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A STUDY TO DETERMINE PREGNANT WOMEN'S KNOWLEDGE, ATTITUDES AND PRACTICES TOWARDS PREMATURITY IN MACHA - CHOMA

BY:

MAULAO STEPHEN MBUZI

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THE UNIVERSITY OF ZAMBIA

SCHOOL OF MEDICINE

DEPARTMENT OF POST BASIC NURSING

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MAULAO STEPHEN MBUZI

LUSAKA SCHOOL OF NURSING (ZRN 1996)
LUSAKA SCHOOL OF MIDWIFERY (ZRM 2001)

A STUDY SUBMITTED TO THE DEPARTMENT OF POST BASIC NURSING, SCHOOL OF MEDICINE, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE BACHELOR OF NURSING DEGREE.

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Lastly but not definitely the least, my family for sacrificing during my prolonged absence from home. I say thank you to them.

LIST OF ABBREVIATIONS

AIDS	:	Acquired Immuno Deficiency Syndrome
ANC	:	Antenatal Clinic
CHW	:	Community Health Worker
CSO	:	Central Statistical Office
HIV	:	Human Immune Virus
IEC	:	Information, Education and Communication
IMF	:	International Monetary Fund
MMD	:	Movement for Multi-party Democracy
NICU	:	Neonatal Intensive Care Unit
RDS	:	Respiratory Distress Syndrome
SADCC	:	Southern Africa Development Coordinating Committee
SAP	:	Structural Adjustment Programme
SBCU	:	Special Baby Care Unit
TBA	:	Traditional Birth Attendant
tTBA	:	Trained Traditional Birth Attendant
UNICEF	:	United Nations International Children's Emergency Fund
UNZA	:	University of Zambia
VLBW	:	Very Low Birth Weight

DECLARATION

I hereby declare that the work presented in this research for the Bachelor of Science degree in Nursing has not been presented wholly or in part for any other Bachelor of Science Degree and is not being currently submitted for any other degree.

NAME: MAULAO STEPHEN MBUZI

SIGNED: ..... DATE: 17.03.05

(**CANDIDATE**)

NAME: PRUDENCIA MWEEMBA

SIGNED: ..... DATE: 17/03/05

(**SUPERVISING LECTURER**)

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BASIC NURSING
SCHOOL OF MEDICINE

STATEMENT

I hereby certify that this is entirely the result of my own independent effort and investigation. The various persons and sources to which I am indebted are indicated in this project.

SIGNED: .....

DATE: 17.03.05

(CANDIDATE)

DEDICATION

This study is dedicated to my old mother who struggled to make sure that I went to school though herself never did and has seen me until this time and who the Almighty God has blessed.

ABSTRACT

Infant mortality continues to be a major concern in Zambia with most causes being preventable. One of the major causes of infant mortality is prematurity which could be prevented. Most interventions to combat infant mortality focus on treating or preventing childhood diseases rather than problems occurring in mothers before and during pregnancy. Infant mortality is an important social health indicator of the country's performance in the socio-economic and health system. This expresses the need for the government to prioritise maternal and child health in order to prevent prematurity.

The main objective of the study was to determine the knowledge, attitudes and practices of pregnant women towards prematurity in Macha catchment area of Choma District in Southern Province.

The literature review was from different scholars and it looked at the global, regional and national perspectives. This was based on a number of factors for example service related factors, socio- cultural related factors, economy related factors and disease related factors and their influence on pregnant women's knowledge, attitudes and practices towards prematurity.

The study used non-experimental, exploratory, qualitative and quantitative method. A pilot study was done at Macha Hospital Antenatal Clinic between

August and September 2004. The research subjects were fifty (50) pregnant women selected randomly as they attended antenatal clinic. Data were collected using a structured interview schedule from the selected subjects and two (2) focus group discussions of five informants each. Data analysis was done manually with a pocket calculator. The findings were presented in form of frequency tables, and cross tabulations.

The results from the study revealed that majority (78%) of the pregnant women had poor level of knowledge towards prematurity and this was attributed to inadequate information, education and communication (IEC) at the health centre. Many (76%) pregnant women did not understand the importance of booking and attending antenatal clinic as very few booked at 1 to 3 months and many attending less than four (4) times in their previous pregnancies. Many (32%) respondents neither knew the signs of a premature baby nor did they know how to care for the baby. Although many (96%) of respondents had heard about a baby born prematurely and all (100%) pregnant women indicated that they sought medical aid at the health centre if/when they experienced problems very few decided on their own to do so as this was because the decisions were made by their husbands and mothers' in-law. This shows that medical personnel and the health care system have a lot of challenge to give adequate IEC to pregnant women on prematurity.

The District Health Management team and Macha Mission Hospital should ensure that more traditional birth attendants are trained and supervised. An emphasis on community participation in the District should be given and the referral system strengthened.

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND INFORMATION

Zambia is one of the landlocked countries in Central Africa. It has seven (7) neighbours that include Angola, Botswana, Democratic Republic of the Congo, Malawi, Mozambique, Namibia, Tanzania and Zimbabwe. She harbours a total population of 10.3 million people going by the 2000 Central Statistical Census of Population and Housing with an area of 753,000 square kilometers. The growth rate stands at 3.6% per year.

Zambia is divided into nine (9) provinces namely; Central, Copperbelt, Eastern, Luapula, Lusaka, Northern, North-Western, Southern and Western. These provinces are further divided into 72 districts with 73 tribes (Nsemukila, B. et al 1990). Zambia has a sparse population distribution when one looks at its population of 10.3 million (CSO, 2000) in comparison with the 753,000 square kilometers. This gives a population density of 13.7 people per square kilometer. Despite this seemingly low density of population, the population is more concentrated in urban areas especially along the line of rail and in big towns than rural areas. This set up also favoured the location of health facilities and health financing which is more to the urban areas. This implied that people in rural areas had to walk long distances to get to a health facility. Thus there was the need to review its medical care services that it inherited at the time of attaining the country's independence in October 1964. This was followed by the declaration of free medical care for all by the government. The emphasis then was curative rather than preventive which led to many problems as the population growth was faster after independence.

Zambia has a mixed economy consisting of a modern and urban oriented sector confined to the line of rail and a rural agricultural sector. The modern sector was dominated by parastatal organisations while the private sector had been predominant in construction and agriculture. Copper mining was and still is the country's main economic activity accounting for 95% of export earning. The situation changed sharply following the decline in world copper prices in the late 1974 and 1975. In 1978 there were some improvement in prices but these dropped sharply in 1981 and 1982. This fall, rising oil prices and the slow pace of industrialisation with a heavy dependence on imports worsened the situation.

In spite of the improvement in copper prices in 1989, Zambia experienced a shortage of foreign exchange. This was largely attributed to the decreased volume of copper sales associated with difficulties in production. Essential commodities continued to be in short supply and inflation level was very high. Due to this decline in the national economy, the provision of social services such as health care and education were drastically affected. In order to stop this devastating economic recession the Movement for Multiparty Democracy (MMD) Government launched an economic recovery programme in 1992. This was referred to as Structural Adjustment Programme (SAP). This refers to a range of economic policies that are supported by loans from the International Monetary Fund (IMF) and World Bank, undertaken to strengthen the balance of payment and slow down the growth of demand in the economy and devaluing the exchange rate and to increase the economic efficiency by shifting towards a more market oriented economic system. This process of adjustment was generally sparked off by an economic crisis as the country was not able to borrow enough money to service its debts. This called for more borrowing of money from IMF and the World Bank but this money is borrowed at concessional interest rates.

The Structural Adjustment Programme also implied that the Zambian Government had to restructure its structures by massive retrenchment of government workers. This has led to escalating poverty levels in the country that, in turn, has affected the health status of the people. This poor health status also affects the people in the Macha catchment area as the profile shows below.

1.2 CATCHMENT AREA HEALTH PROFILE

Macha catchment area is situated in Choma District of the Southern Province in Chief Macha's area. It is sited 70 kilometers from Choma Town via the gravel Choma-Namwala road on an area of 2,500 square kilometers with a catchment population of 158,543 (Macha Hospital Information Office Report, 2004). The area is a plateau land on an altitude of 900 meters above sea level. The population is predominantly Tonga by tribe and language. It comprises mainly the Chiefdom of Macha and parts of the three neighbouring Tonga Chiefdoms of Chikanta in Kalomo District to the west, Siachitema to the south and Mapanza to the east in Choma District, and it borders on the Ila Tribe to the northwest in Chief Muchila's area of Namwala District.

Macha area is a typical rural set-up situated in Choma Rural with no industries. The population is primarily all of the Tonga speaking tribe living in small homesteads consisting of usually one of extended family. The primary livelihood is subsistence farming with maize being the main crop grown. The diet is supplemented with peanut, sweet potatoes and other leafy vegetables as relish. Most farmers in the area own cattle that are sold for cash and provide sources of protein in their diet. Cattle are also used for farming. This area, like many other in the province, experienced drought. This contributes to low harvests resulting in inadequate food in households coupled with the high unemployment levels in the country.

Macha catchment area is accessible by road through the Choma-Namwala Road. The road has become very bad especially with the just ended rainy season. Roads within the catchment area have become impassable. There is no telephone network to the outside world except at the Mission Hospital which has a radiophone link with the District Health Office in Choma, Kalomo, Sinazongwe and some rural health centres in the area. There is a privately owned electronic e-mail system owned by the Macha Malaria Research Institute. Though the catchment area for the hospital is poorly defined the immediate area includes a radius of 40 kilometers with an estimated population of 158,543. However, being the major referral centre for the thirteen (13) out lying rural health centres and Namwala District Hospital (128 km away), the hospital's total catchment population is much larger. Though the immediate area of the hospital is poorly defined, there is distinctly only one hospital, Macha Mission Hospital and thirteen rural health centres in the area. The health services are offered at different levels i.e. community (health post); rural health centre and first level referral care at the hospital. The services delivered include: -

(a) Outpatient
(b) Inpatient
(c) Maternal and child health
(d) Laboratory
(e) Radiology
(f) Primary Health Care and
(g) Research

The top five causes of morbidity and mortality among the under five children include: -

1. Malaria
2. Pneumonia

3. Prematurity
4. Protein Energy Malnutrition (PEM)
5. HIV/AIDS

There, also, exists a Zambia Enrolled Nurse Training School at the only hospital in the area. The health care providers endeavour to give IEC to the people in order to meet their health needs. But the households/families are unable to meet the health needs due to high poverty levels. Most households are not able to afford the descent basic human needs such as shelter, food, clothes and health care which predispose women to harsh conditions that lead to disease and illness. Ranking high is malnutrition with consequent anaemia affecting pregnant women mostly. This is usually associated with low birth weight, prematurity, ill health in pregnancy etc in women. Women are also forced to work long hours and less time to care for their children or even themselves when ill. Maternal morbidity and mortality has increased then especially with the introduction of user fees in health institutions which has seen an increase in home deliveries (CSO, 2000).

Children have been affected in the same manner, as they are the most vulnerable. Removal of food subsidies and reduced nutritional capabilities of children resulted into many of them (40%) being malnourished (ZDHS, 2001-2002). Malnutrition in children predisposes them to diseases which further lead to a high infant mortality rate. The malnutrition state also affects their educational performance and outcome as they are not able to develop well mentally and physically. The introduction of fees in Zambian schools also saw a lot of children stopping school and going on to the streets where conditions are so harsh that the children easily acquire diseases. Many girls are married off at an early age thus predisposing them to pregnancy complications and the deadly HIV/AIDS.

1.3 STATEMENT OF THE PROBLEM

Prematurity still remains a major problem in developing countries including Zambia. The risk of death in infancy of a premature baby is higher than that of a full term and normal birth weight baby. There is a very high mortality rate of low birth weight babies including pre-term ones born in less developed countries according to most authorities in this subject.

Chisoko (1988) states that about 95% (21,000,000) of the world's estimated 22 million low birth weight babies are born annually in developing countries.

Davies (1972) in his study at Wusakili Hospital in Kitwe, Zambia, showed the incidence of low birth weight babies was 11.14% with a perinatal mortality of low birth weight babies of 337/100,000. Malambo (1979) showed that none of the babies who weighed 0.50 – 1.00 kg and who were born at UTH survived. Approximately 2/3 of all low birth weight babies are pre-term.

Premature labour and subsequent delivery of low birth weight affects the psychological and emotional well being of the mother. Most times she has to stay back at the mothers' shelter while she comes to look after the premature baby at the special babies' care unit (SBCU). At the shelter, mothers undergo a lot of social deprivation as conditions are far from being comfortable. Besides, there is an economic demand on the family as its members struggle to meet the financial demands of hospitalization of the mother and her baby who is preterm.

Preterm babies have a high morbidity and mortality. The most common conditions that preterm babies suffer from include respiratory distress syndrome (RDS), apnoeic attacks, jaundice, impaired thermo homeostasis, feeding problems, functional intestinal obstruction, necrotizing enterocolitis, infections and intra ventricular or subarachnoid haemorrhage.

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It is also very expensive for the country to care for low birth weight babies as the provision of medical and nursing care in terms of their care continues to escalate due to the advancement in medical technology.

The care requires highly trained and skilled staff that should impart adequate knowledge, the right attitudes and practices to pregnant mothers through information, communication and education as they attend antenatal care. The knowledge, attitudes and practices of mothers towards the care of pre-term and low birth weight babies is not known hence this study attempts to identify the knowledge, attitudes and practices of pregnant women towards prematurity.

1.4 FACTORS CONTRIBUTING

The factors that may contribute to inadequate knowledge, negative attitudes and practices towards prematurity among expectant mothers may include:

1.4.1 Service Related Factors

(i) Bad Staff Attitudes

Good care to pregnant mothers comprises the ability of health workers to give the required care with the view and aim that the end result of pregnancy is a healthy mother who has undergone pregnancy, labour and delivery normally and a normal healthy neonate. This reduces the high rate of perinatal, neonatal and infant mortality. If in any event staff providing care to these women are bad or have bad attitudes the women will not attend antenatal clinics. This is because of the fears the pregnant women develop which finally leads to lack of knowledge and bad attitudes

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and practices towards premature labour and delivery with the consequence of prematurity.

(ii) **Shortage of Staff**

For care to be given to antenatal mothers in a satisfactory manner there is need to have adequate staffing. This is not the case in our health institutions as there exists a critical shortage of staff especially nurses and midwives. This leads to inadequate health education and staff not doing thorough procedures in antenatal clinics. Women end up lacking in knowledge, positive attitudes and practices towards prematurity.

(iii) **Long Distance to Health Facility**

Easy access to health facilities by pregnant women is very important and encourages them to attend antenatal clinics for screening, check ups, treatment and health education on the various topics to ensure a successful pregnancy outcome. Long distance to these health facilities available may make it difficult for pregnant women to have an access to and seek medical care and advice from these health facilities. Transport is not available always or not there at all to take the pregnant women with antenatal problems likely to end up in premature labour and delivery to the health facilities. This prevents pregnant women from seeking advice and health education in relation to prematurity.

(iv) **Poor Referral System**

Continuity of care is assured when this care is offered at all the levels starting from the community, health post, rural health centre, first level hospital, second level hospital and third level (central) hospital. Failure at any point on this line to diagnose and recognise danger signs of pregnancy liable to causing premature labour and subsequent prematurity may result in lapsity in the care these pregnant women are to receive. Even when danger signs of pregnancy are diagnosed and recognised early transportation may not be recommended to take these pregnant women to the next level of care either because there is no transport or the roads are in a bad shape. That means that pregnant mothers are not reaching the expert care in the management of the danger signs of pregnancy and premature babies.

1.4.2 **Socio-Cultural Related Factors**

(i) **Age**

The age at which women become pregnant can influence their knowledge, attitudes and practices towards premature labour and prematurity. Some girls become pregnant at an early age either due to unwanted pregnancies or due to being married off by parents. Young teenage mothers may shun the antenatal clinics where they are health educated on possible complications of pregnancy leading to premature delivery. This may be because they feel shy. Pregnant older women may not see the need to go for antenatal check ups because they are shy as well or do not want to be attended to by young nurses and midwives. Thus, their lack of knowledge, bad attitudes and practices towards prematurity will continue.

(ii) **High Parity**

Pregnant women with their fifth or more pregnancies may feel they have the experience of pregnancy, labour and delivery. This makes them not to attend antenatal clinic sessions where they are taught on the importance of care in pregnancy, labour and delivery and thereafter. This contributes to their low level of knowledge, bad attitudes and practices towards prematurity that may contribute to the high number of perinatal, neonatal and infant mortality. This could be due to their failure to seek medical care when premature labour and delivery occur at home.

(iii) **Low Education Level**

It is assumed that women who are educated or at least have gone high in education assimilate information better than those women who are not educated at all (ZDHS 2003). Thus uneducated women may not appreciate what they are taught at the antenatal clinics in relation to premature labour and delivery. Education levels are very low in rural areas especially for girls who are either withdrawn from schools to marry or become pregnant and stop school at a young age.

(iv) **Traditional Taboos and Beliefs**

Our Zambian society has traditional taboos and beliefs that women hold in relation to pregnancy, labour and delivery. For example, in certain sectors of our society especially the traditional sector some traditions prescribe that women should not seek antenatal clinic care for their first pregnancies or start using family planning methods before one delivers her first baby. It is such practices that prevent most of our women, especially, in rural areas where these taboos and beliefs are deep rooted not to be educated on the danger signs of pregnancy, pre-term delivery,

importance of antenatal care, what to do when a mother delivers a premature baby etc. This has an influence on the pregnant women's knowledge, attitudes and practices towards prematurity.

(v) **Home Deliveries and Supervision by Untrained TBAs**

Women follow and value what their experiences have been previously. If they deliver in villages or homes this sets a trend in the end and coupled with the supervision they received from untrained traditional birth attendants, will make these pregnant women not to see the need to attend antenatal clinics. This means they will not be taught on various topics including premature labour and delivery which will affect their knowledge, attitudes and practices they will have towards prematurity.

(vi) **Influence of Traditional Healers**

Influence of traditional healers may play a significant role in the knowledge, attitudes and practices these pregnant women may have towards prematurity.

1.4.3 Economic Related Factors

(i) **Poverty**

Most families especially in rural areas are poverty stricken. They cannot manage the basic necessities such as food, decent clothing, shelter etc. Poverty of these pregnant women may influence their knowledge, attitudes and practices towards premature labour and delivery. These women will concentrate on making ends meet by, working harder and for longer periods even up to the time they need rest in pregnancy. Thus, they are likely to deliver premature babies because either they do not know (lack knowledge) or they

know but cannot practise what they know. In addition poverty predisposes to poor nutrition in pregnant women that further increases the chance of these women getting diseases. These diseases may lead to premature labour and delivery.

(ii) **Low Family Income**

The inability of families to secure adequate incomes to sustain themselves can have a great influence on the knowledge, attitudes and practices in one way or another towards prematurity. The family's concentration is put on trying to secure food, clothes, shelter and other necessities other than on the health of pregnant women. This to a great extent affects the health, knowledge, attitudes and practices of these pregnant women. This means that the health needs of pregnant women are not taken to be a priority for families. Health seeking behaviours of pregnant women are not positive and that even conditions predisposing to premature labour and delivery are not identified and treated. Mothers may deliver prematurely in homes on their way to the health facility that may not be healthy for both the mother and her premature baby.

(iii) **Inadequate Community Resources**

The extent to which the community assists pregnant women in relation to their health plays an important role in ensuring that these pregnant women are healthy in pregnancy, labour and soon after. Assistance and resources in the community maybe in form of health education on the importance of antenatal care, good nutrition in pregnancy, rest in pregnancy, treatment of sexually transmitted infections in pregnancy etc and the material things. These material items can be given to pregnant women in times of

need which may include food and transport to the health facility for expert care of premature labour, delivery and the premature baby. This can reduce the high perinatal, neonatal and infant mortality rate.

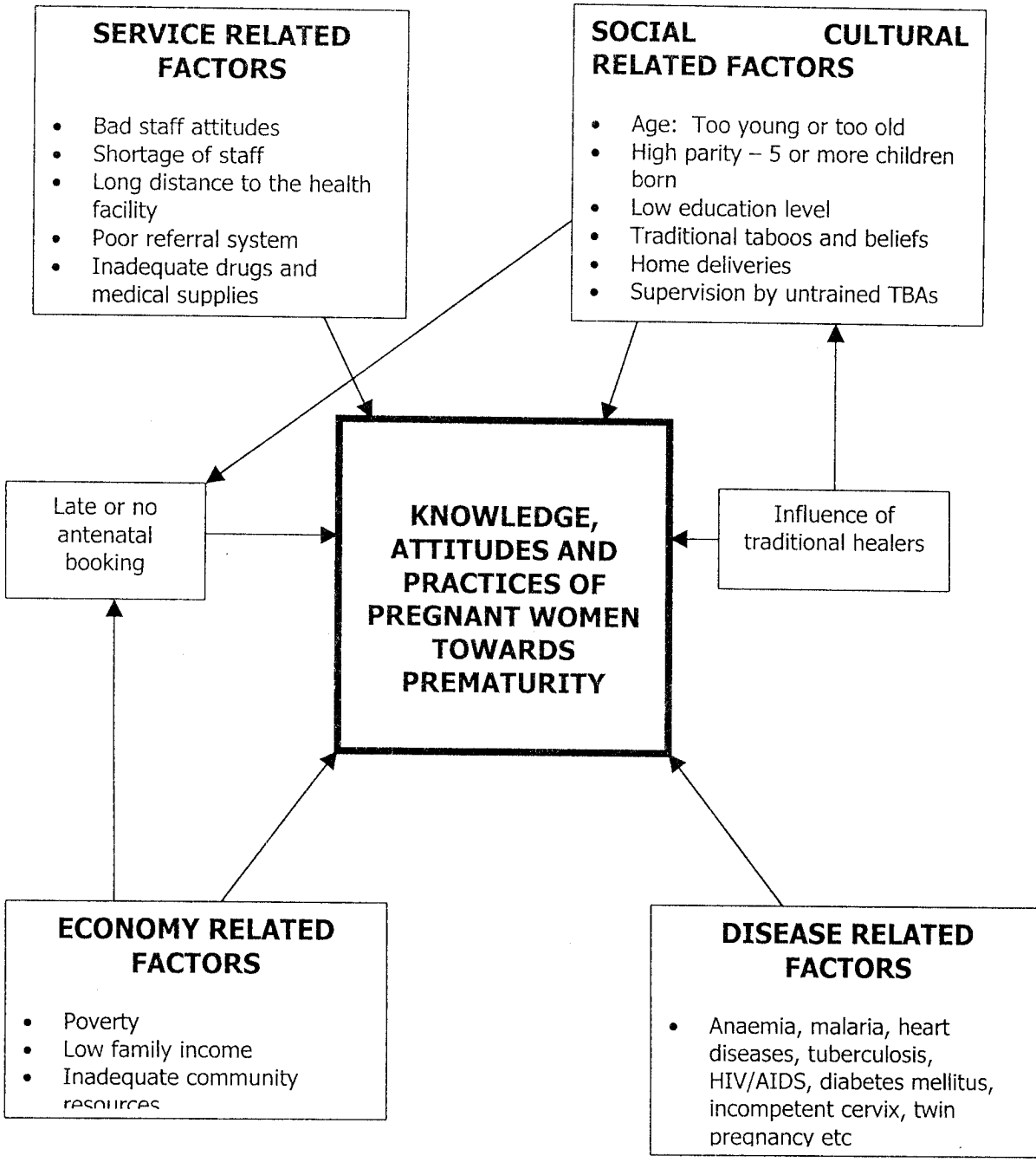
1.4.4 Disease Related Factors

Diseases may lead to women having premature labour and delivery. The important role is to empower pregnant women so that they know the diseases that are associated with premature labour and delivery. This can be done through health education in the community and health facility. Lack of this process may influence pregnant women's knowledge, attitudes and practices towards these diseases. These diseases include anaemia, malaria, heart diseases, tuberculosis, HIV/AIDS, incompetent cervix, twin pregnancy etc. The lack of knowledge on the seriousness and the threat these pose to the health of pregnant women and successive pregnancies may influence the knowledge, attitudes and practices towards their health seeking behaviour from the available health facilities in the catchment area.

1.4.5 Other Related Factors

(i) Late or failure to book for antenatal care due to the various reasons mentioned above may greatly affect the knowledge, attitudes and practices pregnant women have towards prematurity. Thus because pregnant women are not able to attend antenatal clinics or book late when complications may have already taken place and prematurity is eminent with a very high chance of neonatal loss at home, on the way to the health facility or right after arrival.

1.5 **FIGURE 1: DIAGRAM OF POSSIBLE FACTORS THAT MAY INFLUENCE THE KNOWLEDGE, ATTITUDES AND PRACTICES OF PREGNANT WOMEN TOWARDS PREMATURITY**



1.6 JUSTIFICATION FOR THE STUDY

This study sought to address the knowledge, attitudes and practices of pregnant women towards prematurity with the view of reducing the mortality of premature babies.

Previous studies have been done on prematurity in relation to mortality, incidence and the associated factors, care of premature babies and their survival rate. Davis, (1972) in a study done at Wusakili Hospital in Kitwe, Zambia focussed on the incidence of prematurity. This study was followed by another done by Malambo in 1979 on the survival rate among premature babies at the University Teaching Hospital. Both these studies did not bring out the knowledge, attitudes and practices of pregnant women towards prematurity. Thus there was still a gap that had to be filled in. Hence this study was done to fill in the gap for the mothers' knowledge, attitudes and practices can play an important role in the reduction of the high neonatal and infant mortality in Zambia.

This study needed to be done because when pregnant women are well informed about the importance of antenatal care, danger signs of pregnancy and the possible associated factors to premature labour, delivery and care of the infant, they are more likely to be able to attend antenatal clinics and recognise the factors associated with premature labour and early delivery. They will also seek medical advice early. The information from the research is going to help in the identification of the gaps in the provision of antenatal, intranatal and postnatal care of mothers and their babies.

The information gathered will be used in the formulation of policies by the makers to come up with strategies to prevent the occurrence and or reduce the incidence of prematurity and associated neonatal and infant mortality. This will

in the end contribute to the economic development of Zambia, as children are the future of any country.

1.7 OBJECTIVES

1.7.1 GENERAL OBJECTIVE

To determine the knowledge, attitudes and practices of pregnant women towards prematurity.

1.7.2 SPECIFIC OBJECTIVES

(i) To determine the level of knowledge of pregnant women on prematurity.

(ii) To determine the attitudes of pregnant women towards prematurity.

(iii) To identify what pregnant women do when they experience conditions that threaten the viability of the pregnancy.

(iv) To find out the factors that influence the knowledge, attitudes and practices towards prematurity of the pregnant women.

(v) To identify gaps in the provision of midwifery care towards pregnant women in relation to prematurity.

(vi) To come up with recommendations from the research findings on prevention and management of pregnant women likely to deliver premature babies to policy makers and health providers.

1.8 HYPOTHESES

(i) Lack of or inadequate information, education and communication on factors leading to prematurity contribute to delayed health seeking behaviour.

(ii) The higher the level of knowledge of pregnant women on prematurity, the more likely they are to seek care early.

(iii) The more educated pregnant women are, the more likely they are to assimilate what they are taught in relation to prematurity.

1.9 OPERATIONAL DEFINITIONS IN THIS STUDY

(i) **Knowledge**: Being able to mention the associated factors of prematurity.

(ii) **Attitudes**: The way respondents perceive and view things e.g. relation to prematurity.

(iii) **Practices**: Measures commonly taken when pregnant women have associated factors to prematurity or have a premature baby.

(iv) **Parity**: The number of children a woman has given birth to.

(v) **Prematurity**: A situation where a baby is born after 28 weeks of gestation but before the 37^{th} week regardless of the birth weight.

(vi) **Premature Labour**: Any labour occurring after 28 weeks of gestation but before the 37^{th} week regardless of the outcome of the process i.e. still birth, live birth etc.

(vii) **Labour**: The process by which the products of conception (placenta, membranes, liquor amni and the foetus) are expelled through the birth canal by the mother's effort.

(viii) **Low Birth Weight**: Any baby born with weight less than 2.50 kg regardless of the gestational age.

(ix) **Perinatal Mortality**: Refers to all stillbirths and all neonatal deaths occurring in the first week of life.

(x) **Perinatal Mortality Rate**: The number of stillbirths and deaths in the first week of life per 1000 births.

(xi) **Neonatal Mortality**: The number of neonatal deaths per 1000 live births in one year.

(xii) **Infant Mortality Rate**: The number of deaths of children aged under 1 year per 1000 live births.

1.10 VARIABLES

1.10.1 Definition

A variable is an empirical property that is observed to change by taking more than one value or being of more than one kind.

1.10.2 Types

There are basically two major types of variables that is: -

(i) Dependent Variables.
(ii) Independent Variables.

1.10.3 Dependent Variable

A dependent variable is a variable which is observed and measured to determine the effect on it of the independent variable or it is that factor which varies as the researcher manipulates the independent variable e.g. knowledge, attitudes and practices.

1.10.4 Independent Variable

An independent variable is a variable that is measured, manipulated, or selected by the researcher to determine its relationship to an observed phenomenon, the dependent variable e.g. age, parity, level of education, inadequate IEC etc.

TABLE 1: VARIABLES, INDICATORS AND CUT OFF POINTS

	VARIABLE	INDICATOR	CUT OFF POINTS	QUESTION
1.	KNOWLEDGE	Bad	(0-5/12) She did not know the importance of attending ANC during pregnancy, regarded premature labour as one starting at 37-40 weeks, did not know the weight of a full term baby, the appearance of a premature baby the dangers it faces and how to care for it.	9, 12, 13, 17, 18, 19
		Good	(6-8/12) She knew the importance of attending ANC during pregnancy, regards premature labour as one starting before 37 weeks, knew the weight of a full term baby, how it appears, the dangers it faces and how to care for it.	
		Excellent	(9-12/12) She knew the importance of attending the ANC in pregnancy, regards premature labour as one starting before 37weeks, knew the weight of a full term baby, how it appears, the dangers it faces and how to care for it.	
2.	ATTITUDE	Bad	(0-5/11) She highly believed in 2 or more beliefs, she did not think prematurity is a serious problem to both the mother and baby, would not seek medical aid if she developed problems in pregnancy; did not think the ANC is within a walking distance, did not attend all-end-visits in all her pregnancies; described her relationship with health facility staff unacceptable; did not think the health facility had trained midwives to manage her labour and care for her baby and she did not think the relationship could affect her use of the health facility.	22, 23, 24, 25, 27, 28, 31

		Good	(6-11/11) She did not believe in any belief, thought prematurity is a serious problem to both the mother and her baby; she would seek medical aid if she developed problems in pregnancy; thought the ANC was within a walking distance; attended ANC visits in all her pregnancies, described her relationship with health facility staff acceptable and she thought the health centre had trained midwives to manager her labour and care for her baby.	
3.	PRACTICE	Bad	(0-4/8) She did not attend ANC in her last pregnancy, started her ANC attendance after 6 months, had had 3 or less antenatal visits, sought help from relative(s)/friend(s), neighbour, TBA, traditional healer etc, did not decide herself to and delayed to seek medical aid for more than 24 hours or never did so at all.	33, 34, 35, 38, 39, 41.
		Good	(5-8/8) She attended ANC during her last pregnancy, started her ANC visits before 6 months, had 4 or more ANC visits, sought help from a health worker or tTBA and decided to seek medical aid, and left immediately/same day for medical aid.	

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

Literature review is a critical summary of research on a topic of interest, generally prepared to put a research problem in context or to identify gaps and weaknesses in prior studies so as to justify a new investigation.

(Polit and Hungler, 1995).

This literature review is mainly on the knowledge, attitudes and practices of pregnant women towards prematurity and how these influence neonatal and infant mortality. It presents literature from various works of scholars from all over the world. The review has been arranged in three perspectives that is Global, Regional and National perspectives. The purpose of this literature review was to determine what was already known and documented about the topic of study in order to obtain the picture of the state of the knowledge, attitudes and practices of pregnant women towards prematurity comprehensively. It also gives the researcher ideas as to the methodology and instruments that other researchers have used before. This therefore, gives the researcher the information on what have not been done or tried in regard to approaches, methods and types of data collection instruments in existence and as to which ones work or not. This also assists the researcher to refine certain areas of the study.

2.2 GLOBAL PERSPECTIVE

Mutale (1995) quoting Hugh and Malcolm (1990) stated that of the worldwide 21 million low birth weight babies in 1979, 90% (i.e. more than 18.9 million) were in developing countries.

The Indian subcontinent had the highest proportion of low birth weight babies (13%) compared with Asia (excluding India) 20%, Africa 15%, Latin America 11-13%, and Europe and North America 7-8%. More than 7 million low birth weight babies are born every year in India.

Ghosh et al (1990) surveyed 27.394 consecutive singleton births in Safdarjung Hospital, a district hospital in New Delhi of whom 2,072 died (986 foetal and 1,096 neonatal) giving a perinatal mortality rate of 75/1000 births. He also stated that low birth weight infants suffer increased mortality rates during perinatal, neonatal and postnatal periods. In this study, they showed the hazards facing these low birth weight newborn infants in developing countries. It was observed that the perinatal mortality was lowest (i.e. 27/1000 births) in full term infants and increased to 137/1000 births in the 34-36 weeks of gestation group, and was more than 500/1000 births in those under 33 weeks gestation.

In a population based study done by Modi and Kirubakaran (1989) in Brazil, it was found that low birth weight babies were 17 times more likely to die in the perinatal period than babies weighing 2500g or more. Literature reviewed showed that perinatal mortality was very high among pre-term babies, being 5 times more than in the general population. Low birth weight babies comprised 71% of babies who died in the neonatal period and were 24 times more likely to die in the first month than babies with birth weights of 2500g or more.

Arroe and Pectesen (1985-1991) in their study in Denmark involving infants born at less than 28 weeks of gestation 35% (28) died in their neonatal period. This proves further that the survival rate of pre-term babies correlates well with their birth weight and gestational age.

2.3 REGIONAL PERSPECTIVE

Neonatal morbidity and mortality is of concern in all the regions of the world. UNICEF (1992) in its health statistics states that about 15 million children under the age of five were estimated to have died annually from 1980-1985 representing about 30% of all annual deaths in the world. The report further states that the majority of those child deaths occurred in developing countries and that a large proportion of them were preventable. The problem in these developing countries has attracted both local and international interventions or concerns. In many regions of the world low birth weight infants especially those prematurely born need special medical care and procedures aimed at stabilising their physiological systems. These usually require specialised equipment, highly skilled neonatologists all of which have proved to be expensive for the poor countries in the world including those of the Southern Africa, Southern Africa Development Coordinating Committee (SADCC) Region.

Kowa (1998) quoting Ballot et al (1996) who did a study in the Department of Paediatrics at a Johannesburg Hospital looked at the factors associated with poor prognosis or outcome in very low birth weight infants (VLBW). The study had the objective of evaluating predictors of poor outcome. It showed that low birth weight remained a reasonable basis for selecting infants for the expensive tertiary care.

Kamanga (1999) quoting Chamberlain (1995) who did a reference study in Mozambique concluded that febrile infections was a strong cause of pre-term labour and that malaria, anaemia and salaried work outside home were significant risk factors. He also articulated that lack of treatment in the health institutions or failure by pregnant women to attend antenatal clinic played a major role in the increased delivery of premature babies due to diseases.

Jacobson (1991) reports that in the safe motherhood Conference for SADCC countries held in Harare Zimbabwe in 1990, it was noted that lack of access to timely and effective health care was a critical problem in the whole SADCC Region. This is more related to the poor economic situation and the health systems in these countries. This poor economic state of the countries in the region makes it difficult for these countries to provide good antenatal care and treatment and even more difficult for the management of premature babies who require expert care in modern and expensive neonatal intensive care units.

2.4 NATIONAL PERSPECTIVE

Davis (1972) did a first study in Zambia at Wusakili Hospital in Kitwe. This study showed that the incidence of low birth weight in infants was 11.14% and perinatal mortality of 337/100,000. Malambo (1979) did another study at the UTH that showed that none of the babies born with a birth weight of 500-1000g survived. Mutale (1995) did a study at UTH on the survival rate of premature babies that showed that 38.89% among premature babies die. His results on the survival rate were as summarised in table 2 below:

TABLE 2: SURVIVAL RATE ACCORDING TO GESTATIONAL AGE

GESTATIONAL AGE (WEEKS)	NO. OF PREM BABIES ADMITTED	NO. OF BABIES SURVIVED	NO. OF BABIES DIED	%
>33	158	134	24	84.0
31-33	165	120	45	72.7
29-30	100	45	55	45.0
26-28	86	33	53	38.4
<26	16	1	15	6.3

He also concluded that the survival rate of premature babies is not only dependent on the gestational age and birth weight but that also on the skill of the nursing staff and the availability of modern neonatal intensive care units

(NICU) in the health institutions. In Zambia not all health institutions have these modern neonatal intensive care units. This is true especially in the rural areas. Chisoko (1988) attributed the high mortality among premature babies to lack of equipment in our institutions to manage the common conditions that premature babies suffer leading to a low survival rate especially among gross premature babies.

These conditions include respiratory distress syndrome (RDS), apnoeic attacks, jaundice, and impaired thermal homeostasis, feeding problems, intestinal obstruction, necrotizing enterocolitis, infections and intraventricular or subarachnoid haemorrhage.

Chisoko also identified certain factors among his subjects associated with the occurrence of premature delivery. He identified these factors either under social, cultural or economic factors. He observed that of the 50 women who had delivered premature babies 10% (5) had no formal education, 62% (31) went up to primary level, 18% (9) went up to secondary school and another 10% (5) went up to college level. Thus he concluded that the largest proportion of women in his study had only attained primary school level.

Among his subjects Chisoko also found that 72% (36) had fewer antenatal visits (i.e. 0-4) while 28% (14) had more than four antenatal clinic visits. He stated that there was a relationship between the educational level and the utilization of antenatal clinic care services that he also suggested has a bearing on the outcome of pregnancy. The income a woman got also seemed to have a bearing on the occurrence of prematurity among pregnant women. Chisoko observed that among the 50 subjects 82% (41) were in the lower income group, 8% (4) in the medium income and 10% (5) were in the high-income group.

Jacobson (1991) observed that limited education of pregnant women restricts their access to vital information regarding legal rights, health care and family planning.

Nsemukila (1994) in his research "Maternal and Childhood Mortality in Zambia, Trends and Determinants 1965-1992" observed that women in Zambia with little or no education tend not to use maternal and child health and medical services.

These women form the largest proportion of the unbooked cases of hospital deliveries that end in maternal death, premature delivery or even the death of the newborn babies.

2.5 **CONCLUSION**

This literature reviewed has been from a number of different scholars from the world over. Though the data directly related to the knowledge, attitudes and practices of pregnant women towards prematurity is not readily available, major issues discussed above cover the following:

- There is need for the research to be done in the area of pregnant women's knowledge, attitudes and practices towards prematurity.
- No studies have looked at the knowledge, attitudes and practices of pregnant women towards prematurity.
- The health seeking behaviour among pregnant women towards danger signs of pregnancy is influenced by a number of factors that indirectly influence the outcome of pregnancy.

CHAPTER THREE

3.0 METHODOLOGY

3.1 RESEARCH DESIGN

A research design is a set of procedures that guides the researcher in the process of verifying a particular hypothesis and excluding all other possible hypothesis, or explanations about the relationship between variables (Smith and Bless, 2000).

It includes the research setting, operational definitions assumptions, relationships between variables, delimitations, sampling procedures, instruments, approach to be used, methods of data collection, analysis, ethical issues and use of data. This research study used both qualitative and qualitative methods. The research is non interventional. A qualitative research is one that is conducted using a range of methods that use qualifying words and descriptions to record and investigate aspects of social reality. A quantitative research is one that is conducted using a range of methods that use measurement to record and investigate aspects of social reality, (Smith and Bless, 2000). A non-interventional research study is a study in which a researcher collects data without introducing any new treatment or changes. (Polit and Hungler, 1995).

3.2 RESEARCH SETTING

A research setting is the physical location (place) and conditions in which data collection takes place in a research study. This research study was carried out in Macha catchment area of Choma District in the Southern Province. This was at the Antenatal Clinic at Macha Mission Hospital where most of the pregnant women attend their antenatal care.

3.3 STUDY POPULATION

A study population is the total population from which the sample is drawn for the research study. The study population for this study was pregnant women in Macha catchment area. Pregnant women were selected for the study on prematurity because their knowledge, attitudes and practices play a major role in the survival of premature babies and that they are part and parcel of what goes on around their pregnancies. The pregnant women comprise 4.37% of 158,543 (i.e. 8, 561 expected pregnancies) of the total catchment population.

3.4 SAMPLE SELECTION

Sample selection is the process of drawing research subjects from the access population using probability procedures. This research study used probability technique and these pregnant women for this study were selected randomly as they attended antenatal care.

3.5 SAMPLE SIZE

Sample size is the number of research subjects selected from an access population. This research study had 60 pregnant women; fifty for the interview schedule and ten for the two focus group discussions.

3.6 DATA COLLECTION TOOL

A data collection tool is an instrument used in the gathering of information needed to address a research problem. In this study a structured interview schedule was used as the main tool to collect the necessary data for the study. The focus group discussion guide was used to supplement the structured interview schedule.

A data collection tool has to be reliable and valid to produce consistency and accuracy in the desired results for a research study. Reliability and validity in the results to be obtained were ensured as the structured questionnaire and focus group discussion guide were tested in the pilot study done at the same Antenatal Clinic were the study was done. Alterations were made to the questionnaire as appropriate.

3.6.1 STRUCTURED INTERVIEW SCHEDULE

A structured interview schedule is a type of interview where the interviewer asks respondents a number of specific questions but with further probes and or clarifications on certain questions in the questionnaire. In this study a face-to-face interview between the investigator and respondents was done. The questionnaire had both open ended and closed ended questions. Open-ended questions allow the respondents to elaborate or explain their responses while closed ended questions give no room to respondents to explain, as they have to answer either "yes" or "no".

The questionnaire was written in English and was translated into Tonga whenever necessary during the interview. The questionnaire was filled in English by the investigator. Interviewees were assured confidentiality while verbal consents were obtained before the interview process. Respondent privacy was observed during the interview by interviewing one pregnant woman at a time in a secluded place.

3.6.1.1 ADVANTAGES OF USING AN INTERVIEW SCHEDULE

- Interviews are suitable for both literate and illiterate respondents.

- Questions may be clarified if the respondents do not understand them.
- In-depth responses can be obtained with probes.
- Non-verbal behaviour and mannerisms can be observed during the interview process.
- A high proportion of responses can be obtained from potential respondents.

3.6.1.2 DISADVANTAGES OF USING AN INTERVIEW SCHEDULE

- Interviews are costly in time and money as interviewers may have to spend a number of hours interviewing each person separately and they may also need to travel extensively to reach respondents.
- It may be difficult to make arrangements for the interview.
- The presence of the researcher may influence the responses of the respondents.

3.6.1.3 FOCUS GROUP DISCUSSION

- A focus group discussion is a discussion in which the respondents are a group of individuals assembled to answer questions on a given topic. The interviewer, to guide the respondents through a set of questions, uses a structured discussion guide. In this research study two focus groups were convened comprising five (5) pregnant women in each group. The discussions were conducted in Tonga so that respondents were free to express themselves. The topic mostly dwelt on the respondents' knowledge, attitudes and practices towards prematurity. Answers were translated and written in English by the interviewer.

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3.6.2 ADVANTAGES OF FOCUS GROUP DISCUSSION

- It allows the researcher to interact directly with the respondents and give opportunity for clarification and probing of respondents.
- Gives the researcher an opportunity to study individuals as part of a collective group.
- It gives an opportunity to group members to build on responses from other participants.
- It provides insights into the sources of complex behaviour and motivation.
- It provides a chance to respondents to discuss freely and question each other and explain themselves.
- The data collection process is fast, cheap and detailed giving more chances of high validity of the collected information.

3.6.3 DISADVANTAGES OF FOCUS GROUP DISCUSSION

- It may be difficult to collect individual sensitive issues.
- Moderation and control of the group may disrupt group interaction.
- Cultural norms and expectations affect group behaviour/interaction and therefore data.
- Little is known on the impact of the group discussion on the individual members.
- Data analysis may be difficult due to grouping of responses.

3.7 DATA COLLECTION TECHNIQUE

A data collection technique is a method of gathering of information needed to address a research problem. The data collection techniques used in this study to get information from pregnant women were the interview and focus group discussions. The techniques aim at obtaining data on the knowledge, attitudes and practices of pregnant women towards prematurity.

3.8 PILOT STUDY

A pilot study is a small study conducted prior to a larger piece of research to determine whether the methodology, sampling, instruments and analysis are adequate and appropriate, (Smith and Bless, 2000).

A pilot study was done at Macha Hospital Antenatal Clinic. A sample size of five pregnant women was selected using random procedures. The data was collected using a structured interview schedule.

The pilot study allowed the researcher to identify any difficult with the method or materials and investigate the accuracy and appropriateness of the instruments. It also allowed the researcher to determine the response of the community to the actual programme implemented. Data were analyzed manually and necessary adjustments were made to the instrument.

3.9 ETHICAL AND CULTURAL CONSIDERATIONS

An official written permission to conduct a pilot study at Macha Hospital Antenatal Clinic was obtained from Choma District Health Management Board. This was followed by three written permission requests to the District Director of Health in Choma, the Hospital Director at Macha Mission Hospital the Maternal and Child Health Coordinator. The research participants were informed about the purpose of the study so as to have an informed consent.

CHAPTER FOUR

4.0 PRESENTATION OF RESULTS

4.1 DATA ANALYSIS

Data analysis is the systematic organization and synthesis of research data and testing of research hypothesis using those data (Polit and Hungler, 1995).

Data were collected using a structured interview questionnaire and two (2) focus group discussions of five (5) participants each. The sample size for the interview questionnaire was fifty (50) pregnant women. The selection of the sample from the study population was done randomly as pregnant women attended the Antenatal Clinic at Macha Mission Hospital Maternal Child Health Unit.

The data were initially edited and the responses to open-ended questions were categorised and coded. Data counting and entering on the data master sheet was done. Analysis of the data was done manually using a pocket calculator. Frequent tables, percentages and cross tabulations of important variables were done.

The data and important in formation have been presented in the form of tables.

4.2 SECTION A: FREQUENCY TABLES

TABLE 3: DEMOGRAPHIC DATA

VARIABLE	FREQUENCY	RELATIVE FREQUENCY
AGE		
14-19 Years	14	28
20-29 Years	19	38
30-39 Years	17	34
40 Years +	0	0
TOTAL	**50**	**100**
MARITAL STATUS		
Married	41	82
Single	8	16
Divorced	1	2
Widowed	0	0
TOTAL	**50**	**100**
SOURCE OF INCOME		
Business	1	2
Farming	41	82
None	7	14
Knitting	1	2
TOTAL	**50**	**100**
TRIBE		
Tonga	44	88
Ila	1	2
Lozi	1	2
Bemba	2	4
Ndebele	2	4
TOTAL	**50**	**100**
DENOMINATION		
SDA	16	32
BICC	18	36
Catholic	1	2
New Apostolic Church	11	22
Zion	4	8
TOTAL	**50**	**100**
LEVEL OF EDUCATION		
None	1	2
Primary	39	78
Secondary	10	20
Higher	0	0
TOTAL	**50**	**100**

The majority of the respondents were aged between 20 and 29 years (38%). 82% of the pregnant women interviewed were married and 82% had farming as their source of income. Eighty eight percent (88%) were Tonga while 36% belonged to the Brethren In Christ Church. 78% of the respondents went only up to primary school.

TABLE 4: RESPONDENTS' KNOWLEDGE TOWARDS PREMATURITY

VARIABLE	FREQUENCY	RELATIVE FREQUENCY (%)
GRAVID		
Prim gravid	14	28
1-3	17	34
4-6	13	26
7-9	6	12
10 pregnancies +	0	0
TOTAL	**50**	**100**
IMPORTANCE OF ANC		
Yes	45	90
No	5	10
TOTAL	**50**	**100**
BENEFITS OF ANC		
Monitor foetal growth	23	51
Maternal Health	31	69
Foetal position	27	60
Health Education	6	13
PREVIOUS PREGNANCIES REACHING FULL TERM		
Yes	29	81
No	7	19
TOTAL	**36**	**100**
DEFINITION OF PREMATURITY		
Labour at 37-40 weeks	3	6
Labour at 33-36 weeks	0	0
Labour at 28-32 weeks	12	24
Labour before 28 weeks	35	70
TOTAL	**50**	**100**
KNOWLEDGE OF FULL TERM BABY WEIGHT		
Yes	18	36
No	32	64

KNOWLEDGE OF WEIGHT OF A FULL TERM BABY		
1.0-2.4 kg	4	22
2.5-3.4 kg	6	33
3.5-4.4 kg	7	39
4.5-5.4 kg	1	6
5.5 kg and above	0	0
TOTAL	**18**	**100**
HEARING OF A BABY BORN PREMATURELY		
Yes	48	96
No	2	4
TOTAL	**50**	**100**
SOURCE OF KNOWLEDGE		
Relatives	35	73
Friends	13	27
Health workers	6	13
Trained TBA	3	6
Untrained TBA	0	0
None	3	6
DESCRIPTION OF A PREMATURE BABY		
Baby small in size	28	82
Thin sparse hair	9	26
Red wrinkled skin	5	15
Weak and Inactive	6	18
Don't know	16	32
PERCEIVED DANGERS OF PREMATURE BABIES		
Hypothermia	9	36
Hypoglycaemia	8	32
Infection Risk	15	60
Maternal love deprivation	0	0
Don't know	25	50
HOW TO CARE FOR PREMATURE BABIES		
Yes	19	38
No	31	62
TOTAL	**50**	**100**
DESCRIBE CARE FOR PREMATURE BABIES		
Keeping warm always	18	95
Feeding baby frequently	5	26
Keeping baby clean	0	0
Being with the baby	0	0

About 28% of the respondents were primi gravidae (i.e. had their first pregnancy) while 34% had 1-3 pregnancies and non had 10 or more pregnancies. Majority (90%) said they knew the importance of attending the ANC while 69% mentioned maternal health as a benefit of attending ANC, 60% determining the foetal position, 51% monitoring foetal growth and only 13% for health education. Seventy percent (70%) mentioned premature labour as one occurring before 28 weeks while 6% mentioned as labour occurring at 37-40 weeks. 64% of the respondents said they did not know the weight range of a full term baby and of those who said they knew 22% mentioned a lower range than normal. Majority (96%) of the respondents said they had heard of a baby born prematurely among which 73% heard from relatives, 27% from friends and only 13% from health workers. Among the respondents 68% gave at least one sign of prematurity and 32% said they did not know any.

Fifty percent (50%) of the respondents did not know any of the dangers that babies born prematurely face while among those who said they did non (0%) listed maternal love deprivation as a danger. 62% said they did not know how to care for a premature baby while 38% said they knew among which non mentioned keeping the baby clean and or being with the baby as important components of caring for prematurely born babies.

TABLE 5: RESPONDENTS' ATTITUDES TOWARDS PREMATURITY

VARIABLE	FREQUENCY	RELATIVE FREQUENCY (%)
HAVING CUSTOMS ON CAUSES OF PREMATURITY		
Yes	4	8
No	46	92
TOTAL	**50**	**100**
PREMATURITY BEING SERIOUS TO MOTHER AND BABY		
Yes	31	62
No	19	38
TOTAL	**50**	**100**
REASONS FOR PREMATURITY BEING SERIOUS		
Always keeping warm	5	16
Always feeding baby	20	64
Risk of Infection	14	45
Lack of maternal love	12	39
SEEKING MEDICAL AID AT THE NEAREST CLINIC		
Yes	50	100
No	0	0
TOTAL	**50**	**100**
REASONS FOR SEEKING MEDICAL AID IN PREGNANCY		
Monitor foetal growth	3	6
Good maternal health	44	88
Assess foetus	5	10
Health Education	2	4
CLINIC BEING NEAR		
Yes	39	78
No	11	22
TOTAL	**50**	**100**
ATTENDING SAME CLINIC IN ALL PREGNANCIES		
Yes	25	86
No	4	14
TOTAL	**29**	**100**
REASONS FOR ATTENDING SAME CLINIC		
Clinic is near	9	28
Trained staff available	11	44
Assessing health	14	56

For treatment	5	20
EXPERIENCED RELATIONS WITH CLINIC STAFF		
Unacceptable	4	8
Good and acceptable	26	52
Very good + acceptable	20	40
TOTAL	**50**	**100**
OPINION OF AVAILABILITY OF TRAINED MID WIVES		
Yes	44	88
No	6	12
TOTAL	**50**	**100**
NON AVAILABILITY OF STAFF AFFECTING SERVICE		
Yes	5	83
No	1	17
TOTAL	**6**	**100**

Majority of the respondents (92%) said they did not have any customary beliefs about the causes of prematurity. Thirty-eight (38%) percent of the respondents did not think that prematurity is a serious problem to both the mother and the baby while only 16% and 39% mentioned the task of keeping the premature baby warm always and lack of maternal love as the reasons for prematurity being a serious problem respectively. All the respondents said they would seek medical aid at the health centre among which only 6% gave the monitoring of foetal growth and 4% for health education as the reasons respectively. 22% of the respondents said the health centre was not within a walking distance. Only 14% had not attended the same clinic in their last pregnancies while 28% and 20% said they attended the same clinic because it was near and for treatment respectively. Almost all (92%) respondents described their relationship with staff as acceptable. 12% of the respondents said the centre did not have trained midwives and 17% thought staff shortage could not affect the services offered.

TABLE 6: RESPONDENTS' PRACTICE TOWARDS PREMATURITY

VARIABLE	FREQUENCY	RELATIVE FREQUENCY
ATTENDING SAME CLINIC IN ALL PREGNANCIES		
Yes	35	95
No	2	5
TOTAL	**37**	**100**
AGE AT BOOKING OF PREVIOUS PREGNANCIES		
1-3 months	8	21
4-6 months	28	76
2-9 months	1	3
TOTAL	37	100
NUMBER OF TIMES ATTENDED ANC IN LAST PREGNANCY		
0-3	13	35
4-6	22	60
7-9	2	5
TOTAL	**37**	**100**
PROBLEMS FACED AT THE CLINIC IN PREGNANCY		
Staff negligence	1	17
Staff shortage	2	33
Slowness in attending	1	17
Lack of compassion	0	0
Lack of drugs	2	33
TOTAL	**6**	**100**
SOURCE OF HELP IN PROBLEMS DURING PREGNANCY		
Neighbour	0	0
Relative	0	0
Health worker	16	84
Trained TBA	2	10
Untrained TBA	0	0
Traditional Healer	0	0
None	1	6
TOTAL	**19**	**100**
REASONS FOR SOUGHTING HELP ABOVE		
Qualified staff	16	84
Relative	0	0
Friends	0	0
Trained TBA	2	10
Near	1	6

TOTAL	**19**	**100**
SOURCE OF HELP IF EXPERIENCED PROBLEMS IN PREGNANCY		
Neighbour	2	6
Relative	0	0
Health worker	30	83
Trained TBA	6	17
Untrained TBA	0	0
Traditional healer	1	3
DECISION MAKING ON SEEKING MEDICAL AID		
Self	12	60
Husband	6	30
Parents	0	0
Mother-In-Law	2	10
TOTAL	**20**	**100**
REASON FOR CONSULTATION IF EXPERIENCED PROBLEMS		
Trained midwife	22	73
Trained TBA	4	13
Have authority	0	0
Only one near	2	7
To get help	13	43
TIME OF LEAVING FOR AID WHEN EXPERIENCED PROBLEMS		
Immediately	9	48
Later in the day	5	26
Following day	5	26
Never	0	0
TOTAL	**19**	**100**

Majority (95%) of the respondents who had previous pregnancies attended the same clinic. 21% of the respondents booked at the ANC when they were 1 to 3 months pregnant, 76% at 4-6 months and 3% at 7 to 9 months. 60% of the respondents attended the ANC 4 to 6 times while 35% attended 0-3 times. Less than half (40%) of the respondents experienced problems in their previous pregnancies related to staff negligence 17%, staff shortage 33%, staff slowness in attending to someone in labour 17% and shortage of drugs 33%. Some respondents

(6%) said they would consult a neighbour if they experienced problems in pregnancy and 3% said they would consult a traditional healer. On the decision to seek medical aid at the health facility 30% said the husband would decide while 10% said their mothers in-law would. 52% of the respondents said they left for medical aid later in the day and or the following day.

NB: Some variables do not have the totals as they had multiple responses.

TABLE 7: AGGREGATION OF RESPONDENTS' LEVEL OF KNOWLEDGE, ATTITUDE AND PRACTICE SCORES

VARIABLE	FREQUENCY	RELATIVE FREQUENCY
LEVEL OF KNOWLEDGE		
Poor	39	78
Good	10	20
Excellent	1	2
TOTAL	**50**	**100**
ATTITUDE		
Bad	22	44
Good	23	56
TOTAL	**50**	**100**
PRACTICE		
Bad	35	70
Good	15	30
TOTAL	**50**	**100**

Majority (78%) of the respondents had poor knowledge, 44% had bad attitudes and 70% had bad practice towards prematurity.

4.3 SECTION B: CROSS TABULATIONS

DEMOGRAPHIC DATA IN RELATION TO KNOWLEDGE

TABLE 8: RESPONDENTS' AGE IN RELATION TO KNOWLEDGE

CATEGORY	UNDER 19	20-29	30-39	TOTAL
Poor	14 (36%)	14 (36%)	11 (28%)	**39 (78%)**
Good	-	5 (50%)	5 (50%)	**10 (20%)**
Excellent	-	-	1 (100%)	**1 (2%)**
TOTAL	**14 (28%)**	**19 (38%)**	**17 (34%)**	**50 (100%)**

About 36% of the respondents who had poor knowledge were aged 20-29 or less than 19 years.

TABLE 9: RESPONDENTS MARITAL STATUS IN RELATION TO KNOWLEDGE

CATEGORY	MARRIED	SINGLE	DIVORCED	WIDOWED	**TOTAL**
Poor	31 (80%)	8 (20%)	-	-	**39 (78%)**
Good	9 (0%)	-	1 (10%)	-	**10 (20%)**
Excellent	1 (100%)	-	-	-	**1 (2%)**
TOTAL	**41 (82%)**	**8 (16%)**	**1 (2%)**	**-**	**50 (100%)**

Majority (80%) of the respondents who had poor knowledge were married.

TABLE 10: SOURCE OF INCOME IN RELATION TO KNOWLEDGE

CATEGORY	BUSINESS	FARMING	OTHER	**TOTAL**
Poor	-	32 (82%)	7 (18%)	**39 (78%)**
Good	1 (10%)	8 (80%)	1 (10%)	**10 (20%)**
Excellent	1 (100%)	-	-	**1 (2%)**
TOTAL	**2(4%)**	**40 (80%)**	**8 (16%)**	**50 (100%)**

Majority (82%) of the respondents who had poor knowledge were farmers.

TABLE 11: EDUCATION LEVEL IN RELATION TO KNOWLEDGE

CATEGORY	NONE	PRIMARY	SECONDARY	HIGHER	**TOTAL**
Poor	1 (3%)	29 (74%)	9 (23%)	-	**39 (78%)**
Good	-	9 (90%)	1 (10%)	-	**10 (20%)**
Excellent	-	1 (100%)	-	-	**1 (2%)**
TOTAL	**1 (2%)**	**39 (78%)**	**10 (20%)**	**-**	**50 (100%)**

Majority (74%) of the respondents who had poor knowledge went up to primary school level only.

TABLE 12: COMPLETED YEARS IN SCHOOL IN RELATION TO KNOWLEDGE

CATEGORY	1-3 YEARS	4-6 YEARS	7-9 YEARS	**TOTAL**
Poor	10 (27%)	11 (30%)	16 (43%)	**37 (76%)**
Good	-	6 (54%)	5 (46%)	**11 (22%)**
Excellent	-	-	1 (100%)	**1 (2%)**
TOTAL	**10 (20%)**	**17 (35%)**	**21 (45%)**	**49 (100%)**

More than half of the respondents (54%) who had good knowledge completed at least 4-6 years at the mentioned level of education in table 6.

4.4 DEMOGRAPHIC DATA IN RELATION TO ATTITUDE

TABLE 13: AGE IN RELATION TO ATTITUDE

CATEGORY	UNDER 19	20-29	30-39	**TOTAL**
Bad	8 (36%)	7 (32%)	7 (32%)	**22 (44%)**
Good	6 (21%)	12 (43%)	10 (36%)	**28 (56%)**
TOTAL	**14 (28%)**	**19 (38%)**	**17 (34%)**	**50 (100%)**

Thirty six percent of the respondents who had bad attitude were under 19 years while 43% who had good attitude were aged between 20-29 years.

TABLE 14: LEVEL OF EDUCATION IN RELATION TO ATTITUDE

CATEGORY	NONE	PRIMARY	SECONDARY	HIGHER	**TOTAL**
Bad	-	18 (82%)	4 (18%)	-	**22 (44%)**
Good	1 (4%)	21 (75%)	6 (21%)	-	**28 (56%)**
TOTAL	**1 (2%)**	**39 (78%)**	**10 (20%)**	-	**50 (100%)**

Majority (82%) of the respondents with bad attitude only went up to primary school while 60% of those who went up to secondary school had good attitude towards prematurity.

TABLE 15: YEARS OF SCHOOL IN RELATION TO ATTITUDE

CATEGORY	1-3	4-6	7-9	**TOTAL**
Bad	4 (17%)	6 (26%)	13 (57%)	**23 (47%)**
Good	7 (27%)	10 (38%)	9 (35%)	**26 (53%)**
TOTAL	**11 (22%)**	**16 (33%)**	**22 (45%)**	**50 (100%)**

Twenty-seven percent of the respondents who spent 1-3 years at school had good attitude towards prematurity.

4.5 DEMOGRAPHIC DATA IN RELATION TO PRACTICE

TABLE 16: AGE IN RELATION TO PRACTICE

CATEGORY	UNDER 19	20-29	30-39	**TOTAL**
Bad	13 (37%)	12 (34%)	10 (29%)	**35 (70%)**
Good	1 (6%)	7 (47%)	7 (47%)	**15 (30%)**
TOTAL	**14 (28%)**	**19 (38%)**	**17 (34%)**	**50 (100%)**

About 37% of the respondents who had bad practice were under 19 years old.

TABLE 17: MARITAL STATUS IN RELATION TO PRACTICE

CATEGORY	MARRIED	SINGLE	DIVORCED	WIDOWED	**TOTAL**
Bad	26 (74%)	8 (23%)	1 (3%)	-	**35 (70%)**
Good	15 (100%)	-	-	-	**15 (30%)**
TOTAL	**41 (82%)**	**8 (16%)**	**1 (2%)**	-	**50 (100%)**

Majority (74%) of the married respondents had bad practice.

TABLE 18: LEVEL OF EDUCATION IN RELATION TO PRACTICE

CATEGORY	NONE	PRIMARY	SECONDARY	HIGHER	**TOTAL**
Bad	1 (3%)	26 (74%)	8 (23%)	-	**35 (70%)**
Good	-	13 (87%)	2 (13%)	-	**15 (30%)**
TOTAL	**1 (2%)**	**39 (78%)**	**10 (20%)**	**-**	**50 (100%)**

Majority (74%) of the respondents who had bad practice went up to primary school only.

TABLE 19: COMPLETED YEARS IN SCHOOL IN RELATION TO PRACTICE

CATEGORY	1-3	4-6	7-9	**TOTAL**
Bad	10 (29%)	9 (27%)	15 (44%)	**34 (69%)**
Good	1 (6%)	7 (47%)	7 (47%)	**15 (31%)**
TOTAL	**11 (22%)**	**16 (33%)**	**22 (45%)**	**49 (100%)**

Approximately 47% of the respondents who had good practice either completed 4 to 6 or 6-9 years in school while those who completed only 1 to 3 years constituted only 6%.

CHAPTER FIVE

5.0 DISCUSSION OF THE FINDINGS AND IMPLICATIONS TO THE HEALTH CARE SYSTEM

5.1 INTRODUCTION

The discussion of the findings is based on the analysis of the data collected from an interview of fifty (50) pregnant women. The aim of the study was to determine the knowledge, attitudes and practices of pregnant women towards prematurity in Macha Catchment Area of Choma District in Southern Province.

The discussion has been presented under demographic information of respondents based on the knowledge of the respondents towards prematurity, and attitudes and practices of pregnant women towards prematurity.

5.2 DEMOGRAPHIC INFORMATION OF RESPONDENTS

The data were collected from fifty (50) pregnant women. The majority (38%) of the respondents were aged between 20 to 29 years, 34% between 30 to 39 years and 28% were aged less than 19 years. This shows that the women in the age group 20 to 29 years are the most sexually active and highly reproductive followed by those in the 30 to 39 year age range and finally those in the under 19 year old group.

Majority (82%) of the respondents were married while 16% were single. This was because the data were collected in a traditional setting where the main role of women is to get married and bear children as per tradition and norms of our society.

The high number of respondents who are married also entails that girls are married off early and thus they have a longer reproductive life. 82% of the pregnant women interviewed were in farming as a source of income. This can also be attributed to the same reason that traditionally most women are expected to take up the role of being housewives and producers of food through farming for feeding their families.

Most respondents (88%) were Tonga by tribe. This could be attributed to the fact that the data collection was done in Tonga land where the population is indigenously Tonga speaking. More of the pregnant women (36%) belonged to the Brethren In Christ Church (BICC) followed by the Seventh Day Adventist (SDA) Church (32%). This could be attributed to the fact that Macha area is dominantly an area where BICC is established and has its mission. The SDA church established itself in the southern province earlier than most denominations.

Macha area has three (3) secondary schools and a number of basic schools. The catchment population's literacy level is said to be well over 60% (Macha Hospital Plan, 2004) and one would expect this to be reflected in the number of women who are educated. Despite the number of schools being large in the area the majority (78%) of the respondents went only up to primary level of education with most of them spending less than four (4) years at school. This could be attributed to the fact that traditionally girls and women are disadvantaged from the very beginning where education and getting educated are concerned. This could be as earlier state due to early marriages.

5.3 DISCUSSION OF EACH VARIABLE

5.3.1 KNOWLEDGE OF PREGNANT WOMEN TOWARDS PREMATURITY

Antenatal care is a service that is provided to pregnant women to ensure that they are healthy during pregnancy, labour and thereafter with a successful pregnancy outcome. The successful pregnancy outcome is the delivery of a mature and healthy baby. The period of antenatal and its care offer an opportunity for health workers and the pregnant women themselves to work together in order to ensure that the pregnancies are protected through thorough examination, screening and treatment of the possible related dangers of pregnancy (ZDHS, 2000).

According to the maternal and neonatal mortality in Zambia done in 1998, knowledge of the antenatal period was almost a universal phenomenon for almost all age groups. It is said that knowledge is power. Table 8 page 43 shows that 36% of the respondents with poor knowledge were in the age range of those under 19 years. This could be attributed to the lack of experience and health education in this age group who are mostly primi gravidae. This can be further compared to the 30 to 39 year age group which has a lower (28%) of those who had poor knowledge and which had good (50%) and excellent (100%) level of knowledge respectively.

Table 4 page 35 shows that majority (34%) of the respondents had had 1 to 3 pregnancies, 28% were primi gravidae, 26% had had 4 to 6 while only 12% had had 7 to 9 pregnancies. This shows that the sample size had one high risky group the primi gravidae (28%) than the other groups though every pregnancy carries its own risk.

The economic empowerment of women coupled with good knowledge play an important role in ensuring their good health. Table 3 page 34 shows that the respondents who had good (10%) and excellent (100%) knowledge had business as their source of income as could be compared to those (82%) with poor knowledge level who were mostly farmers.

The majority (90%) of the respondents said that they knew the importance of attending the antenatal clinic with 69% mentioning to ensure maternal health, 60% to determine the foetal position, 51% to monitor the foetal growth and only 13% mentioning health education. This shows that fewer women know the value of the health education given at the antenatal clinic or health centre staff to enlighten pregnant women is putting in not much effort. 6% of the respondents mentioned prematurity as labour that starts at 37-40 weeks of pregnancy. This shows that there are still a number of pregnant women who do not precisely know what premature labour is. There was also some supporting evidence that majority (64%) of the respondents did not know the weight range of a full term baby. Although majority (96%) of the respondents said they had heard about a baby born prematurely, many of these (73% and 27%) did so from relatives and friends respectively as compared to the least (13% and 6%) who heard from health workers and trained traditional birth attendants respectively. Some (32%) of the respondents said they did not know the signs of a baby born prematurely, and half (50%) said they did not know the dangers the babies face. The study revealed that more than half (62%) of the respondents did not know how to care for premature babies while of those who said they knew neither mentioned keeping the premature babies clean to prevent infection nor the importance of the mother being with babies. These findings indicate that there is a deficit in the care health centres and staff

provided to their clients in relation to the health education of pregnant women on prematurity. This could also be associated with lack of or inadequate education of pregnant women on the various causes of prematurity such as maternal ill health and very young age, diabetes mellitus, polyhydramnios, grande multiparity, multiple pregnancies incompetent cervix, heart diseases, anaemia, intrauterine foetal infections, amniochorionitis and others. This implies that the pregnant women are not empowered with adequate knowledge in relation to the causes of prematurity so that preventive measures are taken by pregnant women when such problems occur.

5.3.2 ATTITUDES AND PRACTICES OF PREGNANT WOMEN TOWARDS PREMATURITY

It is assumed that women who are educated or at least have gone higher in their education assimilated information better than those who are not educated at all or did not progress to a higher level of education (ZDHS, 2003). Thus it may well be assumed that the educated women having knowledge or better understanding of issues related to their health in pregnancy and that of their unborn babies, will as well have good attitudes and practices that relate to any threat in their pregnancies. Knowledge is the basis upon which attitudes and practices of pregnant women towards prematurity, for if they know, it is likely that even their attitudes and practices are likely to be good and supportive to the completion of pregnancy. It is also expected that women who are older and have had more than two (2) pregnancies and labour experiences before may or are likely to have good levels of knowledge and therefore attitudes and practices towards their own health and that of their unborn babies.

The study revealed that majority (36%) of the respondents who had bad attitude were aged under 19 years, supporting the above notion that very young mothers may not have good attitude and practices. In addition the study supports the idea that very young mothers who would not have gone further in their education may not have good attitude towards prematurity. It shows that majority (86%) of the respondents with bad attitudes just went up to primary school while on the other hand the majority (60%) of those pregnant women who went up to secondary school had good attitudes towards prematurity. Good care of pregnant women comprises the ability of health centre staff to give this required care with the view and aim that the end result of a pregnancy is a healthy mother who has undergone pregnancy, labour and delivery normally and normal health neonate. But if the staff providing the care to these women have bad attitudes then the pregnant women do not attend antenatal clinic because of the fears which develop. This leads to low utilisation of the health centre and the perpetuation of low or lack of knowledge, bad attitudes and practices of women who go into premature labour and delivery and even the care of premature babies. Some (8%) of the respondents described their relationship with the health centre staff as unacceptable. This can be attributed to the bad attitude of staff towards pregnant women. This bad staff attitude does not encourage pregnant women to have a positive attitude towards the care provided at the health centre. Thus, this may discourage or prevent pregnant women from attending the antenatal clinic care sessions or seeking medical aid when problems are experienced in pregnancy. The end result is that more and more pregnant women end up delivering at home and or die or deliver prematurely due to the problems or complications.

This study revealed that age at the time of pregnancy mattered in terms of practice towards prematurity. This was evidenced by the fact that

more (37%) of the respondents with bad practices were under 19 years old followed by the 20 to 29 year group (34%) and then the 30 to 39 year group (29%) in that order. Meanwhile on the other hand, of those who had good practice towards prematurity majority (47%) were in the 30 to 39 year age group (table 16 page 46). This could be attributed to the fact that pregnant women become more and more knowledgeable with each pregnancy and hence the improvement in their attitude and practices towards pregnancy and the outcome. (Nakambale, A. 2002).

Consistency in attending the same antenatal clinic by pregnant women in their previous pregnancies may be a good indicator that women are happy and appreciate the services offered. This study showed that majority (95%) of the respondents who had had pregnancies before attended the same clinic. Majority (76%) booked for antenatal care at 4 to 6 months and 3% at 7 to 9 months. Some mothers (35%) attended the antenatal clinic for less than three (3) times during their previous pregnancies. This shows that though some women understand and use the antenatal clinic care services available, a large number do not do so due to various reasons (i.e. their practices are bad). It can also be observed that those who had good practices either started late their antenatal attendances late and for a fewer times than they were supposed to. This makes it difficult for the health centre staff to examine and screen mothers for pregnancy complications likely to result into premature delivery or even threaten the mothers' lives.

The results of this study are in line with the findings of the Zambia Demographic and Health Survey (ZDHS, 2000) which revealed that just above half (53%) of the births took place at home. Similar findings were found in a study of the factors associated with maternal and neonatal mortality related to pregnancy and delivery in Zambia done by Nsemukila

et al 1998. This study revealed that some (6%) of the respondents sought help from neighbours and others (3%) from traditional healers when they experienced problems in pregnancy. This showed that despite the availability of health centres and staff our mothers still need a lot of health education and sensitisation on seeking help from genuine sources for advice and aid such as health workers and community health workers in the community. This also highlights the challenges that the health care system faces in Zambia.

Ahmed et al 1998 obtained similar results in their study entitled 'Maternal Mortality in Rural Bangladesh: Where do Women go for Care?' The study findings revealed that women's practices when it comes to seeking medical aid and or advice was hampered by many factors.

Decision making by pregnant women to seek medical aid and advice on their own is a very important aspect of ensuring that they have access to the available health care services as early as possible. Failure to decide on their own and delay to finally leave for health services by the pregnant women worsens or complicates the various obstetric emergencies that they may have. This delay results in health staff failing to manage the complicated cases and even premature delivery of which babies require expensive equipment and expertise. This study revealed that despite more (60%) of the respondents saying they decided on their own to seek medical aid, still a large number (30%) and some (10%) had decisions made by their husbands and mothers in-law respectively when they experienced problems in pregnancy (Table 6 page 40).

It was reflected in the focus group discussions by most pregnant women that their spouses and or partners and mothers in-law decided for them to seek medical aid because their husbands and mothers in-law are the ones

who look after them and that they have the jurisdiction and authority (traditionally). This study also found out that of the respondents who experienced problems in their pregnancies, many either left later (26%) or the following day (26%) (Table 6 page 40). This still reflected the difficulty that pregnant women face when it comes to prioritising their health among their family members and the non readily availability of medical and care items needed to take them to the nearest health centre for screening and treatment early. These findings are in line with Nsemukila et al 1998 report which states that even though pregnant women would want to attend health services promptly, socio-economic constraints do not allow them to do so. This is also in line with Nyaphisi et al (1994)'s report which states that poverty has made people in Lesotho, Malawi, Uganda and Zambia less able to appropriately utilise the available health services. The pregnant women also cited lack of money, long distance to health facilities and lack of transport as the main reasons for the mothers' delay or total failure to access the available health care services.

During the two focus group discussions women suggested that adequate information, education and communication (IEC) on problems that may occur during pregnancy and the likely premature delivery should be given to all pregnant women to provide adequate knowledge, good attitudes and practices. Thus the study findings are in line with hypothesis number one which says "Lack of or inadequate information, education and communication to pregnant women on causes of prematurity contribute to delayed health seeking behaviour. This is so because very few (21%) booked at 1 to 3 months with majority (76%) booking at 4 to 6 months and worse some (3%) booked at 7 to 9 months. More still a large number (35%) had up to 3 visits in their previous pregnancies.

The study also supports the hypothesis which says "The more educated pregnant women are, the more likely they are to assimilate what they are taught in relation to prematurity." The hypothesis which says "The higher the level of knowledge of pregnant women on prematurity, the more likely they are to seek care early." was also supported.

The study objectives were met in that the level of knowledge of pregnant women towards prematurity was determined and found to be low. This is so because majority (78%) of the respondents had poor knowledge. The study proved that the pregnant women had good attitudes though not at a higher level than those with bad attitude (i.e. 56% against 44%). It was also verified that most pregnant women (70%) had bad practices towards prematurity.

5.4 IMPLICATIONS TO THE HEALTH CARE SYSTEM

The study revealed that most of the respondents had inadequate knowledge on prematurity. The majority of those who had good knowledge got it from friends and relatives and few from health care providers. This shows that there is a big challenge for the health care system as much seems not to be done in terms of educating pregnant women on prematurity. This implies that the information that pregnant women from their friends and relatives may not be the correct one. Health care providers should take the crucial and important task of educating pregnant women on prematurity and the importance of:

- Booking for antenatal care early.
- Regular antenatal visits.
- Seeking professional advice early and
- Prioritising of the health of pregnant women by families.

This, therefore, means that health care providers should not only target pregnant women but all members of the community so that the correct and important information circulates for promoting good maternal and child health.

5.5 CONCLUSION AND RECOMMENDATIONS

5.5.1 CONCLUSION

The evaluation of the knowledge, attitudes and practices of pregnant women towards prematurity in the Macha catchment area of Choma District was worth carrying out as it served as a measure of the health services being provided there. This study also assisted in the identification of the gaps that exist in the provided care with the aim of reducing the occurrence of prematurity and or the prevention of maternal and child death. The major findings of the study included the following areas: -

Majority (78%) of the pregnant women had poor level of knowledge towards prematurity regardless of their level of education, age, marital status, parity etc. This gives an idea that the problem is not with pregnant women themselves but with the health care system. This could mean that inadequate IEC to pregnant women on prematurity is given for them to understand and take appropriate action.

Many pregnant women did not understand the importance of booking and attending antenatal clinic care since very few booked at 1 to 3 months and a large number attended for less than four (4) times in their previous pregnancies. Many women also did not know how a premature baby

looks or the dangers such a baby faces despite many of them having said they had heard about one.

Despite many pregnant women indicating that they would seek medical aid if they developed problems in their pregnancies most do not actually decide on their own to seek medical aid. This is because most of the pregnant women are disadvantaged financially and have to have their husbands and or other persons to make decisions about their health.

At least just more than half (56%) of the women had good attitude though this can easily be underplayed by the poor knowledge level and bad practice as the former is influenced by the level of knowledge.

5.6 RECOMMENDATIONS

5.6.1 RECOMMENDATIONS TO HEALTH CENTRE STAFF

1. Health care providers should make sure that adequate IEC to pregnant women on prematurity is intensified and strengthened. They should also involve community-based caregivers such as community health workers (CHWs) and trained traditional birth attendants (tTBAs), and members of the various neighbourhood health committees (NHCs) to educate community members on prematurity.

2. Health centre staff should make use of the planned outreach sessions to go into the community and give IEC right in the villages to all women on what they should do when they become pregnant and when they are ill during pregnancy to prevent the occurrence of premature delivery.

They should enlighten community members and family members to prioritise the health of pregnant women and allow them to decide to seek medical aid when they feel they should do so. Families should also be educated on how families can plan their families and resources to ensure that the pregnant women are taken to the hospital or nearest health centre when problems arise during pregnancy.

3. Simple but meaningful audio-visual aids to be used together with sketches in drama to make the IEC understandable and interesting to pregnant women and the general community.

5.6.2 **RECOMMENDATIONS TO THE DISTRICT**

1. The District Health Management Team (DHMT) should ensure that more and more TBAs and CHWs are trained by and through Macha Mission Hospital to help in the IEC in the community and screening and treatment of pregnant women for eminent causes of premature labour and delivery.

2. Outreach activities should be strengthened, supported and supervised to ensure that the planned activities are carried out accordingly. Ensure that the health centre staff produce tangible programmes for static and outreach activities indicating clearly the activities which should be well reported on a quarterly basis through quarterly reports.

3. The DHMT should improve on the staffing levels at the health centre to ensure that adequate time is allocated for IEC when

pregnant women attend the antenatal clinic and for outreach sessions.

4. The communication and referral systems should be improved and strengthened in the district by ensuring that all rural health centres are connected by the radiophones. This also can be done by providing an ambulance at Macha Mission Hospital and improving the road network to ease the movement of pregnant women when a referral has been recommended for further investigations and management.

5. Family planning activities should be strengthened in the whole district. The DHMT should work with other government departments especially the Ministry of Education to carryout massive health education campaigns on family planning in schools and higher institutions of learning. This will prevent early and unwanted pregnancies.

5.6.3 **RECOMMENDATIONS TO THE GOVERNMENT**

1. There is need to train more midwives therefore the government should improve the funding to training schools and the levels of enrolment. More midwives in health centres will make the giving of IEC easier and will improve the quality of care given to pregnant women. This shall finally reduce the ever increasing levels of maternal and infant mortality.

2. The government should consider providing an ambulance to Macha Mission Hospital through Choma District Health Management Board. This will make it easier for the

transportation of pregnant women to the hospital when the need arises to prevent cases from becoming complicated or ending into premature delivery. When prematurity is prevented there will be a reduction in the neonatal and infant mortality and a reduction of the expenditure on the management of premature babies who require expensive sophisticated machines and expert care.

3. The government should support and fund rural based research projects focusing on Maternal and Child Health (MCH). This will assist the government in formulation of national health policies and reduction of the high maternal and infant mortality.

5.7 PLAN FOR DISSEMINATION OF FINDINGS

Dissemination of research findings is a process by which scientific investigation results are carried across to ensure that utilization can occur. The findings from this research study will be disseminated as follows:

- Copies of the research report were given to the Ministry of Health, Post Basic Nursing Department, the UNZA Medical Library, Choma District Health Board and Macha Mission Hospital.

- When all is done a symposium will be held at Macha Mission Hospital at which the findings of the research project shall be presented and discussed with other health workers. This will assist in coming up with better ways of improving the knowledge, attitudes and practices of pregnant women towards

prematurity. The improvement in knowledge, attitudes and practices of pregnant women on prematurity will reduce the high neonatal and infant mortality.

The researcher and the MCH coordinator shall hold meetings with the Trained Traditional Birth Attendants (tTBAs), Community Health Workers (CHWs), Neighbourhood Health Committee (NHC) members, and other volunteer workers in the communities to discuss the research findings from this research study. This will assist in the coming up with interventions to be followed.

5.8 LIMITATIONS OF THE STUDY

There were major limitations which were encountered by the researcher in the research process. These included the following: -

1. The time allocated for the project was limited because of the busy schedule of the researcher.

2. Funds allocated for the project fell far below what was budgeted for to carry out and complete the project as required.

3. The study lacked adequate literature on the topic as no research has been done before directly focusing on the knowledge, attitudes and practices of pregnant women. Most studies focused on the survival rate, prevalence and the causes of prematurity overlooking the important role the

prematurity. The improvement in knowledge, attitudes and practices of pregnant women on prematurity will reduce the high neonatal and infant mortality.

The researcher and the MCH coordinator shall hold meetings with the Trained Traditional Birth Attendants (tTBAs), Community Health Workers (CHWs), Neighbourhood Health Committee (NHC) members, and other volunteer workers in the communities to discuss the research findings from this research study. This will assist in the coming up with interventions to be followed.

5.8 LIMITATIONS OF THE STUDY

There were major limitations which were encountered by the researcher in the research process. These included the following: -

1. The time allocated for the project was limited because of the busy schedule of the researcher.

2. Funds allocated for the project fell far below what was budgeted for to carry out and complete the project as required.

3. The study lacked adequate literature on the topic as no research has been done before directly focusing on the knowledge, attitudes and practices of pregnant women. Most studies focused on the survival rate, prevalence and the causes of prematurity overlooking the important role the

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APPENDIX I

THE UNIVERSITY OF ZAMBIA
SCHOOL OF MEDICINE

DEPARTMENT OF POST BASIC NURSING

QUESTIONNAIRE FOR PREGNANT WOMEN

TOPIC: **KNOWLEDGE, ATTITUDES AND PRACTICES OF PREGNANT WOMEN TOWARDS PREMATURITY**

RESPONDENT NUMBER: .....

DATE OF INTERVIEW: .....

PLACE OF INTERVIEW: .....

INSTRUCTIONS TO THE INTERVIEWER

1. Introduce yourself.
2. Explain the purpose of the interview and that the information collected will be treated as confidential.
3. Get a verbal consent from the respondents before the interview.
4. Thank the respondent at the end of the interview.

SECTION A: DEMOGRAPHIC DATA

FOR OFFICIAL USE ONLY

1. When were you born?

   (a) Month
   (b) Year
   (c) Don't know

2. What is your marital status?

   (a) Married
   (b) Single
   (c) Divorced
   (d) Widowed
   (e) Other (specify) .....

3. What is your occupation or source of income?

   .....

4. What tribe are you?

   .....

5. What is your religion?

   .....

6. How far did you go in your education?

   (a) None
   (b) Primary
   (c) Secondary
   (d) Higher

7. How many years did you complete at the level mentioned in Q 6?

   Years completed .....

SECTION B: KNOWLEDGE OF PREGNANT WOMEN AND PREMATURITY

FOR OFFICIAL USE ONLY

8. How many pregnancies have you had?

.....

9. Do you know the importance of attending Antenatal Clinic during your pregnancy?

(a) Yes
(b) No

10. What are the benefits of attending ANC?

.....

.....

11. Did all your pregnancies reach full term?

(a) Yes
(b) No

12. What do you regard as a premature labour?

(a) Labour starting at 37-40 weeks
(b) Labour starting at 33-36 weeks
(c) Labour starting at 28-32 weeks
(d) Labour starting before 28 weeks

13. Do you know the weight of a full term baby?

(a) Yes
(b) No

14. If "yes" to Q 13 what is the weight range of a full Term baby?

Weight: .....

FOR OFFICIAL USE ONLY

15. Have you ever heard of a baby who is born prematurely?

(a) Yes
(b) No

16. If "yes" to Q 15 from who?

(a) Relatives
(b) Friends
(c) Health workers
(d) tTBA
(e) TBA

(f) Other specify .....

17. How does a premature baby appear?

.....

18. What dangers do babies born prematurely face?

Dangers .....

.....

19. Do you know how to care for babies born prematurely?

(a) Yes
(b) No

20. If "yes" to Q 19 describe how premature babies should be cared for.

Description: .....

.....

SECTION C: ATTITUDES OF PREGNANT WOMEN AND PREMATURITY

FOR OFFICIAL USE ONLY

21. Do you have any customary beliefs about the causes of prematurity?

(a) Yes
(b) No

22. If "yes" to Q 21 state the beliefs.

.....

.....

23. Do you think that prematurity is a serious problem to the mother and her baby?

(a) Yes
(b) No

24. If "yes" to Q 23 give reasons for your answer.

Reasons: .....

.....

25. Would you seek medical aid if you developed problems during pregnancy?

(a) Yes
(b) No

26. Give reasons for your answer in Q 25.

Reasons: .....

.....

FOR OFFICIAL USE ONLY

27. Do you think the clinic you attend is within a walking distance from your home?

(a) Yes
(b) No

28. If "yes" have you attended the same clinic during all your pregnancies.

(a) Yes
(b) No

29. Give reasons for your answer above.

.....

30. What type of relationship have you experienced with clinic staff?

(a) Unacceptable relationship
(b) Good acceptable relationship
(c) Very good acceptable and mutual relationship

31. Do you think the health facility has trained midwives to manage your labour and care for your baby?

(a) Yes
(b) No

32. If "No" to Q 31 would it affect your use of the health facility?

(a) Yes
(b) No

SECTION D: PRACTICES OF PREGNANT WOMEN AND PREMATURITY

FOR OFFICIAL USE ONLY

33. Did you attend ANC during all your pregnancies?

(a) Yes
(b) No

34. At how many months do you start attending ANC?

.....

35. State the number of times you attended ANC during your last pregnancy.

.....

36. Did you experience any difficulties during your pregnancies?

(a) Yes
(b) No

37. If "yes" to Q 36 list the problems you experienced.

(a) Negligence of staff while client is in labour
(b) Shortage of staff
(c) Slowness in attending to labour
(d) Showing no compassion in labour
(e) No drugs available

38. If "yes" to Q 36 where did you go for help?

(a) Neighbour/friend
(b) Relative
(c) Health worker
(d) Trained TBA
(e) Untrained TBA
(f) Traditional healer

(g) Others specify .....

FOR OFFICIAL USE ONLY

39. Give reasons for your answer in question 38.

.....

.....

40. What would you do if you experience difficulties during your pregnancy if No to Q 36. Consult;

(a) A neighbour/friend
(b) A Relative
(c) A Health worker
(d) A Trained TBA
(e) An untrained TBA
(f) A Traditional healer

(g) Others specify .....

41. Who decided that you seek medical aid when you experienced difficulties in your pregnancies?

(a) Self
(b) Husband
(c) Parents
(d) Mother In Law

(e) Other specify .....

42. Give reasons for your answers in Q 40.

.....

.....

43. How soon did you finally leave for medical aid when you experienced difficulties in your pregnancies.

(a) Immediately
(b) Later in the day
(c) Following day
(d) Never

APPENDIX II

THE UNIVERSITY OF ZAMBIA

SCHOOL OF MEDICINE

DEPARTMENT OF POST BASIC NURSING

FOCUS GROUP DISCUSSION GUIDE FOR PREGNANT WOMEN

NUMBER OF INFORMANTS: .....

COMPOSITION OF INFORMANTS: .....

LANGUAGE USED IN THE INTERVIEW: .....

INSTRUCTIONS

1. Introduce yourself and the topic.
2. Explain the purpose of the discussion.
3. Get a verbal consent from the group to continue with the discussion.
4. Assure the group of confidentiality.

QUESTIONS:

1. What is prematurity?
2. What are the associated factors of prematurity?
3. Which of the associated factors of prematurity are common in your community?
4. How do you deal with the associated factors and prematurity?
5. Who decides when and where you seek medical help when the associated factors of prematurity and prematurity itself occur?
6. How is the efficiency and effectiveness of the health services and staff at the health centre in relation to prematurity?
7. What do you think has to be done to improve the care given to the mothers and their premature babies?

APPENDIX III

WORK SCHEDULE

	TASK TO BE PERFORMED	DATES	RESPONSIBLE PERSON	PERSON DAYS REQUIRED
1.	Literature Review	Continuous	Researcher	
2.	Finalise Research Proposal	Week 4 – 16 3 May - 30 Aug	Researcher	4 x 12 = 48 days
3.	Clearance for Funding	Week 10 – 14 14 June – 16 July	M.O.H.	5 x 4 = 20 days
4.	Clearance from Research Supervisor	Week 14-19 16 July – 20 August	Research Supervisor	5 x 2 = 10 days
5.	Pilot Study	Week 20 23 – 27 August	Researcher	2 days
6.	Training Research Assistants	Week 21 1 – 3 September	Researcher	2 days
7.	Data Collection	Week 22 – 23 6 –17 September	Researcher and Research Assistants	5 x 2 = 20 days
8.	Preliminary Data Analysis	Week 24-27 20 Sept. – 15 Oct.	Researcher	5 x 6 = 20 days
9.	Final Data Analysis	Week 28-33 18 Oct. – 26 Nov.	Researcher	5 x 6 = 30 days
10.	Finalization of Research Report	Week 34 – 47 29 Nov. – 28 Feb.	Researcher	5 x 14 = 70 days
11.	Dissemination of Research Results	Week 48+ 3 March	Researcher	60 days

APPENDIX IV

GANTT CHART 2004 – 2005

	TASK TO BE PERFORMED	RESPONSIBLE PERSON	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
1.	Literature Review	Researcher											
2.	Finalise Research Proposal	Researcher											
3.	Develop Data Collection Tool	Researcher											
4.	Clearance	Supervisor											
5.	Conduct Pilot Study	Researcher											
6.	Data Collection	Researcher											
7.	Data Analysis	Researcher											
8.	Draft Report to PBN	Supervisor											
9.	Final Report	Researcher											
10.	Monitoring/Evaluation	Researcher											

APPENDIX V

STUDY BUDGET

	BUDGET CATEGORY	UNIT COST (K)	QUANTITY	TOTAL
1.	**STATIONERY**			
	Bond paper	25000	4	100000
	Markers	10000	5	50000
	Pencils	500	5	2500
	Pens	1000	5	5000
	Cello-Tape	5000	1	5000
	Folder	15000	4	60000
	Flip chart	15000	2	30000
	Scientific Calculator	80000	1	80000
	Tippex fluid	15000	1	15000
	Stapler	15000	1	15000
	Staples	15000	1 pkt	15000
	Ruler	5000	1	5000
	Eraser	3000	4	12000
	Notebook	5000	1	5000
	Diskette	5000	2	10000
	Spiral	5000	3	15000
	SUB TOTAL			424500
2.	**SECRETARIAL**			
	Typing Questionnaire	20000	1	20000
	Printing Questionnaire	20000	1	20000
	Photocopying Questionnaire	2000	60	120000
	Research Report Typing	200000	1	200000
	Research Report Photocopying	20000	5	100000
	Binding Research Report	40000	5	200000
	SUB TOTAL			660000
3.	**PERSONNEL**			
	Researcher's Honorarium	50000	10 Days	500000
	Transport	150000	1	150000
	Research Assistants	45000	10 Days	450000
	Refreshments	50000	1	50000
	SUB TOTAL			1150000
	TOTAL COST			2234500
	10% Contingency			223450
	GRAND TOTAL			**K2457950**

The University of Zambia
School of Medicine
PBN Department
P .O. Box 50110
LUSAKA
4th August 2004.

The District Director of Health
Choma District Health Management Team
CHOMA.

ufs The Head of Department
Post Basic Nursing Department
P.O. Box 50110
LUSAKA.

ufs The Lecturer / Course Coordinator
Post Basic Nursing Department
P. O. Box 50110
LUSAKA.

Dear Sir or Madam:

RE: PERMISSION TO COLLECT DATA.

Iam a 4th year student at the University of Zambia, School of Medicine, Department of Post Basic Nursing. Iam currently pursuing a BSc (Nursing) degree Programme. In partial fulfillment of this programme, Iam required to conduct a Research Study; my topic is "To determine the knowledge, attitudes and practices of pregnant women towards prematurity."

I write to ask for permission to collect data from pregnant women attending Antenatal Clinic at Macha Mission Hospital.

Yours faithfully,

Mbuzi S. Maulao.

Cc Hospital Director-Macha.

All correspondence should be addressed
to the District Director of Health
Tel: 032-20532
Fax: 032-20324

In reply please quote
No.....

REPUBLIC OF ZAMBIA

MNISTRY OF HEALTH

CHOMA DISTRICT HEALTH MANAGEMENT BOARD

P.O. Box 630741
CHOMA
ZAMBIA

31st August, 2004.

The Director
Macha Mission Hospital
CHOMA.

Dear Sir,

RE: DATA COLLECTION – MBUZI S. MAULAO.

Kindly allow the above mentioned student from University of Zambia , School of medicine to collect data from pregnant women attending antenatal clinic at Macha Mission hospital.

Your assistance will be highly appreciated.

Yours faithfully,
Choma District Health Management Board

L. Mukelabai
Manager Planning and Development
For/DISTRICT DIRECTOR OF HEALTH

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