

**THE UNIVERSITY OF ZAMBIA  
SCHOOL OF MEDICINE**

**DEPARTMENT OF POST BASIC NURSING**

**A STUDY TO DETERMINE KNOWLEDGE, ATTITUDES  
AND PRACTICES OF DIABETIC PATIENTS  
TOWARDS THEIR ILLNESS AT UTH**

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**TABLE OF CONTENTS**

	<b>PAGE</b>
Title Page .....	i
Table of contents .....	ii – v
Annexes .....	iv
List of Tables .....	iv - v
Declaration .....	vi
Statement .....	vii
Dedication .....	viii
Acknowledgements .....	ix
Abstract .....	x
Abbreviations .....	xi

**CHAPTER ONE**

1.0	Introduction .....	1
1.1	Background Information .....	1
1.2	Statement of the Problem .....	3
1.3	Justification of the Study .....	9
1.4	Objectives .....	10
	1.4.1 General Objectives .....	10
	1.4.2 Specific Objectives .....	10
1.5	Hypothesis .....	11
1.6	Variables .....	11
1.7	Operational definition of terms .....	11

**CHAPTER TWO**

2.0	Literature Review .....	13
2.1	Introduction .....	13
2.2	Global Perspective .....	13
2.3	Regional Perspective .....	15
2.4	National Perspective .....	16

**CHAPTER THREE**

3.1	Methodology .....	18
3.1.1	Research Design .....	18
3.1.2	Research Setting .....	18
3.1.3	Study Population .....	19
3.1.4	Study unit .....	19
3.1.5	Sampling Method .....	19
3.2	Data Collection Technique .....	20
3.3	Ethical Consideration .....	21
3.4	Pilot Study .....	21

**CHAPTER FOUR**

	Data Analysis – Presentation and interpretation of findings .....	23
4.1	Introduction .....	23
4.2	Frequency Tables .....	24

**CHAPTER FIVE**

	Discussion of findings .....	34
5.1	Introduction .....	34

5.2	Discussion of findings .....	34
5.3	Implications to the health system .....	43

## CHAPTER SIX

Conclusions and Recommendations .....	46
6.1 Conclusion .....	46
6.2 Recommendations .....	46
6.3 Limitations .....	48

## ANNEXES

Annex I	:	Letter of introductory.....	
Annex II	:	Letter seeking permission from University Teaching Hospital Management. ....	56
Annex III	:	Questionnaire for diabetic clients at the Diabetic Clinic (UTH). ....	51
Annex IV	:	References.....	49

## LIST OF TABLES

Table 1	:	Demographic data. ....	24
Table 2	:	The level of clients knowledge about Diabetes Mellitus. ....	25
Table 3	:	Clients' attitude towards Diabetes Mellitus. ....	25
Table 4	:	Clients' practices towards Diabetes Mellitus. ....	26
Table 5	:	Knowledge of Diabetes Mellitus in relation to age. ....	26
Table 6	:	Knowledge of Diabetes Mellitus in relation to educational level. ....	27

Table 7	:	Knowledge of Diabetes Mellitus in relation to sex. ....	27
Table 8	:	Knowledge of Diabetes Mellitus in relation to marital status. ....	28
Table 9	:	Knowledge of Diabetes Mellitus in relation to occupation. ....	28
Table 10	:	Attitude of Diabetic clients in relation to age. ....	29
Table 11	:	Attitude of Diabetic clients in relation to sex. ....	29
Table 12	:	Attitude of diabetic clients in relation to marital status. ....	29
Table 13	:	Attitude of Diabetic clients in relation to educational level. ....	30
Table 14	:	Attitude of Diabetic clients in relation to occupation. ....	30
Table 15	:	Practices of Diabetic clients in relation to age. ....	30
Table 16	:	Practices of Diabetic clients in relation to sex. ....	31
Table 17	:	Practice of Diabetic clients in relation to marital status. ....	31
Table 18	:	Practice in relation to educational level.....	31
Table 19	:	Practices of Diabetic clients in relation to occupation. ....	32
Table 20	:	Who administers insulin to the client.....	32
Table 21	:	Who taught client how to inject insulin to themselves. ....	33



## STATEMENT

I hereby certify that this study is the result of my own independent investigations. The persons I am indebted are clearly indicated in the text and in the references.

SIGNED: He. .....

**CANDIDATE**

DATE: 18.03.02. .....

**SUPERVISING LECTURER**



## DECLARATION

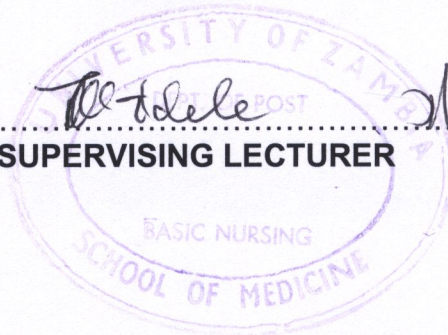
I, **MUNDANYA CHYENGO. N**, hereby declare that the work presented in this study for Bachelor of Science degree in Nursing has not been presented either wholly or in part for other degree and is not currently submitted for any other degree.

SIGNED BY: ..... 

**CANDIDATE**

APPROVED BY: .....  19<sup>th</sup> 02

**SUPERVISING LECTURER**



## **DEDICATION**

This research work is dedicated to my dear wife Hellen, who gave me support and without whose patience and encouragement, this work would not have been possible.

To my parents, brothers and sisters for their unflinching support throughout my studies and without whom this work would not have been completed.



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May the Lord bless you all abundantly.

## **ABSTRACT**

The purpose of the study was to determine the knowledge, attitudes and practices of diabetic clients towards their illness. The study was conducted in August – October 2001. The sample size was fifty (50) and the subjects were selected using convenient sampling method. The sample consisted of diabetic clients (males and females) aged 10 – 50 years and above from various racial and socio-economic backgrounds. A semi-structured interview schedule was chosen as an appropriate and ideal instrument to obtain the information from the respondents. Literature was obtained from studies done in Zambia and other countries world-wide on the knowledge, attitudes and practices.

The research findings revealed that most of the diabetic clients do not have adequate knowledge about their illness. It also revealed that most diabetic clients who have at least attained the basic formal education are likely to develop positive attitudes and have good practices towards their illness.

The study recommended that information, education, and communication (IEC) should be intensified by health care providers to diabetic clients and that health authorities should provide the necessary resources for diabetic clients to live healthier and longer lives.

## **ABBREVIATIONS**

U.T.H.	:	University Teaching Hospital
I.D.D.M.	:	Insulin Dependent Diabetes Mellitus
N.I.D.D.M.	:	Non-Insulin Dependent Diabetes Mellitus
W.H.O.	:	World Health Organisation
H.I.V.	:	Human Immuno-deficiency Virus
A.I.D.S.	:	Acquired Immune Deficiency Syndrome
I.E.C.	:	Information, Education and Communication



# **CHAPTER ONE**

## **1.0 INTRODUCTION**

### **1.1 BACKGROUND INFORMATION**

“Diabetes Mellitus is a common condition found in many populations throughout the world. The development of Diabetes Mellitus is associated with increased mortality and a high risk of developing vascular, retinal and neuropathic complications leading to premature disability and death (WHO 1994).”

Diabetes Mellitus is a chronic illness! It's complexity and chronicity in nature demands that patients need to have adequate knowledge about it and develop positive attitudes towards it so that they can cope with the disease and have productive lives.

“Increased knowledge of Diabetes Mellitus and ways of treating it means that the outlook for people with diabetes will improve all the time. The advice given to patients needs to be practical and tailored to individual circumstances.” (Willis J. 1986).

The above statement implies that diabetic patients who are knowledgeable about their condition are less likely to develop complications, since they take precautions to avoid these complications. They will for example adhere to dietary advice, insulin therapy and drug regimen.

Information about the disease and its prevention and control and data on the baseline situation and on the progress and quality assessment of prevention and control programmes are often inadequate.

“Adequate knowledge about Diabetes Mellitus is needed by both health care providers and patients. It is therefore essential to provide education to both partners in case of couples, and other carers, health care providers and patients require appropriate skills for the management of diabetes and its acute and long term complications.” (WHO 1994).

In the USA, where the prevalence of Diabetes Mellitus is approximately 7% in adults, it has been estimated that the combined direct and indirect costs of Diabetes in 1987 were US\$20.4 billion. Prevention and screening programmes for diabetes may be seen as a heavy economic burden on society, which may be an obstacle to their implementation. However, the costs are so high that prevention would be beneficial in economic terms apart from the benefits to the health of individuals and society (WHO 1994).

According to a report by the Director-General of the Department of health (1995/96) in South Africa, the death rate and the proportion of total deaths caused by diabetes are rising steadily. Diabetes Mellitus which has increased from 1% of total deaths in 1980 now constitute 3% of mortality in South Africa and the death rate has more than doubled from 6.8 per 100,000 to 17.3 during the same period.

Interest to carry out the study arose primarily through observing the increasing number of diabetic clients being readmitted to hospital with complications. Therefore, the study focuses on determining the knowledge, attitudes and practices of diabetic clients towards their illness at the diabetic clinic of the University Teaching Hospital in Lusaka.

## **1.2 STATEMENT OF THE PROBLEM**

"Diabetes Mellitus is one of the most common non-communicable diseases among populations of the world. It is the fourth leading cause of death in many developed countries and there is substantial evidence that it is epidemic in many developing and newly industrialised nations." (Amos et al 1997).

Demographic and epidemiological evidence suggests that in the absence of effective intervention, diabetes will continue to increase in frequency world wide. There are several factors that may contribute to the knowledge, attitude and practices of diabetic patients towards their illness.

### **• LEVEL OF EDUCATION**

The educational level of a client is an important factor. Patients with a low educational background may not be able to understand the basic information they need to know about diabetes mellitus. Patients need to know the nature of the condition, that is the signs and symptoms, treatment and complications. Patients also need to know the diet regimen, insulin therapy and how to administer insulin to themselves. In addition to this, the diabetic clients should know how to manage complications, for example when they experience



symptoms of hypoglycaemia, they should take glucose to raise the blood sugar level. The level of education will also determine the extent client will understand the condition and its management. This is of great importance since diabetes is a life-long condition. Clients with a high level of education are likely to easily understand their condition and how to manage it. They are also likely to develop positive attitudes towards their illness based on the knowledge they have. Consequently, their practices will most likely promote their health and prevent complications and disabilities unlike those clients who have low educational background.

- **INADEQUATE INFORMATION, EDUCATION AND COMMUNICATION**

Inadequate information, education and communication may also influence the knowledge, attitudes and practices of diabetic clients. Diabetic clients may not take advice seriously which may lead to poor control of the illness.

“Knowledge alone is not adequate in improving the health outcomes of people with diabetes. Recent studies suggest that professional behaviour has a significant effect on health outcomes, and people with diabetes want health care professionals to behave in a less didactic and authoritarian way.” (Anderson et al 1996).

Health care professionals need to provide information on Diabetes Mellitus: Causes, signs and symptoms, treatment, complications and prevention. They should also establish communication with the diabetic clients. Such a relationship allows them to gain access to information and support. The other factor which may affect the knowledge, attitudes and practices of diabetic

patients is lack of data on diabetes mellitus. Health care professionals may not have adequate information on diabetes mellitus. As a result of this they may not pass on accurate and detailed information which the client needs to know. The client may be ignorant of what to do.

- **LACK OF SPECIFIC SKILLS**

Some diabetic client may lack specific skills, for example, how to administer insulin injections to themselves, how to test their urine for glucose, how to measure dietary requirements etc this may affect their attitudes towards their illness. Lack of these skills may also make them develop bad practices which may endanger their health.

- **OCCUPATION**

The occupation of a diabetic client may be another factor contributing to a client's knowledge, attitudes and practices. Those with stress-related jobs such as business executives, managers and accountants may have less time to take their medication. These clients may not be able to adhere to advice such as weight reduction, carrying out exercises or adjusting to the prescribed diet. They may even miss their appointment or review dates due to their busy schedules. The clients who are at home most of the time are likely to adhere to advice such as taking their medication in order to control the blood sugar level. They may develop positive attitudes towards their illness. They are also likely to carry out health promoting practices such as exercises in order to their weight.

- **NON-AVAILABILITY OF RESOURCES**

The other factor which may influence the knowledge, attitudes and practices is the non-availability of resources. These could be diagnostic equipment to detect the levels of blood glucose, oral hypoglycaemic agents and insulin at the health facilities. Other resources are syringes and needles which are required for insulin therapy. The non-availability of these items may lead to improper treatment of the illness, for example, clients may reuse disposable insulin syringes. This practice is unsafe as the client may introduce infection in the body.

- **AGE**

The age of the client may influence the knowledge attitudes and practices of diabetic patients. Young clients may adhere to advice on their condition more than elderly clients because they are active and eager to learn more. They may have positive attitudes towards the treatment and how to manage or control their illness in general.

Elderly diabetic clients may not follow due to advanced age. An elderly diabetic may have fixed attitude by the time he is expected to adjust to his diet or activity. They may be illiterate or their vision may fail so that they may fail to follow instructions.

“Prevalence of diabetes mellitus is higher among elderly people and in certain ethnic groups. In those aged 65 and over, it has been shown to be as high as



6%. In the Asian and Caribbean communities, prevalence is three to four times higher than in the white population.” (Amos A.F. et al 1997).

The above statement indicates that there is a link between the age of a person and the prevalence of diabetes mellitus. Clients who are young may be eager or determined to gain more knowledge about their condition. The knowledge they have may enable them develop positive attitudes towards their illness and have safer practices which will prevent complications as compared to elderly diabetic clients.

- **STAFF SHORTAGE**

Inadequate health care staff may influence the diabetic clients' knowledge, attitudes and practices. If there are very few health workers at a health facility, this means the patients will not be provided with adequate information on their condition. In order for the patients to be well informed about their condition, there should be adequate health staff to provide the necessary information to the diabetic clients.

A multidisciplinary team is crucial to diabetic care. Practice nurses are often the only source of diabetic information for patients managed by a primary care team. A dietician will be involved in a supporting role, providing education and advice. Each team member should be able to use others as advisers (Sumner, J. 1997).

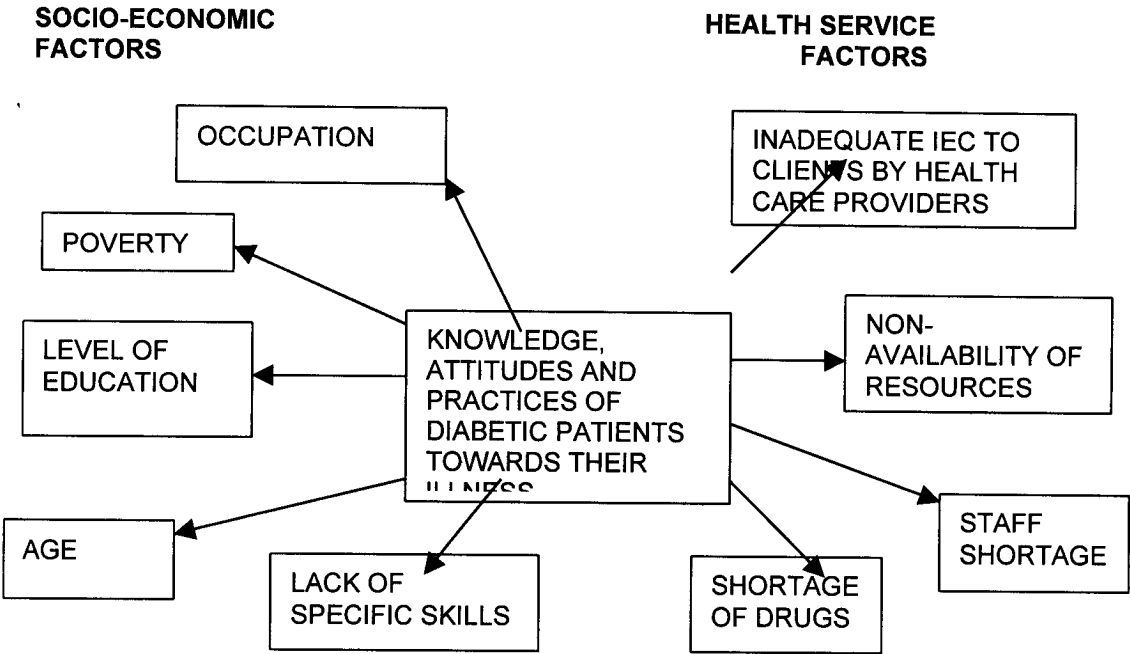
The above statement implies that diabetic care requires a team of health care providers who have different roles. Each member of the team plays an important part in promoting the health of the client and preventing short and long term complications.

- **POVERTY**

Poverty is another factor which may contribute to the knowledge, attitudes and practices of diabetic patients towards their illness. Hospitals have inadequate resources because of funding which is inadequate. Due to the poor economic status of the country, funding has been drastically cut. The hospitals and other health institutions sometimes run out of insulin. Oral hypoglycaemic drugs and other supplies such as syringes and needles. Patients may be required to buy these items from pharmacies and drug stores. Some of the patients may not be able to do so due to poverty. This may lead to non-compliance to treatment. The clients may be tempted to use unsafe practices such as reusing disposable syringes and needles. The other factor is that of cost-sharing which was introduced. In cost-sharing, the clients are expected to contribute to the cost of their care. This policy, however, exempts certain categories of people, for example, the elderly clients, children below 5 years of age, those with chronic illnesses such as Tuberculosis, Asthma, hypertension, heart diseases and Diabetes Mellitus. Although this policy states that these categories of people should not pay, they are expected to contribute because of inadequate supplies. Supplies are not given freely although this is a chronic condition.

It is hoped that the results or findings of this study will assist workers and all those involved in the provision of health care to improve the delivery of health education so as to help the diabetic clients to understand the concepts of their therapy, that is the diet and drug therapy and thus avoid unnecessary admissions to the hospital. Health care providers need to provide a more dynamic approach to health education to assist clients to understand the instructions given concerning their condition and develop positive attitudes towards their illness.

**DIAGRAM OF ANALYSIS OF FACTORS CONTRIBUTING TO DIABETIC PATIENTS' KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS THEIR ILLNESS**



**1.3 JUSTIFICATION OF THE STUDY**

Many diabetic patients do not have adequate knowledge about their disease and they have negative attitudes and practices towards their illness. The

study therefore aims to determine the knowledge, attitudes and practices of diabetic patients towards their illness. The results of this study will be utilised to find ways of increasing patient education and enable patients develop positive attitudes towards their illness.

## **1.4 OBJECTIVES**

### **GENERAL OBJECTIVE**

To determine the knowledge, attitude and practices of diabetic patients towards their illness.

### **SPECIFIC OBJECTIVES**

1. To establish the patients' knowledge about diabetes mellitus.
2. To establish the attitude of diabetic patients towards their illness.
3. To determine the practices of diabetic patients towards their illness.
4. To identify socio-economic factors which may affect the management of diabetic patients such as:
  - (i) Occupation
  - (ii) Educational level
  - (iii) Sex
  - (iv) Age
5. To make recommendations to relevant authorities.

## **1.4 HYPOTHESIS**

2. When diabetic patients are given adequate knowledge about their condition, they are less likely to have complications.
3. Diabetic patients who are of a high socio-economic status are more likely to adhere to the treatment regimen than those of a low socio-economic status.

## **1.5 VARIABLES**

### **(a) DEPENDENT VARIABLES**

Knowledge, attitudes and practices.

### **(b) INDEPENDENT VARIABLES**

- Sex
- Educational level
- Poverty
- Age
- Occupation.

## **1.6 OPERATIONAL DEFINITIONS OF TERMS**

### **1. DIABETES MELLITUS**

It is a chronic illness characterised by hyperglycaemia and disturbances of carbohydrate, fat and protein metabolism that are



associated with absolute on relative deficiency of insulin and/or insulin secretion.

2. **KNOWLEDGE**

Familiarity gained through experience.

3. **ATTITUDES**

The behaviour of a person towards Diabetes Mellitus.

4. **PRACTICES**

Repeated action of something. It can be good or bad.

5. **HYPERGLYCAEMIA**

High blood sugar level.

6. **HYPOGLYCAEMIA**

Low blood sugar level.

7. **INSULIN**

A hormone secreted by the islets of langerhans in the pancreas, i.e. enhances uptake of glucose by the tissue cells.

8. **INSULIN DEPENDENT DIABETES MELLITUS**

A type of diabetes in which there is absolute deficiency of insulin.

9. **NON-INSULIN DEPENDENT DIABETES MELLITUS**

A type of diabetes in which the pancreas produces insulin but it is rendered insufficient.

## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW**

Diabetes Mellitus is a world wide public health problem made more acute in Africa by low socio-economic standards (Ducorps M. 1998).

There is little research work that has been done on Diabetes Mellitus in Zambia. In this literature review, information was obtained from books, journals and magazines. The purpose of literature review was to find out what has been previously researched on so as to have a picture of the problem and relate it to the present situation.

### **2.1 GLOBAL PERSPECTIVE**

The global prevalence of diabetes mellitus is expected to double from 124 million in 1997 to 220 million by 2010, with the largest increases in Africa and Asia. These 2 regions are also expected to experience the greatest increases in HIV/AIDS prevalence. The impact of HIV/AIDS on the diabetes epidemic was estimated through use of data from South Africa. The analysis highlighted the need to adjust for the effect of HIV/AIDS when projecting the prevalence of chronic diseases and national health budgets into the next century. South Africa's annual population growth rate is expected to decrease, from 1.9% in 1995 to 0.3% in 2010, as a result of the AIDS epidemic. The age-adjusted prevalence of type 2 diabetes will increase from 1.7% to 3.7% resulting in 1,624,000 case in 2010. A less conservative

prevalence of 4% rising to 8% gives an estimated 3,482,000 cases. When the effect of HIV/AIDS on population growth is calculated, this number is predicted to decrease to about 3,380,000 cases a 3% reduction representing over 100,000 fewer cases of type 2 diabetes. The burden of HIV/AIDS and diabetes is likely to fall on lower socio-economic classes (PANZ V. 1999).

In 1993, the National Institute of Diabetes and Digestive and Kidney diseases in USA ended a 10-year study to determine how best to control the complications of Insulin Dependent Diabetes Mellitus (IDDM). The study revealed among other things that more extensive patient education made a positive outcome in the results. Patients who adhered to insulin regimen had 50% progression of complications less than those who were not following the regimen. Patients who followed dietary regimen had a dramatic improvement within a short period of time. The results of this study clearly show the positive impact that patient education has on the diabetic clients.

In a prospective study of intentional weight loss and mortality in over weight white men aged 40-64 years in USA, it was discovered that intentional weight loss may reduce the risk of dying from diabetes (Williamson D. et al 1999).

From this study, it can be seen that patient attitudes plays a role in the prognosis of their illness. Patients who intentionally make an effort to try to reduce their weight are likely to control their illness and live much longer.

## 2.2 REGIONAL PERSPECTIVE

In Egypt, a study was carried out to describe the level of knowledge about the disease. It was found that a majority of diabetic patients (90%) had poor knowledge about the disease (83.7%) had poor knowledge about the complications associated with diabetes and 96.3% had poor awareness of how to control the disease. The poor level of knowledge that diabetes have about the disease suggests that health care providers need to be trained in areas of information education and communication. (Kamel N. et al 1992).

The results of this study show how serious the problem of inadequate knowledge is and the need for reinforcing information, education and communication by health care providers in order to help diabetics control their disease and prevent complications.

An account is given of how a national diabetes care and education programme was developed in Ghana, a developing country through international collaboration of medical schools, industry and government health care institutions. The approach is by way of multidisciplinary teams consisting of physicians dieticians and nurse educators at two tertiary institutional levels (teaching hospitals) who in turn trained teams consisting of physicians, dieticians, diet therapy nurses, nurse educators and pharmacists at regional and district level. (Amoah et al 1989:453).

Such kind of an approach can be very helpful in educating diabetic patients concerning their illness. A multidisciplinary approach is very important because most of the aspects of diabetes can be handled by experts who will give professional advice hence minimising chances of progression of complications.

### **2.3 NATIONAL PERSPECTIVE**

In Zambia, a study was carried out in 1985 to determine how effective health education given to Insulin Dependent Diabetes Mellitus (IDDM) is at the University Teaching Hospital (UTH) in Lusaka. The findings were that some of the clients did not know much about their own condition. Out of the 50 subjects (aged 10-64) on whom the study was carried out, 10 (20%) knew nothing about Diabetes Mellitus, 22 (44%) knew little and 18 (36%) knew much. Furthermore, clients were exposed to health education only in the initial stage of their illness when they were admitted to the ward. A little advice was given to them during subsequent visit in the clinic and most of the advice was given by a doctor.

The study also revealed that parents and significant others felt that they were not well prepared for the management of their relative. This is because only the relative of a child was most of the time included in the health teaching. A number of adult diabetes were either given advice on their own in hospital or if the significant persons were needed, they were only briefed on what was to



be done to their relative at home once during the stay in hospital or on discharge from hospital. (Ng'ambi M., 1985. Unpublished study).

In conclusion, this literature review shows that Diabetes Mellitus is a serious health problem globally. It has also revealed that most of the diabetic clients do not have adequate knowledge about the disease and how to take preventive measures in order to avoid complications. Inadequate knowledge about the disease has led to bad attitudes and practices towards the disease.

## **CHAPTER THREE**

### **3.1 METHODOLOGY**

#### **3.1.1 RESEARCH DESIGN**

A research design is a scheme of action for answering the research question. (Treece and Treece, 1997). In this study, a non-intervention type of research design was used. In this study design, the researcher merely observes and analyses the situation but does not manipulate the situation. A descriptive survey was used. This involves the collection of data with the aim of describing the situation as it is. The main reason for using a descriptive study design was that it would enable the researcher to describe the characteristics of the subjects and the frequency of phenomena related to knowledge, attitudes and practices of diabetic patients. The researcher used this type of approach in order to get direct information from the respondents.

#### **3.1.2 RESEARCH SETTING**

The study was carried out in Lusaka Urban. The specific site of study was at the University Teaching Hospital (UTH) Diabetic clinic. The University Teaching Hospital (UTH) is the biggest hospital in Zambia with a bed capacity of 1,500. The diabetic clinic at the UTH is conducted every Friday from 08:00 hours to 12:00 hours. It is during these clinics that diabetic patients are reviewed and counselled. The diabetic clients come from different cultural, racial, educational and socio-economic backgrounds. This site was chosen because it was easy to access the diabetic clients.

**3.1.2 STUDY POPULATION**

The study population comprised both male and female diabetic clients aged 10 to 65 years of age. The subjects were all from Lusaka urban and came from different social, cultural and educational back grounds.

**3.1.4 STUDY UNIT**

Diabetic patients attending the diabetic clinic at the University Teaching Hospital (UTH) in Lusaka.

**3.1.5 SAMPLING METHOD**

The sample consisted of fifty (50) clients within the age range of 10-50 years. These were selected using non-probability sampling method. This method consists of taking all cases available until the sample size reaches the desired size. This method was chosen because the sample subjects were easily accessed so it was convenient for this study.

**TABLE SHOWING THE STUDY POPULATION UNIT, SAMPLING METHOD AND SAMPLE SIZE**

<b>STUDY POPULATION</b>	<b>STUDY UNIT</b>	<b>SAMPLING METHOD</b>	<b>SAMPLE SIZE</b>
Male and Female diabetic clients aged 10-50 years	Diabetic patients attending diabetic clinic at UTH.	Convenience sampling.	50

### **3.2 DATA COLLECTION TECHNIQUE**

The instrument which was used to collect data was a semi-structured interview. A semi-structured interview schedule is a data collection technique in which the interviewer asks a number of specified questions but additional probes are allowed. It is based on an established questionnaire with predetermined closed ended and non-predetermined open-ended questions.

#### **ADVANTAGES**

1. The interview is suitable for literate and illiterate subjects.
2. Questions may be clarified if they are misunderstood.
3. There is high response rate rather than written questionnaire. In-depth responses can be obtained.
4. Responses can be obtained from a wide range of subjects.
5. Non-verbal behaviour and mannerisms can be observed during the interview.
6. Interviews may be used with small sample size.

#### **DISADVANTAGES**

1. It is time consuming and expensive.
2. The presence of researcher can influence the responses of the respondents.
3. Arrangement for interviews may be difficult to make.
4. Training programmes are needed for interviewer.

5. Interviewers may misinterpret non-verbal behaviour.
6. If the responses are not standardised, it may be difficult to quantify the responses.
7. Analysis may be time consuming and more difficult.

### **3.3 ETHICAL CONSIDERATION**

It is of great importance to consider ethics when developing a research methodology. Permission to conduct the study was sought from UTH management to carry out the study in the Diabetic clinic. The nature and purpose of the study was explained to the subjects before interviews and participation was voluntary. The respondents were assured that the information provided would be treated as confidential. Names were not written on the interview schedule questionnaire but instead numbers were written.

### **3.4 PILOT STUDY**

A pilot study is a small scale study done before the main study (Treece and Treece 1997). A pilot study was carried out in the medical wards at the University Teaching Hospital (UTH) in Lusaka. The medical wards are EO1, EO2, E11, E12, E21 and E22. A semi-structured interview was used and only 10 clients were interviewed. A pilot study tested the instrument as well as reaction of respondents to the instrument.

A pilot study also made it possible to make adjustments necessary in the interview schedule.

Diabetes Mellitus is a long term and complex illness which requires patients to have adequate knowledge in order to cope with the disease. As revealed in literature review, it is quite costly to treat diabetics when they develop complications. It is therefore of utmost importance that health care providers give adequate information to the diabetic clients about the disease and its treatment and help them develop positive attitudes towards their illness.



## **CHAPTER FOUR**

### **4.1 DATA ANALYSIS AND PRESENTATION OF FINDINGS**

1. The data which was collected from the fifty (50) respondents was sorted out and edited for completeness and accuracy. The responses from open-ended questions was categorised, coded and entered on the data master sheet. Descriptive statistics using frequency distribution and percentages were used in tabulating data. This facilitated comparison of the same data as well as summarising the findings. This type of analysis makes it easier to remember facts. The frequencies were made by simple tallying.
2. The data was analysed manually using frequency tables, cross tabulations and numerical descriptions of each table. A total of fifty (50) respondents were conveniently selected at the diabetic clinic in phase V at the University Teaching Hospital (UTH).

4.2 FREQUENCY TABLES

TABLE 1. DEMOGRAPHIC DATA

VARIABLE	FREQUENCY	RELATIVE FREQUENCY (%)
<b>AGE ( years)</b>		
10 - 19	0	0 (%)
20 - 29	1	2 (%)
30 - 39	14	28 (%)
40 - 49	14	28 (%)
50 and above	21	42 (%)
<b>TOTAL</b>	50	100 (5%)
<b>SEX</b>		
Male	22	44 (%)
Female	28	56 (%)
<b>TOTAL</b>	50	100 (%)
<b>MARITAL STATUS</b>		
Married	37	74 (%)
Single	6	12 %
widowed	5	10 %
Divorced	2	4 %
<b>TOTAL</b>	50	100 %
<b>EDUCATIONAL LEVEL</b>		
primary	13	26 %
secondary	24	48 %
college	5	10 %
university	1	2 %
Never being to school	7	14 %
<b>TOTAL</b>	50	100 %
<b>OCCUPATION</b>		
Nothing	14	28 %
Self - employed	22	44 %
Formal employment	14	28 %
<b>TOTAL</b>	50	100 %

Table 1 shows that the majority of the respondents 21 (42%) were above 50 years with only 1 (2%) between 20-29 years of age and 22 (44%) of the respondents were males whereas 28 (56%) were females.

The majority of the respondents 37 (74%) were married. Out of the total number of respondents the majority 24 (48%) had attained secondary education while 7 (14%) had never been to school.

In terms of occupation, the majority 22 (44%) were self-employed and 14 (28%) did nothing for their living. 14 (28%) were in formal employment.

**TABLE 2: FREQUENCY DISTRIBUTION OF THE LEVEL OF CLIENTS KNOWLEDGE ABOUT DIABETES MELLITUS**

LEVEL OF KNOWLEDGE	FREQUENCY	RELATIVE FREQUENCY (%)
High	8	16%
Average	11	22%
Low	18	36%
No knowledge	13	26%
<b>TOTAL</b>	<b>50</b>	<b>100%</b>

The table shows 13 (26%) had no knowledge about diabetes mellitus, while 18 (36%) had low knowledge.

**TABLE 3: FREQUENCY DISTRIBUTION OF CLIENTS' ATTITUDE TOWARDS DIABETES MELLITUS**

ATTITUDE	FREQUENCY	RELATIVE FREQUENCY (%)
POSITIVE	36	72%
NEGATIVE	14	28%
<b>TOTAL</b>	<b>50</b>	<b>100%</b>

Table 3 shows that the majority 36 (72%) of the respondents in the study had a positive attitude towards Diabetes Mellitus while 14 (28%) had a negative attitude towards Diabetes Mellitus.

**TABLE 4: FREQUENCY DISTRIBUTION OF CLIENTS' PRACTICES TOWARDS DIABETES MELLITUS**

PRACTICE	FREQUENCY	RELATIVE FREQUENCY (%)
GOOD	41	82%
POOR	9	18%
TOTAL	50	100%

The table shows that the majority 41 (82%) of respondents have good practices towards their illness while 9 (18%) have bad practices.

**KNOWLEDGE AND DEMOGRAPHIC DATA**

**TABLE 5: KNOWLEDGE OF DIABETES MELLITUS IN RELATION TO AGE**

KNOWLEDGE	AGE (YEARS)					TOTAL
	10-19	20-29	30-39	40-49	50 AND ABOVE	
High	0(0%)	0(0%)	1(7.1%)	3(23%)	4(18.2%)	8
Average	0(0%)	0(0%)	2(14.2%)	2(15.4%)	7(31.8%)	11
Low	0(0%)	0(0%)	8(57.1%)	4(30.8%)	6(27.3%)	18
No knowledge	0(0%)	1(100%)	3(21.4%)	4(30.8%)	5(22.7%)	13
TOTAL	0	1	14	13	22	50

The table shows that the age group 50 years and above had the highest number 5(22.7%) of respondents with no knowledge of diabetes.

**TABLE 6: KNOWLEDGE OF DIABETES MELLITUS IN RELATION TO EDUCATIONAL LEVEL**

KNOWLEDGE	EDUCATIONAL LEVEL					TOTAL
	PRIMA RY	SECOND ARY	COLLEG E	UNIVER SITY	NEVER BEEN TO SCHOOL	
HIGH	1(7.7%)	5(20.8%)	0(0%)	0(0%)	2(28.6%)	8
AVERAGE	2(15.4%)	4(16.7%)	3(60%)	1(100%)	1(14.3%)	11
LOW	8(61.5%)	6(25%)	2(40%)	0(0%)	2(28.6%)	18
NO KNOWLEDGE	2(15.4%)	9(37.5%)	0(0%)	0(0%)	2(28.6%)	13
TOTAL	13	24	5	1	7	50

The table shows that 2 (28.6%) of the clients who had never been to school had high level of knowledge about Diabetes Mellitus, with 9 (37.5%) with secondary education as having no knowledge.

**TABLE 7: KNOWLEDGE OF DIABETES MELLITUS IN RELATION TO SEX**

KNOWLEDGE	SEX		TOTAL
	MALE	FEMALE	
HIGH	3(13.6%)	5(17.8%)	8
AVERAGE	3(13.6%)	8(28.5%)	11
LOW	9(40.9%)	9(32.1%)	18
NO KNOWLEDGE	7(31.8%)	6(21.4%)	13
TOTAL	22	28	50

This Table shows that both male and female respondents had low level of knowledge 9 (40.9%) and 9 (32.1%) respectively.

**TABLE 8: KNOWLEDGE OF DIABETES MELLITUS IN RELATION TO MARITAL STATUS**

KNOWLEDGE	MARITAL STATUS				TOTAL
	MARRIED	SINGLE	WIDOWED	DIVORCED	
High	6(16.2%)	1(16.7%)	1(2%)	0(0%)	8
Average	7(18.9%)	0(0%)	3(60%)	1(50%)	11
Low	15(40.5%)	1(16.7%)	1(2%)	1(50%)	18
No knowledge	9(24.3%)	4(66.7%)	0(0%)	0(0%)	13
TOTAL	37	6	5	2	50

The table shows that the majority of the married respondents 15 (40.5%) had a low level of knowledge while the single clients had the highest number 4 (66.7%) with no knowledge about Diabetes Mellitus.

**TABLE 9: KNOWLEDGE OF DIABETES MELLITUS IN RELATION TO OCCUPATION**

KNOWLEDGE	OCCUPATION			TOTAL
	NOTHING	SELF-EMPLOYED	FORMAL EMPLOYMENT	
High	1(7.1%)	6(27.3%)	1(7.1%)	8
Average	4(28.6%)	5(22.7%)	2(14.3%)	11
Low	6(42.8%)	7(31.8%)	5(35.7%)	18
No knowledge	3(21.4%)	4(18.2%)	6(42.8%)	13
TOTAL	14	22	14	50

The table shows that most of the respondents had at least some knowledge on Diabetes Mellitus with only 6 (42.8%) of those in formal employment and 3 (21.4%) who did nothing for their living had no knowledge about Diabetes Mellitus.



**TABLE 10: ATTITUDE OF DIABETIC CLIENTS IN RELATION TO AGE**

ATTITUDE	AGE (YEARS)					
	10-19	20-29	30-39	40-49	50 AND ABOVE	TOTAL
POSITIVE	0(0%)	1(100%)	9(62.3%)	9(62.3%)	17(70.8%)	36
NEGATIVE	0(0%)	0(0%)	5(35.7%)	2(18.2%)	7(29.2%)	14
TOTAL	0	1	14	11	24	50

The table shows that most of the clients aged 50 years and above 17 (70.8%) had a positive attitude towards their illness.

**TABLE 11: ATTITUDE OF DIABETIC CLIENTS IN RELATION TO SEX**

ATTITUDE	SEX		TOTAL
	MALE	FEMALE	
POSITIVE	16 (72.7%)	20 (71.4%)	36
NEGATIVE	6 (27.3%)	8 (36.4%)	14
TOTAL	22	28	50

The table shows that the majority of both male and female respondents had positive attitude towards Diabetes Mellitus.

**TABLE 12: ATTITUDE OF DIABETIC CLIENTS IN RELATION TO MARITAL STATUS**

ATTITUDE	MARITAL STATUS				TOTAL
	MARRIED	SINGLE	WIDOWED	DIVORCED	
POSITIVE	27(72.9%)	4(66.7%)	3(60%)	2(100%)	36
NEGATIVE	10(27.1%)	2(33.3%)	2(40%)	0(0%)	14
TOTAL	37	6	5	2	50

The table shows that most of the married clients 27 (72.9%) had a positive attitude towards their illness while only 10 (27.1%) had a negative attitude.

**TABLE 13: ATTITUDE OF DIABETIC CLIENTS IN RELATION TO EDUCATIONAL LEVEL**

ATTITUDE	EDUCATIONAL LEVEL					
	PRIMAR Y	SECONDA RY	COLLEG E	UNIVER SITY	NEVER BEEN TO SCHOOL	TOTAL
POSITIVE	9(69.2%)	16(66.7%)	4(80%)	1(100%)	6(85.8%)	36
NEGATIVE	4(30.8%)	8(33.3%)	1(20%)	0(0%)	1(14.2%)	14
TOTAL	13	24	5	1	7	50

The table shows that the majority of clients with secondary education 16 (66.7%) had positive attitude towards Diabetes Mellitus.

**TABLE 14: ATTITUDE OF DIABETIC CLIENTS IN RELATION TO OCCUPATION**

ATTITUDE	OCCUPATION			TOTAL
	NOTHING	SELF EMPLOYED	FORMAL EMPLOYMENT	
POSITIVE	11(78.6%)	14(63.6%)	8(57.1%)	36
NEGATIVE	3(21.4%)	8(36.4%)	6(42.9%)	14
TOTAL	14	22	14	50

The table shows that most of the respondents who were in self-employment 14 (63.6%) had positive attitudes towards their illness.

**TABLE 15: PRACTICE OF DIABETIC CLIENTS IN RELATION TO AGE**

PRACTICE	AGE (YEARS)					TOTAL
	10-19	20-29	30-39	40-49	50 AND ABOVE	
GOOD	0(0%)	1(100%)	13(92.9 %)	8(72.7%)	19(79.2%)	41
POOR	0(0%)	0(0%)	1(9.1%)	3(27.3%)	5(20.8%)	9
TOTAL	0	1	14	11	24	50

The table shows that the majority of respondents in age group 50 years and above 19 (79.2%) had good practices followed by 13 (92.9%) in the 30-39 years age group.

**TABLE 16: PRACTICE OF DIABETIC CLIENTS IN RELATION TO SEX**

PRACTICE	SEX		TOTAL
	MALE	FEMALE	
GOOD	16(72.7%)	25(89.3%)	41
POOR	6(27.3%)	3(10.7%)	9
TOTAL	22	28	50

The table shows that most of the males (72.7%) and females 25 (89.3%) had good practices.

**TABLE 17: PRACTICE OF DIABETIC CLIENTS IN RELATION TO MARITAL STATUS**

PRACTICE	MARITAL STATUS				TOTAL
	MARRIED	SINGLE	WIDOWED	DIVORCED	
GOOD	30(81.1%)	4(66.7%)	5(100%)	2(100%)	41
POOR	7(18.7%)	2(33.3%)	0(0%)	0(0%)	9
TOTAL	37	6	5	2	50

The table shows that the majority of married clients 30(81.1%) had good practices while some of the married clients 7 (18.9%) and single clients 2 (33.3%) had poor practices.

**TABLE 18: PRACTICE IN RELATION TO EDUCATIONAL LEVEL**

PRACTICE	EDUCATIONAL LEVEL					TOTAL
	PRIMAR Y	SECONDA RY	COLLEG E	UNIVER SITY	NEVER BEEN TO SCHOOL	
GOOD	12(92.3 %)	20(83.3%)	3(60%)	1(100%)	5(71.4%)	41
POOR	1(7.7%)	4(16.7%)	2(40%)	0(0%)	2(28.6%)	9
TOTAL	13	24	5	1	7	50

Table 18 shows that the majority of clients who had attained primary education 12 (92.3%) had good practices.

**TABLE 19: PRACTICE OF DIABETIC CLIENTS IN RELATION TO OCCUPATION**

PRACTICE	OCCUPATION			TOTAL
	NOTHING	SELF EMPLOYED	FORMAL EMPLOYMENT	
GOOD	12(85.7%)	19(86.4%)	10(71.4%)	41
POOR	2(14.3%)	3(13.6%)	4(28.6%)	9
TOTAL	14	22	14	50

The table shows that the majority of respondents in all the categories of occupation had good practices.

**TABLE 20: TABLE SHOWING WHO ADMINISTERS INSULIN TO THE CLIENT**

WHO ADMINISTERS INSULIN	FREQUENCY	RELATIVE FREQUENCY
CLIENT	21	87.5%
NURSE	2	8.3%
SPOUSE	1	4.2%
TOTAL	24	100%

The table shows that of the 24 clients who are on insulin treatment, 22 (87.5%) administer insulin to themselves, 2 (8.3%) by the nurse and only 1 (4.2%) by the spouse.

**TABLE 21: TABLE SHOWING WHO TAUGHT CLIENT TO INJECT INSULIN TO THEMSELVES**

WHO TAUGHT CLIENT	NUMBER OF CLIENTS	RELATIVE FREQUENCY
NURSE	13	59.1%
DOCTOR	9	40.9%
TOTAL	22	100%

The table shows that of the 22 clients who were taught how to administer insulin to themselves, the majority 13 (59.1%) were taught by the nurse while 9 (40.1%) were taught by the doctor.

## **CHAPTER FIVE**

### **DISCUSSION OF FINDINGS AND ITS IMPLICATIONS TO THE HEALTH SYSTEM**

#### **5.0 INTRODUCTION**

The objective of this study was to determine the knowledge, attitudes and practices of diabetic patients towards their illness and to make recommendations to the relevant authorities for action. The first assumption of the study was that most of the diabetic patients do not have adequate knowledge about their illness. The other assumption was that diabetic clients of a high socio-economic status are likely to adhere to the treatment regimen than those of a low socio-economic status.

Data was collected from fifty (50) respondents both males and females. Their age ranged between 10 years and 50 years and above. Respondents were chosen by random sampling as the clients came to the diabetic clinic. The discussion is based on the data collected and analysed. The results are discussed under subheadings according to the objectives of the study.

#### **6. DISCUSSION OF FINDINGS**

##### **DEMOGRAPHIC DATA**

The demographic data revealed that of the fifty (50) respondents, the majority 21 (42%) were in the age group 50 years and above. The age group 20-29

had only one (1) client. The age groups 30-39 and 40-49 years had 14 (28%) clients each with Diabetes Mellitus. This could be due to the fact that the incidence of Diabetes tends to be high with age. The development of Diabetes Mellitus increases with age as well. This is supported by Fledger et al (1979) who states that in general, the incidence of Diabetes Mellitus increases with age and then declines.

Most of the clients above the age of 40 years have Type II (maturity onset) Diabetes Mellitus while Diabetic clients with Type I (early onset or juvenile) diabetes are less than 40 years and they are few.

In a study to determine the prevalence of diabetes Type I and Type II in Cameroon, it was discovered that insulin dependent Diabetes Mellitus (IDDM) occurred at any age and that only 53% of cases were revealed before 40 years of age. Non-insulin dependent Diabetes (NIDDM) was also detected at any age. In both types of diabetes, maximum onset frequencies were found in middle age; in the fourth decade (31-40 years) in insulin-dependent diabetes mellitus and the fifth decade (41-50 years) in non-insulin dependent Diabetes Mellitus. No significant difference was found between males and females.

The majority of the respondents 37 (74%) were married while only 6 (12%) were single. This could be due to the fact that most of the diabetic clients were above 30 years old. This is a normal occurrence in Zambian culture because one is expected to be married by the age of 30. This kind of a

picture suggests that most of the diabetic clients adhere to advice and have good practices towards their illness because they are reminded by their spouses or children for example on administration of medication, keeping appointment dates and testing of urine for glucose.

It has also been observed that the majority 22 (44%) were self-employed while 14 (28%) were in formal employment and those who were not involved in any activity were also 14 (28%). This implies that those who are self-employed have ability to obtain the necessary resources such as drugs (hypoglycaemic agents), insulin, needles and syringes which sometimes are not available at the hospital and other health institutions. They are also able to follow the recommended guidelines on diet, for example eating in between meals, eating the recommend food because they can afford it. This supports the assumption that Diabetic patients who are of a high socio-economic status are more likely to adhere to the treatment regimen than those of a low socio-economic status.

Some of the clients in formal employment and those not employed may not have all the required resources because of the low socio-economic status in Zambia where even some of the people in formal employment cannot meet the basic requirements such as food and health costs.

The incidence of Diabetes Mellitus increases with family income in some studies. The incidence rate for those from families with average income was



nearly twice that observed from households with less income on average (West et al; 1979).

La Porte et al (1981) however found little relationship between incidence and social class.

The majority of the respondents 24 (48%) had secondary education while 13 (26%) had attained primary education and 7 (14%) have not been to school. This implies that most of the respondents have at least basic knowledge about Diabetes Mellitus. They will also be able to follow simple instructions on how to look after themselves for example advice on importance of exercises, following the prescribed diet, how to test urine for glucose, how to administer insulin to themselves and how to prevent complications.

## **THE KNOWLEDGE OF DIABETIC CLIENTS ABOUT THEIR ILLNESS**

The study has revealed that out of fifty (50) respondents, 18 (36%) had low level of knowledge and only 8 (16%) had a high level of knowledge while 13 (26%) had no knowledge as shown in Table 2.

Out of the 50 clients, 21 (42%) had been admitted to hospital in the last 12 months while 29 (58%) had never been admitted to hospital. 14 (28%) were admitted for high blood sugar level (hypoglycaemia) and 7 (14%) were admitted for other complications such as Retinopathy, diabetic wound and hypertension.

These findings support the assumption that “when diabetic patients are given adequate knowledge about their condition, they are less likely to have complications”.

Based on the findings above, it was therefore concluded that most of the clients do not have adequate knowledge about their illness. This picture implies that the majority of the clients are unable to care for themselves due to inadequate knowledge about their illness, for example, they may not know how to inject themselves with insulin, the recommended diet, how to test urine for glucose and how to recognise complications early. They are likely to develop complications due to low level of knowledge about the disease and measures which should be taken to prevent complications.

Of those who had some knowledge, the majority 24 (48%) got the information from the doctor, 4 (8%) got the information from the nurses and 9 (18%) got the information from friends.

There is need for increased public awareness about the disease. More nurses should be actively involved in the dissemination of information to the clients about diabetes because they are the closest health care providers to the clients. There is also need for the health institutions to increase awareness by providing literature such as leaflets, journals, magazines, newspaper articles, research papers to the clients. Radio and television programmes can be of help in the dissemination of information.

The study shows that 2 (28.6%) of the clients who had never been to school had a high level of knowledge about Diabetes Mellitus (Table 6). This is quite unusual. However, they could have obtained this knowledge either from the radio or from friends or relatives.

The married respondents had more clients 6 (16.2%) with high level of knowledge as shown in Table 8. This could be due to the fact that married couples are able to support each other for example on treatment, diet, urine testing for glucose and appointment dates during their lives together.

The poor level of knowledge of the diabetic clients imply that health care providers do not give adequate, information, education and communication (IEC) about Diabetes Mellitus.

Anderson et al (1996) suggests that professional behaviour has a significant effect on health outcomes and people with diabetes want health care professionals to behave in a more flexible way.

The above statement implies that professionals who are involved in providing health care to the diabetic clients need to behave in a manner that will lead to positive outcomes on the health of the clients. The health professionals include physicians (Doctors), nurses, dieticians and other specialists. They should not dictate what is expected of clients but they should skilfully provide the necessary information and encourage the clients to adhere to the advice so that they can appreciate the services being provided to them. A multi

disciplinary team approach is very useful in providing care to the diabetic clients. Clients must feel that they are members of the health team.

## **THE ATTITUDE OF DIABETIC PATIENTS TOWARDS THEIR ILLNESS**

The study has demonstrated that most of the respondents 36 (72%) had a positive attitude toward their illness while 14 (28%) had negative attitudes as shown in Table 3.

The study has revealed that most of the clients aged 50 years and above 17 (70.8%) had a positive attitude (Table 17). This could be due to the fact that most of the clients in this age group have had the disease for a long time and based on their experience, they develop positive attitudes toward their illness which in turn enables them to live longer and healthier lives.

Sue Cradock (1998) supports this and said that when people develop diabetes, they and only they become the significant health care providers. They are in control of how they live their lives and carry the burden of responsibility for the management and delivery of care.

The majority of respondents who had positive attitude had attained secondary education 16 (16.7%). This shows that diabetic clients who have attained some formal education are likely to have positive attitude toward their illness. The attitude of the diabetic clients was based on whether they were adhering

to dietary advice, ability to test urine for glucose and keeping appointment dates.

Most of the respondents who were self-employed 14 (63.6%) had positive attitudes towards their illness. This could be due to the fact that they are motivated. They have their own work schedule, they are independent and they can easily adjust to the treatment schedule as well as afford to buy resources such as drugs, insulin, needles, syringes and testing equipment for urine.

## **THE PRACTICES OF DIABETIC PATIENTS**

The study has revealed that the majority 41 (82%) of the respondents had good practices while 9 (18%) had poor practices. Most of the married clients 30 (81.1%) had good practices and only 7 (18.9%) had poor practices.

This could be due to the fact that the married clients are reminded by their spouses or children how to care for themselves regarding their illness. For example following dietary advice, taking medication at the right time, correct administration of insulin, carrying out exercises regularly for patients who are obese, regular testing of urine for glucose and keeping review dates.

The majority of clients who had attained primary education 12 (92.3%) had good practices as shown in Table 18. Clients who at least have been to school are able to follow the basic instructions about what to do concerning

their illness, that is the good practices which should be carried out in order to promote good health.

Most of the respondents in the age group 50 years and above 19 (79.2%) had good practices (Table 15). This could be due to the fact that most of the clients in this age group have had the disease for some time and have mastered the necessary skills in self-care for example insulin administration and testing urine for glucose.

Of the 50 respondents, 12 (24%) always ate something in between meals, 29 (58%) ate some food sometimes and 9 (18%) never ate something in between meals. These results support the assumption that most of the diabetic clients at least take something in between meals as a way of following the diet guidelines.

In 1994, a study was carried out in USA on food frequency and Diabetes Mellitus. Single-day feeding studies were carried out in type 2 Diabetes Mellitus showing an advantage with increased meal frequency. Studies of 13-hourly feedings compared with 4 meals during the 10 hours of observation showed both lower mean glycaemia and insulinaemia and a flatter gastric inhibitory polypeptide profile. The results of this study clearly show the importance of following the dietary regime in the management of diabetes mellitus. A client who takes meals frequently is likely to control the blood sugar levels, hence reducing chances of developing complications such as hypoglycaemia.

In conclusion the findings of this study reveal that most of the diabetic clients do not have adequate knowledge about their illness. Most of the elderly diabetic patients have positive attitudes and good practices towards their illness due to the experience that most of them have. The study further revealed that clients who are literate understand their condition and take precautions to prevent short and long term complications.

## **8. IMPLICATIONS TO THE HEALTH SYSTEM**

The findings of this study revealed that most of the diabetic patients do not have adequate knowledge about their illness. The study also revealed that most of the elderly diabetic patients aged 50 years and above have positive attitudes and practices toward their illness.

The findings of this study have got a lot of implications to the health system. First and foremost the fact that most of the diabetic clients do not have adequate knowledge concerning their illness needs the attention of all the health care providers. The health care providers need to take an active role in providing adequate information concerning Diabetes Mellitus to the clients.

This should be taken as a personal responsibility by each health worker. The information provided to the clients should include what Diabetes is all about, signs and symptoms, complications, treatment, all forms of treatment such as oral hypoglycaemic agents, insulin and diet. The clients should also be taught about how to prevent short-term and long-term complications. Short term

complications include hypoglycaemic coma and hyperglycaemic (Diabetic Coma) and long term complications include neurologic, nephropathic, microvascular and macrovascular complications. Clients who are well informed will take precautions to look after themselves well in order to prevent complications.

The other implication of great importance to the health system is the need for the provision of resources. Resources include oral drugs, insulin, needles and syringes, equipment for testing urine and other diagnostic equipment. There is also need for adequate human resource who will provide the care to the diabetic clients. The availability of these resources will enable health workers provide quality care to the clients.

In order to provide comprehensive care to the clients, there is need for the health sector to employ a multidisciplinary approach. A variety of disciplines is required to manage a diversity of complications because the necessary clinical expertise cannot be provided by a single person. Those involved are responsible for a wide range of tasks from psychological counselling to laser surgery. (Torrington and Hall, 1995).

The complexity of the disease inevitably demands such kind of an approach so that each specialist provides the best care to the client.

Multidisciplinary teams are crucial to Diabetic care. A multidisciplinary team is not a fixed entity but a flexible system, capable of changing and adapting according to patients' circumstances. The patient is the constant and the



most important team member and his or her needs define the team (Summer, J. 1997).

It is therefore a challenge to all health institutions or systems to consider such an approach when caring for Diabetic clients where health workers of various disciplines are available.

The government plays a major role in the care of diabetic clients. This is related with health policies for example, Diabetic clients should have access to free medical care since the disease is chronic. Exemption from paying medical fees means that more diabetic clients will have access to medical care. On the other hand, the government should try to improve the living conditions of the people so that people in the community particularly those with chronic conditions such as Diabetic clients will afford the recommended diet and the other required resources. A sound economic status will not only improve access to medical care but it will improve their health as well.

## **CHAPTER SIX**

### **6.1 CONCLUSION**

Diabetes Mellitus is a global health problem which is worse in developing countries including Zambia. The purpose of this study was to determine the knowledge, attitudes and practices of diabetic patients towards their illness. The findings of the study revealed that most of the diabetic clients do not have adequate knowledge about their illness. The study further revealed that diabetic clients who have basic formal education will develop positive attitudes towards their illness and will develop good practices.

The study also revealed that most of the diabetic clients are elderly persons above the age of 50 years. There is great need for the health care workers to provide adequate information to the clients so that they are well informed about their illness hence be able to develop positive attitudes and good practices.

### **6.2 RECOMMENDATIONS**

In view of the study findings, the following recommendations are made:

1. Health workers should intensify information, education and communication (IEC) on diabetes. This will enable the diabetic clients to be more aware about the disease process and how to prevent complications.

2. There is need for the government through the Ministry of health to introduce regular mass screening of people in the communities for Diabetes Mellitus. This will enable early detection of the disease so that those who are affected can start treatment early in order to avoid complications.
3. The government should ensure that there are adequate resources for the diabetic clients for example drugs (oral hypoglycaemic agents), insulin, needles, syringes, testing equipment for glucose. The availability of these resources will motivate the diabetic clients and enable them develop positive attitude towards their illness.
4. There is need to intensify a multi-disciplinary approach. Nurses, doctors, dieticians and other specialists need to work together as a team in order to provide quality care to the clients.
5. Future research should be done on the health workers to determine their knowledge and attitudes towards Diabetes Mellitus.

### **6.3 LIMITATIONS**

In this study, I had the following limitations:-

1. I had limited time in which to carry out the study.
2. Inadequate funding – The sponsors did not provide adequate funds to carry out the study.
3. Language barrier – Some clients were not able to express themselves in English and the researcher is not fluent in the local language (Nyanja).

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## **APPENDIX I**

### **THE UNIVERSITY OF ZAMBIA SCHOOL OF MEDICINE**

#### **DEPARTMENT OF POST BASIC NURSING**

**STRUCTURED INTERVIEW SCHEDULE ON THE KNOWLEDGE,  
ATTITUDES AND PRACTICES OF DIABETIC CLIENTS TOWARDS THEIR  
ILLNESS IN LUSAKA URBAN.**

#### **INSTRUCTIONS TO INTERVIEWER**

1. Introduce yourself to the respondent.
2. Explain the purpose of the interview.
3. No name shall appear on the questionnaire.
4. Tick (✓) in the appropriate box in the provided space.
5. Do not modify questions.
6. Thank the respondent at the end of the interview.

# QUESTIONNAIRE

## SECTION A: BIOGRAPHICAL DATA

1. How old are you?

- (a) 10 – 19 years
- (b) 20 – 29 years
- (c) 30 – 39 years
- (d) 40 – 49 years
- (e) 50 and Above


2. Sex

- (a) Male
- (b) Female


3. What is your marital status?

- (a) Married
- (b) Single
- (c) Widowed
- (d) Divorced


4. What educational level did you attain?

- (a) Primary
- (b) Secondary
- (c) College
- (d) University


5. What do you do for a living?

- (a) Nothing
- (b) Self-employed
- (c) Formal employment
- (d) Other specify.....


## SECTION B: KNOWLEDGE AND ATTITUDES

6. For how long have you had diabetes mellitus?

- (a) Less than 4 years
- (b) 5-9 years
- (c) more than 10 years




7. What do you know about Diabetes Mellitus?

.....

.....

8. Where did you get this information?

- |     |          |                          |
|-----|----------|--------------------------|
| (a) | Doctor   | <input type="checkbox"/> |
| (b) | Nurse    | <input type="checkbox"/> |
| (c) | Friend   | <input type="checkbox"/> |
| (d) | Relative | <input type="checkbox"/> |
| (e) | Radio    | <input type="checkbox"/> |

(f) Other specify .....

9. Have you ever been hospitalised in the last 12 months?

- |     |     |                          |
|-----|-----|--------------------------|
| (a) | Yes | <input type="checkbox"/> |
| (b) | No  | <input type="checkbox"/> |

10. If yes, what was the reason for the hospitalisation?

.....

11. What diabetic treatment are you on?

- |     |          |                          |
|-----|----------|--------------------------|
| (a) | Insulin  | <input type="checkbox"/> |
| (b) | Diabense | <input type="checkbox"/> |

(c) Other specify .....

12. Who administers your insulin treatment?

- |     |        |                          |
|-----|--------|--------------------------|
| (a) | Myself | <input type="checkbox"/> |
| (b) | Spouse | <input type="checkbox"/> |
| (c) | Friend | <input type="checkbox"/> |
| (d) | Father | <input type="checkbox"/> |
| (e) | Mother | <input type="checkbox"/> |

(f) Other specify.....

13. Were you taught how to inject yourself with insulin?

- |     |     |                          |
|-----|-----|--------------------------|
| (a) | Yes | <input type="checkbox"/> |
| (b) | No  | <input type="checkbox"/> |

14. If yes, who taught you?
- (a) Doctor

(b) Nurse

(c) Spouse

(d) Other specify.....
- 

15. When do you eat your meals?
- (a) Breakfast

(b) Lunch

(c) Supper
- 

16. Do you eat something in between meals?
- (a) Always

(b) Sometimes

(c) Never
- 

17. Were you given guidelines on the recommended diabetic foods?
- (a) Yes

(b) No
- 

18. Do you follow these guidelines?
- (a) Yes

(b) No
- 

19. If no, explain:
- .....

20. Do you test your urine for glucose?
- (a) Yes

(b) No
- 

21. If no, explain:
- .....

22. Do you keep appointment dates?
- (a) Yes

(b) No
-

23. If no, please explain:

.....

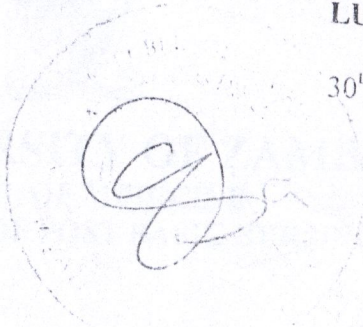
**END OF QUESTIONS – THANK YOU FOR YOUR PARTICIPATION**

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

30<sup>th</sup> July 2001

*Approved*

The Executive Director  
University Teaching Hospital  
P.O Box 50001  
LUSAKA



UFS The Head of Department  
Post – Basic Nursing  
School of Medicine,  
LUSAKA

*[Signature]*

Dear Madam,

**RE: PERMISSION TO CONDUCT A RESEARCH STUDY**

I am a 4<sup>th</sup> year student currently pursuing a Bachelor of Science (BSc) degree in Nursing at the above named institution.

As part of the course requirement, I am required to submit a research study. My research topic is: **A STUDY TO DETERMINE THE KNOWLEDGE, ATTITUDES AND PRACTICES OF DIABETIC PATIENTS TOWARDS THEIR ILLNESS.**

I would be grateful if you could grant me permission to carry out a pilot study on ten (10) diabetic patients in the medical wards and also to interview fifty (50) diabetic clients attending the diabetic clinic to enable me to gather information required for the study during the months of August and September 2001.

Thanking you in advance for your favourable consideration.

Yours faithfully,



Mundanya Chiyengo (Mr.)

- c.c.
- The Director of Nursing (UTH)
  - The Nursing Officer (Phase V)
  - The in-charge (Diabetic Clinic)
  - The Nursing Officer (E-Block)
  - The Consultant Physician (Diabetic Clinic)





**THE UNIVERSITY OF ZAMBIA**  
**SCHOOL OF MEDICINE**  
**DEPARTMENT OF POST BASIC NURSING**

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P.O. Box 50110  
Lusaka, Zambia

16<sup>th</sup> May 2001

Dear sir/Madam,

This serves to introduce Mr/Mrs/Ms. CHYENGO Almondanya a Fourth Year BSC (Nursing) student in the Department of Post Basic Nursing, School of Medicine, University of Zambia. The student is undertaking a Research Study in partial fulfilment of the above mentioned degree.

The Research Topic for study is "A STUDY TO DETERMINE THE KNOWLEDGE, ATTITUDES AND PRACTICES OF DIABETIC PATIENTS TOWARDS THEIR ILLNESS."

We shall be most grateful if you could access the student to information on the subject or clients and any other assistance the student may require.

Yours faithfully

C.M. Ngoma  
C.M. Ngoma (Mrs.)  
COURSE CO-ORDINATOR  
DEPARTMENT OF POST BASIC NURSING

