of the respondent anywhere
6. Ask all the questions in this questionnaire

SECTION A : DEMOGRAPHIC AND OTHER PERSONAL DATA

1. Age (age Mother)..... Date of Birth (DOB).....
2. marital Status (Marital)
1. Single 2. Married 3. Widowed 4. Divorced 5. Separated
3. Age in years of the child - Date of Birth (DOB Child).....
4. Number of children (Parity) -
5. Occupation (Occupy).....
6. Literacy Level (Literacy)
1. Literate 2. Non-Literate

7. Monthly Income. (Income)
8. Presence of Financial Support
 1. Yes
 2. No
9. Number of People Living together in your house (Number in house).....

KAP ON GROWTH MONITORING

10. Why are children weighed? (Why weigh)

1. For growth	1. Yes	2. No
2. To detect all diseases early	1. Yes	2. No
3. For prevention of diseases	1. Yes	2. No
4. To monitor child growth	1. Yes	2. No
5. Do not know	1. Yes	2. No
11. How often should your child be weighed in the first two years of life?
 1. Once a week
 2. Once a month
 3. Once in two months
 4. Do not know
12. Are you still taking your child for weighing? (Still Weighing)
 1. Yes
 2. No
13. At what age should you stop to take your child for weighing (stoop weighing)

1. At 2 years	4. At 5 years
2. At 3 years	5. Over 5 years
3. At 4 years	6. Do not know

KAP ON BREAST FEEDING

14. What is your view about giving the baby the breast only from one to six months?

1. It is good	3. It is not possible
2. It is bad	4. No comment

15. What food did you give your baby from one month to six months (food 1 - 6 months)
- | | |
|------------------------------------|-----------------------------|
| 1. Breast milk alone | 5. Artificial milk only |
| 2. Breast milk and water | 6. Breast milk and porridge |
| 3. Breast milk and artificial milk | 7. Others |
| 4. Artificial milk and water | |
16. At what age should a child stop to breast feed (stop breast feed)?
1. At less than 12 months
 2. At 8 months
 3. At 24 months
 4. At more than 24 months
17. Are you still breast feeding your baby (still breast feeding)
1. Yes
 2. No

KAP ON FEEDING AND WEANING

18. What first supplementary food did you introduce to your baby when started weaning him/her?
1. Other milk
 2. Porridge plain
 3. Porridge with milk
 4. Porridge with groundnuts
 5. Others
19. At what age did you introduce your baby to extra foods (extra food age)
- | | |
|----------------|---------------------|
| 1. At 2 months | 4. At 5 months |
| 2. At 3 months | 5. At 6 months |
| 3. At 4 months | 6. At over 6 months |
20. Who feeds your child (feeding child)?.....

21. Identify the foodstuff that is essential for the health of your baby (food essential)?
1. Groundnuts
 2. Okra
 3. Biscuits
 4. Plain porridge
22. Identify the foodstuff not essential for the growth of your child
1. Kapenta
 2. Nshima
 3. Fanta
 4. Mangoes

KAP ON IMMUNISATIONS

23. Which of the diseases listed below is prevented by child immunisation
1. Cough
 2. Meningitis
 3. Malaria
 4. Polio
 5. Diarrhoea
24. At what age in months should a baby receive measles vaccine (give measles vaccine)
1. At 6 months
 2. At 9 months
 3. At 12 months
 4. At more than 12 months
 5. Do not know
25. Is your child fully immunised?
1. Yes
 2. No
 3. Can not remember

21. Identify the foodstuff that is essential for the health of your baby (food essential)?
1. Groundnuts
 2. Okra
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 4. Plain porridge
22. Identify the foodstuff not essential for the growth of your child
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25. Is your child fully immunised?
1. Yes
 2. No
 3. Can not remember

GROWTH CHART

4. Check the growth chart and indicate how often the weighing of the child is done (how often weighing)
 1. Every month
 2. Every 2 months
 3. Not done regularly
 4. Stopped after immunisation period
 5. Not weighed at all
5. If weighing is done regularly or irregularly, indicate if the curve is (curve)
 1. Within the "road"
 2. Above the "road"
 3. Almost below the "road"
 4. Below the "road"

FAMILY PLANNING CARD

If in the interview, the mother has said she uses modern family planning, request for the card

6. Is the card available (card available 1? Yes 2. No
7. What family planning method is she using (FP method)?
 1. Contraceptive pill
 2. Injection
 3. Loop
 4. Condom

GROWTH CHART

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FOCUS GROUP DISCUSSION GUIDELINES WITH MOTHERS
(TO BE TRANSLATED IN LOCAL LANGUAGE)

Immunisation

1. What are the disadvantages of a child's incomplete or missing some immunisations?

Breast Feeding

2. What are your views about exclusive breast feeding?

Weaning Practices

3. What weaning food is readily available for a 6 months old baby?

Growth Monitoring

4. What are the benefits of taking your under-five children for monthly weighing?
5. What are the problems that hinder mothers from taking their children for weighing up to five (5) years?

Family Planning

6. What do you like about modern family planning methods?
7. What don't you like about modern family planning?

Oral Rehydration Therapy

8. How is home made ORS prepared?
9. What measures do you take when your child starts to have diarrhoea?

Malaria

10. How do you protect your children against malaria?

End of focus group discussion.

ANNEX 6

FOCUS GROUP DISCUSSION GUIDE FOR HEALTH WORKERS.

CHILD SURVIVAL STRATEGIES.

1. What are the child survival strategies?

GROWTH MONITORING

2. Why do mothers fail to bring their children after finishing immunisations and in between immunisations?
3. How do you make use of the baby's weight in 'the road to health' graph?

IMMUNISATIONS .

4. What could be the reasons for some mothers not bringing their children for immunisations?

BREAST FEEDING

5. What are your views about exclusive breast feeding in the first 4-6 months?

FEEDING/WEANING/NUTRITION

6. What type of weaning food should mothers introduce to their babies after exclusive breast feeding?
7. There after, what types of food should they give them at?
 - a. 9 months?
 - b. 12 months?
 - c. 18 months?
 - d. 24 months?

ORAL REHYDRATION THERAPY

8. What problems do you have in teaching ORT to mothers?
9. How is home made ORS prepared?

FAMILY PLANNING

10. What are the factors contributing to non utilisation of family planning services by some mothers?

MALARIA PREVENTION

11. What measures do you teach mothers to take to protect their children against malaria?

INFORMED CONSENT TO PARTICIPATE IN THE INTERVIEW ABOUT UTILISATION OF SERVICES AT THE MCH CLINICS.

Dear Madam,

My name is.....from Chipata School of Nursing with two other friends conducting a research on utilisation of services offered at Under 5 Clinics to Promote Child Health and Prevent childhood diseases.

We therefore wish to determine the knowledge, attitude and practice of mothers/care givers of the under - 5 years children on child care activities such as monthly weighing, immunisations, breastfeeding, issues of nutrition and general prevention of childhood diseases. This information is very vital for the improvement of child health in our district.

I am therefore requesting you to allow us to interview you. The information obtained will be treated with strict confidentiality.

Your participation in this study is voluntary. Would you like to participate in this study?

Tick the appropriate response.

YES { }

NO { }

SIGNATURE..... SIGNATURE.....

University of Zambia
School of Medicine
Department of Community Medicine
P.O. Box 50110
LUSAKA.

15th December, 1997

The Director
Chipata District Health Management Team,
P.O. Box 511205,
CHIPATA.

Dear Sir,

RE: REQUEST TO CONDUCT A RESEARCH STUDY

I am requesting to conduct a research study in your catchment district.

I am a student at the above mentioned school, currently studying for a Master's degree in Public Health (MPH). In partial fulfilment of the requirements for my studies, I am required to conduct a research in the field of health.

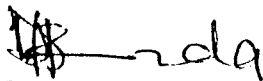
I am therefore requesting your office to grant me permission to carry out a study on "INCORPORATION OF CHILD SURVIVAL STRATEGIES IN MODERN CHILD REARING AMONG MOTHERS IN CHIPATA DISTRICT, ZAMBIA: A KNOWLEDGE, ATTITUDE AND PRACTICE SURVEY."

My study will involve interviewing mothers in Chipata Urban and rural as well as focus group discussions with mothers and with health care providers.

The findings will be very useful to your office for ensuring effective delivery of health care to promote child survival in your district.

Your approval will be greatly appreciated.

Yours faithfully,



Dorothy H. S. Banda (Mrs)



In reply please
Quote.....
No.....

REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH

CHIPATA DISTRICT
P.O. BOX 511205
CHIPATA

29th January, 1998

^D
Mrs. H.S. Banda
Chipata School of Nursing,
P.O. Box 510119,
CHIPATA

Dear Madam,

RE: RESEARCH PROTOCOL

In reference to your letter dated 15th December, 1997 in which you requested the District Director of Health to grant you permission for you to carry out a research in our District, I am happy to inform you that your request has been granted.

In case of clarity seeking or/and to gather more information about the matter please don't hesitate to contact Mr Muchayanshimbi B.L. Francis, the Acting Manager Administration for Chipata District.

Yours faithfully,

Muchayanshimbi B.L.F.
A/G Manager Administration
for/ACTING DISTRICT DIRECTOR OF HEALTH