THE UNIVERSITY OF ZAMBIA

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EXPERIENCES OF MENOPAUSE BY WOMEN IN ZAMBIA

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LIST OF ABBREVIATIONS /ACRONYMS

AIDS	-	Acquired Immune Deficiency Syndrome
BSc	-	Bachelor of Science
CSO	-	Central Statistical Office
DHO	-	District Health Office
DHO	-	District Health Office
DNS	-	Department of Nursing Sciences
EN	-	Enrolled Nurse
ENM	-	Enrolled Nurse-Midwife
FP	-	Family Planning
GNCZ	-	General Nursing Council of Zambia
HBM	-	Health Belief Model
HRT	-	Hormone Replacement Therapy
IEC	-	Information Education and Communication
MOH	-	Ministry of Health
NHC	-	Neighbourhood Health Community
RNM	-	Registered Nurse-Midwife
UFS	-	Under Flying Service
UK	-	United Kingdom
USA	-	United States of America
USAID	-	United States Agency for International Development
WHO	-	World Health Organisation
ZDHS	-	Zambia Demographic and Health Surve

DEDICATION

To all our families;

Mwamba W. family for Fungwe Bridget, Robert Tembo's family and son IshaackManda for Victoria Tembo, Webster Hamweete and the Shilengwe family for Charity, George Selemani's and Vivian Chibuye family for Clifford Chibuye for the patience and sacrifice they endured due to our immense academic commitments, for we were not readily available to you when you needed us most during their very trying moments.

Also to our departed family members, who would have loved to see their grown-ups, mature and succeeding children in their endeavours.

DECLARATION

We declare that effects of menopause among Zambian women in this study for a Bachelor of Science Degree in Nursing has not been presented either wholly or in part, for any other Degree and is not been currently submitted for any other Degree at any other institution.

Signed: _____ Date: 10.06.13

(Candidate)

Signed : _____ Date: 10.06.13

(Candidate)

Signed: _____ Date: 10/06/13.

(Candidate)

Signed: _____ Date: 10.06.13.

(Candidate)

Approved by: _____ Date: 03.07.2013

(Supervising Lecturer)

STATEMENT

We, Fungwe Bridget, Shilengwe Charity, Tembo Victoria and Chibuye Clifford, hereby certify that this study is entirely the result of our own independent investigations. The various sources to which we are highly indebted are clearly indicated in the text and references.

Signed: ..... Date: 10.06.13

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Signed: ..... Date: 10.06.13

Supervisor ..... Date 03.07.2013

ABSTRACT

The purpose of the study was to explore the experiences of menopause among Zambian women in four Provinces; Lusaka, Copperbelt, Luapula and Eastern provinces. The sites for the study were; Katete, Luanshya, Nchelenge and Lusaka. The objectives of the study were achieved and the researcher rejected the hypothesis which "states that there is no relationship between knowledge on menopause and coping strategies among women in menopause."

A descriptive quantitative non-interventional study design was used for this study to investigate the experiences of menopause among Zambian women aged 55 years and above. In the study the subjects were selected using simple random sampling. The data collected was analysed using social statistic package for social scientists (SPSS).

Data were collected from 200 respondents using a structured interview schedule. The study revealed that a higher percentage of women 75% (149) were of the view that menopausal health care services should be provided to help those with problems to lead a comfortable life. 144 (72%) of the respondents said that they had knowledge on menopause.128 (64%) of the respondents considered menopause as a normal life event. The study findings revealed that menopausal women were experiencing a variety of effects. 119 (59%) said that it affected their social life because of their moods, general body pains, urination problems and also affected their engagement in activities of daily living. 120 (60%) of the respondents said that they were bothered by hot flashes and did not know how to manage them. 116 (58%) of the respondents said that for the many menopausal symptoms they suffered, they did not use any remedies. 149 (75%) of respondents expressed the need for menopausal health care services to be provided in the health care facilities because they needed to learn more on menopausal symptoms from health care providers and receive some treatment. 180 (90%) said that menopausal women could increase their knowledge on menopause through health education from health care providers while 1 (0.5%) said that knowledge could be increased through advice from traditional healers.

The study has shown a relationship between knowledge on menopause and coping strategies. The study has also shown that Zambian women suffer from menopausal symptoms silently and most of them did not know whether there were any remedies available in the health care facilities.

More attention should be paid towards health education of women on matters relating to menopause. Menopausal health services should be provided at all levels of care.

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND

Menopause is defined as the ending of menstruation (Brooker, 2008). It is recognised after 12 months of amenorrhoea not associated with a pathologic cause. Menopause normally occurs between the ages of 45 years and above. During this time a woman experiences a number of symptoms like hot flashes, mood swings, anxiety, osteoporosis, fatigue, insomnia, painful coitus, gastro-intestinal tract upsets and general body pains. These changes are due to a fall in the normal levels of oestrogen from 40-50mg/Pl (a level required to maintain normal health bone tissues) to 10-20mg/Pl (Hermes and David, 2012), because the ovary is no longer responding to pituitary gonadotrophins.

During menopause, the woman needs to adjust her life both physiologically and psychologically (Sellers, 2010, Fraser and Cooper, 2008). Sellers (2010) also points out that the way in which women cope with this transition varies from only minor problems to severe emotional and physical problems.

The onset of perimenopause, which is the phase that precedes menopause, begins in the early 40s. This is a transitional period that takes place prior to a woman's last period (Pandit, 2011).

Menopause is a medicalised condition (Meyer, 2003), a normal life course event that comes under the sphere of medical supervision and influence. Meyer (2003) argues that the medicalisation of menopause began in the U.S, spread across Europe, and then to the rest of the world. Medicalisation occurs in response to the concerns and demands of patients, physician education, socialisation, commercial and market interests (Power, 2007).

In countries like United States of America, Morocco, Spain and China there is treatment available for menopause, such as, Oestrogen replacement therapy and antidepressants (Rolnick, 2009).

Nisar and Sohoo (2009) found that menopause related symptoms have a negative impact on the quality of life of postmenopausal women worldwide.

Menopausal women are faced with escalating social prejudices and restrictions, economic hardships, emotional deterioration and health care inadequacies. These harsh conditions may lead to the development and perpetuation of mental illness (Rice, 2005, Stewart, 2007). Studies done in Asia revealed that there is a reduced prevalence of menopausal symptoms in Asian women compared to Eastern Women and reasons were that Asian diet contained a high proportion of phytoestrogen (Fewster, 2012).

Tineke et al., (2007) in their 10 year study of risk factors for clinical fractures among postmenopausal women found that the absolute risk of a second clinical fracture is highest in the first five years after any first clinical fracture.

A computerised survey on the effects of menopause conducted by Cumming (2009) on the women's libido revealed that most women were not seeking for help for menopause related reduced libido causing distress.

Al-Azzawi (2001), in his study of the Western countries showed that the symptoms of oestrogen deprivation can be relieved by oestrogen treatment which if taken for the long term will help to prevent genital atrophy and reduce the risks of disabilities related to osteoporosis. This hormone replacement is able to reduce the risks of cardiovascular diseases. He therefore ranked it among the most significant public health programmes.

Alessandra and Audrey (2009) in their study of depression in menopause made known that treatment of menopause associated depression are difficult on antidepressants alone. A combination of antidepressants with hormonal therapy offers the best therapeutic potential in terms of efficacy.

Sallam et al., (2006) in their study found that Egyptian women suffer from osteoporosis, particularly at the femoral neck after the menopause.

Little information is available in the Zambian context on menopause. Therefore, the potential social-cultural and economic factors that may explain the diversity of issues manifested in the Zambian community of menopausal women remain unexplored.

The aim of this study is to explore menopause, how it affects women and how women can be helped to cope with the situation.

1.2 STATEMENT OF THE PROBLEM

Women world over Zambia inclusive, are affected with menopausal symptoms. These symptoms include mood swings, depression, and joint aches due to changes in the bone density, hot flushes, night sweats, chills, fatigue, headaches, irregular heartbeat, urinary tract infection, weight gain, and insomnia. Despite the fact that women experience these problems, there are no menopausal services available as menopausal care is not among the services in the Zambia health care package at all levels of care (MOH, 2005). In addition, there is little information on menopause made available to Zambian women resulting in no demand for the menopausal services. According to the National Reproductive Health Policy (2005), suitable conditions for supporting good health during menopause need to be promoted. The policy made known that training of health care providers will enable them to identify and treat women with menopausal health problems. Despite the inclusion of this statement on menopause in the policy, no training of health care providers has been initiated and thus menopausal care was not included in the national health care package.

Menopause is a natural process that every woman has to go through, and cannot be prevented. Therefore it is for this reason that the investigators conducted a study on effects of menopause on Zambian women so that appropriate recommendations are made to policy makers and stake holders on interventions to mitigate the effects of menopause.

1.3 FACTORS CONTRIBUTING AND/OR INFLUENCING THE EFFECTS OF MENOPAUSE

The early symptoms may be noticed while still having periods such as muscle-skeletal pains and memory impairment. The effects usually last for the whole menopause

transition (until the mid – fifties) but some women may experience them for the rest of their lives. The factors have been categorised under the following main headings physiological, psychological, mental health, socio-economic and service related factors.

1.3.1 Socio-economic effects

1.3.1.1 Cost of non specific care

Menopausal women find it costly to seek for medical health services related to their symptoms as the symptoms are not easily identified. Frequent visits are made to health institutions in an attempt to seek care. These menopausal women incur some costs on transport and investigations for the non specific care that are involved. The women spend a lot of money on non specific care and in the end run out of money. When there is less money in the home, the first priority would be food before health care. For the women with low income, these costs further impoverish them as the majority depend on their husbands for financial support.

1.3.1.2 Changes in body odour

Oestrogen is responsible for regulation of the hypothalamus, the part of the brain that controls body temperature. When oestrogen levels drop during menopause, a false message is sent to the hypothalamus informing it that the body is overheated. At this, the hypothalamus responds by increasing sweat production which will result in body odour. While sweat itself is odourless, it does create conditions in certain parts of the body, such as axillae (armpits) or the groin, in which bacteria thrives. The axillae, particularly, have apocrine sweat glands that secrete material that has a high level of proteins, carbohydrates and lipids that bacteria feed on. The bacteria thus create the odour commonly associated with sweating. When a woman is experiencing hot flashes and an abnormal level of perspiration, she is more likely to be affected by the body odours (Russel, 2007; Hutchinson, 2007). The bad odour will affect the woman's self esteem/ negative self image as she will have no confidence of being among others because of being scared of the odour her body is emitting. The odour can affect the sexual relationship of/between the couple as the other may not be able to tolerate it. The odour

can also lead to one having frequent baths to get rid of it or use of deodorants which can increase the cost of living.

1.3.1.3 Broken relationships

This arises from a number of factors which include irritability, confusion, memory loss, reduced libido and changes in body odour. Women who are in menopause and do not have children, are likely to experience domestic violence at the hands of their spouses (CSO, 2007).

1.3.2 Social-economic and cultural practices

Menopause has been veiled in secrecy and silence; it has been frequently considered a taboo subject, and, as a result, some women's rights to identify their healthcare needs and get proper care for those needs are suppressed in the name of biology. Meleis, et al (1999) indicated that the menopausal experience, particularly of ethnic minority women who frequently have low socioeconomic status and family income, low educational level, and limited employment opportunities, could not be explained and understood without considering the totality of their lives: the constraints of economic difficulties, unfavourable labour market conditions, lack of access to information, cultural conflicts, lack of resources, and marginalization. These factors create tremendous stress, hardship, suffering, and other challenges that influence the women's menopausal transition.

1.3.3 Quality of life

The World Health Organization (2012) has defined quality of life as "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, standards, expectations and concern. Possibilities result from the opportunities and limitations each person has in his/her life and reflect the interaction of personal and environmental factors. Three major life domains are identified: being, belonging, and becoming. In menopause the quality of life is substantially affected and all the major domains of life are compromised by symptoms experienced which are associated with their presentation amongst which are the headaches, mental confusion and memory loss.

1.3.4 Mental Health Factors

1.3.4.1 Mood swings

During menopause the ever-fluctuating hormones disrupt the body's natural balance. The woman experiences mood swings. The mood swings can disrupt a woman's normal way of life. People around may not understand the phase the individual is passing through and this can result in disrupted relationships.

1.3.4.2 Depression

The risk of depression is greater in perimenopausal women, who also have hot flashes, but it still is greatly elevated in those who do not have this and other common symptoms associated with transitioning to menopause (Clayton and Ninan, 2010).

The underlying cause of depression in menopausal women is due to hormonal imbalance, especially decreased levels of oestrogen. As women approach menopause, their oestrogen levels begin to drop off. This hormone plays a big part in regulating brain functions, especially chemicals that influence mood, such as serotonin and cortisol.

When the ovaries secrete fewer oestrogen hormones the serotonin levels in the body are affected. The serotonin levels in the body affect women's moods and thus when serotonin levels are imbalanced, moods become imbalanced. Consequently usually happy women find themselves experiencing depression and anxiety during menopause (Clayton and Ninan, 2010).

1.3.4.3 Mental confusion

Menopause can adversely affect the ability to concentrate. It may become even more difficult to focus than before. The woman may also feel disorientated and experience a general state of mental confusion that is all-too-common at this mid-life transition (Taylor, 2001). The mental confusion can lead to many other social problems like, loss of employment, broken relationships among others.

1.3.4.4 Anxiety

Anxiety is a common feature in menopause Panic attacks, rushes of energy, burning in the chest, unusual vibrations throughout the body, and warm sensations are some of the physical effects the women may experience. The limbic systems of our brain are responsible for managing our emotions, including the fight or flee response. It relies on a very complicated web between neurotransmitters, and hormones to fuel the body in the chance that there is real danger. Oestrogen has a significant effect on the brain's regulation of moods and emotion and is directly related to anxiety with the ups and downs of hormone levels. Progesterone has a very calming effect on the limbic system similar to neurotransmitters. When levels of oestrogen fall, so do our energy and mood. For women in their 40s and 50s who are going through menopause, one of the most common causes of anxiety is decreased oestrogen levels. Oestrogen declines during perimenopause, or the time before menopause. The changes in oestrogen levels have a direct effect on the neuro-chemicals serotonin, nor epinephrine, dopamine, and melatonin. Since all of these chemicals play an integral role in emotion and mood regulation, disruptions caused by oestrogen fluctuations can lead to anxiety during menopause (Clayton and Ninan, 2010).

1.3.5 Physiological factors

1.3.5.1 Fatigue

Fatigue can be defined as on-going lethargy, a persistent feeling of weakness, apathy or general tiredness. For women undergoing the menopausal transition, the cause of fatigue is the fluctuation in hormones that occurs naturally during this time. Hormones are responsible for controlling energy at the cellular level, thus when levels of oestrogen and progesteronedecrease, energy levels also decreases. Compounding this, hormones also play a role in regulating the sleep cycle. These fluctuations will also affect a woman´s ability to get a good night of rest, leading to fatigue in the morning. Physical symptoms of low energy such as changes in reaction time or reduced coordination can make women more prone to accidents. Low energy can also lead to mood problems, such as anxiety, depression and irritability as a result of fatigue. Difficulty concentrating, irritability and

mood swings, lack of energy can endanger personal relationships and professional performance.The women may fail to go to the office to work, they may fail to go to the field to cultivate and gain an income to support their families. Production at personal, family, community and national level is likely to be affected.

1.3.5.2 Amenorrhoea

Menopause marks the transition from the child-bearing years to the phase when a woman is no longer fertile. Although in the past there has been a stigma associated with menopause, it is now accepted as a normal life transition. Many women find this time of their life liberating due to the cessation of the monthly menstrual period--called amenorrhea--and any concern over pregnancy (Cheng at el., 2007).

1.3.5.3 Vaginal dryness and vulva itchiness

The vagina is kept moist by mucus membranes that are located at the cervix. Oestrogen in the body aids these membranes in producing lubrication that helps to keep the vagina moist, supple, and strong. The lubricant also has a slight acidity level, which helps to protect the vagina from foreign bacteria, keeping it free from infection. Oestrogen is the key to maintaining vaginal health and elasticity. As oestrogen levels decrease during menopause, the vaginal epithelium at cervix produces less mucous. As a result, the vagina becomes very dry and thin. The walls of the vagina become weaker and more sensitive. This can result in painful coitus and loss of libido. For women who are married, painful coitus and loss of libido can result in marital conflicts which may lead to separation and in the end, divorce (Bemesdorfer, 1996).

1.3.5.4 Weight gain

Maintaining proper weight is a challenge for menopausal women. Hormones and weight gainare closely related, if your hormones are not balanced, you can gain weight, especially with too much cortisol or too little progesterone, testosterone or oestrogen. When oestrogen levels diminish during menopause it causes cessation of ovulation. The decreased production of oestrogen by the ovaries causes a woman's body to search for

other sources of oestrogen. Another source of oestrogen is fat cells; the body learns to convert more calories into fat, in order to increase oestrogen production. The body stores all spare calories as fat, so you see this fat deposit around the hips and shoulders.

Progesteronelevels decreases during menopause causing water retention or bloating. This side effect makes the woman feel heavier and makes clothes to fit tighter.

Testosterone in a women works to build and maintain muscle mass among other things. These muscle cells work to burn calories in your body and cause a higher metabolism. When levels of this hormone decrease during menopause it causes the loss of muscle mass and hence result in lower metabolism. This lowered metabolism results in weight gain (Dudley, 1999)).

Weight increases the chance of development of conditions like Hypertension, atherosclerosis and in some cases heart conditions like coronary heart disease. This implies that the woman will have to make frequent visits to the health facility seeking care for these ailments. The other problem of weight gain is that it causes disfigurement of the body shape; this will affect the woman's self esteem because generally women want to look good and presentable. The clothes will not be fitting; they will become small and call for a change of wardrobe.

1.3.5.5 Headaches

During menopause, oestrogen is not produced at lower rates. Oestrogen controls blood vessel dilatation in the brain by regulating fluid shifts. Because of the lower levels of oestrogen, blood vessels in the brain contract and widen at a fast pace, and the nerves are stimulated causing an experience of pain (Neri et al., 1992). This causes migraines in menopause, a recurrent, throbbing headachegenerally felt on one side of the head but it may occur on both sides of the head can last anywhere from one or two hours up to three days. The menopause migraine headaches occur in three types. Carotidynia, also called lower-half headache or facial migraine, produces deep, dull, aching, and sometimes piercing pain in the jaw or neck. Headache-free migraine is characterized by the presence of aura without headache. This occurs in patients with a history of migraines with aura.

Ophthalmologic migraine comes on with pain in the eye and is accompanied by vomiting (Fuller, 2007). As the pain continues, the eyelids begin to drop, a condition called ptosis, and the nerves responsible for moving the eyes can become paralyzed. Watch out for certain other unwanted developments during this period. There could be a sudden change in your eyesight. You may experience a double vision, and in extreme cases, partial blindness is not ruled out. At the peak level of the headache, you feel a throbbing sensation, shooting pain within the head, some corners of the head almost bursting out. The slightest noise, switching on the light or for that matter, even if you open your eyes, you feel terribly uncomfortable. This is the style of menopause headache (Neri et al., 1992).

1.3.5.6 Osteoporosis

Osteoporosis is a disease that causes bones to degenerate and decrease in mass. The bones are comprised of two major ingredients: minerals (including calcium and phosphorous) and bone cells (consisting of osteoblasts and osteoblasts). Large amounts of calcium and other minerals are laid down during teenage years, in preparation for adult growth. In order to stay strong and healthy, the bones constantly regenerate themselves. The bone cells work together to reabsorb and then regenerate the bones (Svejme et al., 2012). Osteoblasts shape and remodel bones, while the osteoblasts help to recreate the bones. The peak bone mass is reached between the ages of 20 and 30. During menopause, estrogen levels in the body drop rapidly. Oestrogen plays an important role in bone health by keeping the osteoblasts in check, allowing the osteoblasts to build more bone. Unless the Oestrogen that is lost is being replaced, the bones become thin and brittle quite rapidly. Osteoporosis predisposes menopausal women to fractures. Sometimes these brittle bones can lead to a form of arthritis called gout (Svejme et al., 2012).

1.3.5.7 High blood pressure

Before menopause, women tend to have slightly lower diastolic pressure and systolic pressure. Van et al., (1992) in their longitudinal study on blood pressure changes around

the menopause found that is after the menopause that the systolic pressure in women increases by about 5 mm Hg.

The increase is attributed to the drop in the levels of oestrogen associated with menopause weight gain, and an increase in salt sensitivity.

1.3.5.8 Hot flashes

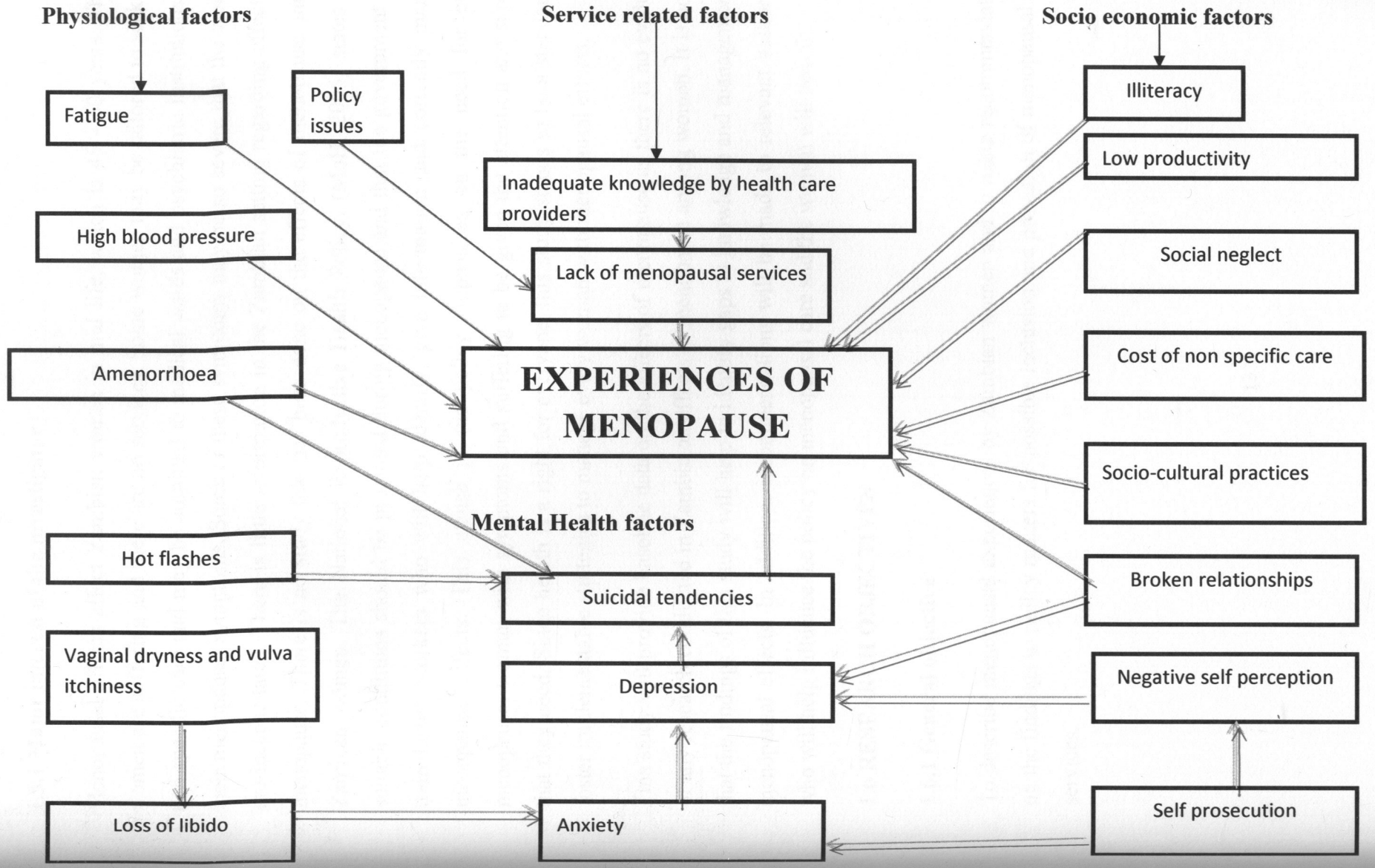
A hot flash is a sudden sensation of intense body heat, often with profuse sweating and reddening of the head, neck, and chest. These symptoms can occur with mild to severe heart palpitations, anxiety, and irritability and, rarely, panic. Hot flashes are the most common symptom of a woman's changing oestrogen levels during menopause.

As oestrogen and progesterone levels drop during menopause, the body produces more of gonadotrophins releasing hormone (GnRH) in order to force fertility. GnRH is also responsible for regulating heat sensors in the brain. When higher levels of GnRH are present, the body mistakenly interprets that it is overheating. The body then attempts to cool itself down by opening blood vessels in the head and neck, which causes perspiration. Typically, a hot flash last only a couple of minutes, however some women can experience hot flashes lasting up to 30 minutes. Women can experience as many as 15 hot flashes in one day, but typically hot flashes occur 2 to 4 hours apart during menopause.

1.3.6 Service related factors

The health services for menopausal women in Zambia do not exist. This means that Zambian women cannot seek help when they are experiencing the menopausal symptoms and if any help is given, it is nonspecific. The policy is in place in relation to menopausal care. This policy states that the Ministry of Health will train Health Care providers who will identify and treat menopausal women and that suitable conditions for supporting good health during menopause will be promoted (MoH, 2005). However, the policy has not been operationalised.

ANALYSIS DIGRAM: FACTORS ASSOCIATED WITH EFFECTS OF MENOPAUSE AMONG ZAMBIAN WOMEN



1.5 JUSTIFICATION OF THE STUDY

1.5.1 Major interest of the investigator

Menopausal effects affect Zambian women in mid life, which is 45 - 60 years. These women are suffering and there are no services. Some women may be tailored to seek the non specific care and may be admitted to medical wards and psychiatric institutions for their menopausal symptoms. Some of these symptoms may be so severe that the women are incapacitated. There is little information in the Zambian setting regarding effects of menopause. There is no study that has been done on the effects of menopause among Zambian women. The National Reproductive Health Policy, (MoH, 2005) states that suitable conditions should be promoted during menopause and that the government will train health workers who will help identify, give information and correctly manage menopausal effects. This clause in the policy emphasises on the need for every menopausal woman with symptoms and suffering to be given the attention and support that they need. Since health is a right for everyone, this study stands to be a standard to foster implementable strategies to manage every woman with menopausal effects.

This study will provide baseline data on the effects of menopause as there is no evidence of any research conducted in Zambia on effects of menopause among women. It is hoped that the findings of this study will help to identify gaps in knowledge and management of menopausal effects. In addition, recommendations will be made to relevant authorities who will help influence the policy on menopausal care and the women will benefit.

1.6 RESEARCH OBJECTIVES

1.6.1 General objective

To describe menopausal experiences by Zambian women and to make recommendations on the findings to policy makers for possible inclusion and provision of menopausal care services.

1.6.2 Specific objectives

1.6.2.1 To determine the average age at which women in Zambia attain menopause

1.6.2.2 To find out problems experienced by Zambian women in menopause.

1.6.2.3 To assess knowledge on menopause among Zambian women

1.6.2.4 To identify socio-cultural factors associated with menopause

1.6.2.5 To identify the menopause coping strategies used by Zambian women

1.7 STUDY HYPOTHESIS

1.7.1 Zambian women are affected by menopause

1.73 H0: There is no relationship between knowledge on menopause and copying strategies.

1.7.2 H1: There is a relationship between knowledge on menopause and copying strategies.

A hypothesis is a formal statement of the expected relationships between two or more variables in a specified population. The hypothesis translates problem and purpose into a clear explanation or prediction of the expected result or outcome of the study (Burns and Groove, 2007).

1.8 CONCEPTUAL DEFINITION

1.8.1 Perimenopause: The period of time prior to menopause during which the woman moves from normal ovulatory cycles to cessation of menses (Olds et al., 2004).

1.8.2 Menopause: The time in a woman's life when menstrual periods permanently stop (Encarta, 2009).

1.8.3 Post menopause: The period when women have not experienced a menstrual bleed for a minimum of 12 months, assuming that they do still have a uterus, and are not pregnant or lactating (Olds et al, 2004).

1.8.4 **Menopausal women**

Menopausal women refer to the women going through the process of menopause (Sellers, 2010).

1.8.5 **Menopausal symptoms:** Physiological, emotional and sociological complaints associated with menopause (Olds et al, 2004).

1.8.6 **Experiences of menopause:** The experiences of menopause refer to the problems faced by women as they go through menopause (Sellers, 2010).

1.9 OPERATIONAL DEFINITION

1.9.1 Knowledge: In this research, knowledge refers to familiarity and information that women have on menopause.

1.9. Social-Cultural Factors: In this research, social cultural factors refer to what women believe in and how they value menopause and how these affect their awareness of menopause.

1.9.3 Coping Strategies: In this research copying strategies refer to the thoughts and actions used by women to deal with menopause

1.9.4 Experiences: In this research, experiences refer to particular encounters of menopause by menopausal women.

1.10 THEORETICAL FRAMEWORK

A theoretical framework is an abstract, logical structure of meaning that guides the development of the study and enables the researcher to link the findings to nursing's body of knowledge (Burns and Groove, 2005). A study framework can be expressed as a map or a diagram of the relationships that provide the basis for a study or can be presented in a narrative format. This study was guided by the Health Belief Model, developed to help understand why people did or did not use preventive services offered by public health departments in the 1950's, and has evolved to address newer concerns in prevention and

detection as well as lifestyle behaviors such as sexual risk behaviors and injury prevention.

1.10.1 The Health Belief Model

The Model theorises that people's beliefs about whether or not they are at risk for a disease or health problem, and their perceptions of the benefits of taking action to avoid the disease or health problem, influence their readiness to take action (Basavanthapa, 2008). The Model has six main (6) components that influence people's decisions to take an action to screen for, control conditions and prevent complications. These components are:

1.10.1.1 Perceived Susceptibility: This is an individual's assessment of his or her chances of getting the disease or condition (Basavanthappa, 2008). Menopausal women will not change their health behaviours unless they believe that they are at risk. Women going through the menopause transition do not know that they are at risk of suffering severe menopausal symptoms and hence may not see the need for seeking health care services.

1.10.1.2 Perceived severity: This is an individual's judgment as to the severity of the disease (Glanz et al., 2002). When menopausal women are made aware of the seriousness of the effects of menopause, they will develop a positive response to the need to avoid consequences to their health. The woman in menopause can only act by seeking health care if she considers menopausal symptoms to have serious consequences. On the other hand menopausal women can employ coping mechanisms if they realize the symptoms are overwhelming otherwise they would choose to suffer silently. Additionally health care providers including Ministry of Health can only see the need to provide menopausal services if they are aware of the symptoms.

1.10.1.3 Perceived benefits: Women's experiences can be severe and detrimental to women's health. This is the individual's conclusion as to whether the new behaviour is better than what he/ she is already doing. This is a belief that a certain action will reduce risk or seriousness of impact (Basavanthappa, 2008). It is therefore difficult for menopausal women to seek health services if they do not understand the benefits of doing so.

1.10.1.4 Perceived Barriers: This is an individual's opinion as to what will stop him/her from adopting the new behaviour. Perceived barrier is the belief about costs or negative aspects of the actions (Glanz, 2002). Menopausal women fail to seek health care because they think doing so will be difficult due to factors like, non availability of the services, time and costs involved.

1.10.1.5 Cues to action: A cue to action is something that helps move someone from wanting to make a health change to actually making the change. This is an external event that prompts a desire to make a health change or instigators for readiness. They can be anything from essential knowledge gained from information, education and communication (IEC) during gynaecological clinics and outpatients departments. Therefore menopausal women can only make a change about their health if health messages are communicated to them.

1.10.1.6 Self efficacy: This is a personal belief in one's ability to do something. Self-efficacy looks at a person's belief in his/her ability to make a health related change (Basavanthappa, 2008). Menopausal women's confidence in taking action over their symptoms will be an important factor in them actually seeking for health services.

1.11 VARIABLES

A variable is a measurable or potentially measurable component of an object or event that may fluctuate in quality or quantity that may be different in quantity from one individual object or event to another individual, object or event of the same general class (Basavanthappa, 2008).

1.11.1 Dependent variable

This is represented by Y and is often referred to as the consequence or presumed effect that varies with a change in the independent variable (LoBiondo-Wood and Haber, 2006). In this research the dependent variable is experiences of menopause.

1.11.2 Independent variables

This is usually symbolized by X and is the variable that has the presumed effect on the dependent variable (LoBiondo-Wood and Haber., 2006). In this research, the independent variables are:

1.11.2.1 Age
1.10.2.2 Knowledge
1.11.2.2 Experiences of menopause
1.11.2.3 Coping strategies
1.11.2.4 Socio-cultural factors/traditional beliefs and practices

Table 1: VARIABLES CUT-OFF POINTS

VARIABLE	INDICATOR	CUTOFF POINTS	QUESTIONS
Dependent variables			
Knowledge	Low	< 2	8-11
	High	> 2	
Cultural factors associated with menopause	Culturally accepted	3-4	12-15
	Not culturally accepted	0-2	
Social factors associated with Menopause	Social life not affected by menopause	3-5	16-21
	Social life affected by Menopause	0-2	
Copying strategies	High coping strategies	>2	22-26
	Low coping strategies	0-2	
Independent Variable			
Experiences of Menopause	Suffered severe effects	9-17	27-38
	Suffered less severe effects	0-8	

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

Literature Review also referred to as review of the literature refers to an organized critique of the important scholarly literature that supports a study, and a key step in the research process (LoBiondo-Wood and Haber, 2006). It places each of researchers in the context of its contribution to the understanding of the subject under review. Literature review describes the relationship of each work to the others under consideration, identify new ways to interpret and shed light on any gaps in previous research. It involves resolving conflicts amongst seemingly contradictory previous studies and prevents duplication of effort. Literature review also places one's original work (in the case of theses or dissertations) in the context of existing literature.

This review focuses on studies conducted on experiences of menopause among women. During literature review documented and published information on menopause were reviewed. The documents reviewed covered researches done in different parts of the world. The experiences of menopause among women are varied. Apart from menopause causing physiological effects, socio-cultural, mental and service related factors are also associated with menopause.

2.2FACTORS ASSOCIATED WITH MENOPAUSE

2.2.1 Menopause

Alidoosti et al., (2011), defined menopause as the permanent cessation of menstruation, and marks the end of a woman's reproductive capacity. The symptoms are unpleasant but unavoidable manifestations of the ageing process in women.According to Rees (2011), the permanent cessation of menstruation results from loss of ovarian follicular activity. Natural menopause is recognized to have occurred after 12 consecutive months of amenorrhea, and is thus known with certainty only a year after the event. Perimenopausal includes the period beginning with the first features of the approaching menopause, such as vasomotor symptoms and menstrual irregularity, and ends 12 months after the last

menstrual period. Post menopause the period dating from the final menstrual period. However, it cannot be determined until after 12 months of spontaneous amenorrhea (Rees, 2011).

Rees (2011) defined premature menopause as menopause that occurs at an age less than two standard deviations below the mean estimate for the reference population. The age of 40 years is frequently used, arbitrarily, to define it. Most women spend one-third to one-half of their lifetime in post menopause. The increasing average length of the postmenopausal life span emphasizes the importance of menopause in today's society (Yang et al., 2011).

2.2.2Age at attainment of menopause

The average age of menopause in the western world is 51 years while as in India it is 44.3 years and the normal age range for the occurrence of menopause is between 45 years and 55 years (Mushtaq, 2011). Age at natural menopause in the developed world is approximately normally distributed, ranging between 40 years and 58 years, with an approximate mean of 51.4 years (Henderson., 2008; Judge., 2008). Ellen et al., (2001) in their study on factors associated with age at natural menopause in a multi-ethnic sample of midlife women also found the mean age at attainment of menopause to be 50.4 years for Japanese women, 49.5 years for Thai women and Filipino Malay women were reported to be an average age of 47–48 years at menopause. Malik (2005) in his study on Knowledge and attitude towards menopause and Hormone Replacement Therapy (HRT) among postmenopausal womenin Karachi found age at attainment of menopause to be 47.4 ± 3.3 years. Dratva et al., (2009) in their study entitled "Is age at menopause increasing across Europe?" done in Switzerland which involved 5,288 women found the mean age at menopause to be 50.8years. Dratva's study revealed determinants of earlier menopause to be smoking, body mass index greater than 30 kg/m2 and low parity. Sievert, et al., (2001) in their study on variations in age at natural menopause found that there was a relationship between the number of pregnancies and age at menopause, the study demonstrated that women who never had children had early menopause. A study done in United States of America on the age at attainment of menopause showed that

timing of natural menopause is driven by a combination of genetic, reproductive, and lifestyle factors (Henderson et al., 2008). Another study done in Framingham in USA on factors influencing age at natural menopause revealed that menopausal age differs widely, between 40 and 60 year, and appears to be varied by both environmental and genetic factors. Smoking is one of the most important environmental factors influencing menopausal age with smokers experiencing menopause on average 0.8–2.0yr earlier than non-smokers (Murabito et al., 2005).

2.2.3 Social cultural factors associated with menopause

Ayranci et al., (2010) in his epidemiological study in Turkey on menopause status and attitudes in a Turkish midlife female population revealed that culture and ethnicity are reflected in beliefs, traditions, language, and social structure. In some cultures, the loss of regular bleeding is connected with a communal benefit since menopause means the end of "the days of uncleanness", while in more procreation-minded societies, menopause is seen mainly in a negative way because it means the end of fertility and the end of youth. Most of the women in this study had mixed ideas concerning menopause, and the majority was also suffering from menopause complaints. This data could assist healthcare providers in the provision of culturally competent health care to midlife Turkish women.

Imfun-ok., (2007) in a study of Feminist approach to research on menopausal symptom experience points out that menopause occurs at a time of life when women are facing many threats and challenges (which include, a change in their social roles, the stress of parenting, adolescent children, children leaving home, the illness of their partner, or the death of elderly parents) and midlife is a multifaceted stage in a woman's developmental process, characterized by important transitions. Thus, it is important that any understanding of menopause be placed within the context of a woman's daily life, and includes a consideration of her psychological state, psychological influences, sexual orientation, cultural and social background, social contexts (Imfun-ok, 2007). In the same study Imfun-ok stated that existing studies on menopausal symptoms have rarely disclosed women's own experiences, and one of the reasons would be the distant relationship between the researchers and the research participants. Although the meanings

attached to menopause and menopausal symptoms may be different according to the women's cultural and social background, the research participants may not view the important issue from the researchers' point of view of importance.

Richard-David., (2011) explains that menopause is viewed and experienced differently by women of different cultural background. Understanding similarities and differences among women especially in their expectations of menopause is a basic yet essential step for providing culturally appropriate care and promoting lifestyles that decrease symptoms and enhance quality of life.

2.2.4 Coping strategies

Feinamann., (2011) in her study conducted in Oxford, England on how professional women cope with menopause found that nearly half of women going through menopause had difficulties coping with symptoms at work.

Berkoff., (2011) in his study in Canada whose purpose was to find out whether diet could help with menopause among Canadian women, found that a low-fat, high-fruit, vegetable and whole grains diet help reduce hot flashes and night sweats. In addition, significant finding was that women who lost 10 or more pounds or more than 10% of their body weight were significantly more likely to see their night sweats and hot flashes reduced or in some cases disappear than women who maintain their weight over the study period. This was associated with the theory that having more body fat causes the body to retain heat and losing some weight helps the body dissipate the heat more easily.

Darsarehet al., (2012) in their randomized placebo controlled study on menopausal symptoms in Asian society's relief concluded that both aromatherapy massage and regular massage treatments reduce menopausal symptoms; however, aromatherapy massage may be more effective and were being practiced among Asian women. In addition, foods rich in phytoestrogen, which are natural low oestrogen containing substances, such as soya, help alleviate symptoms of menopause, including vaginal dryness, burning, itching, painful intercourse and decreased interest in sex. Black cohosh is also a popular alternative to prescription of hormonal therapy for the treatment of menopausal symptoms.

Francis et al., (2011) in their study in America to analyze the effect of participation in a mindfulness stress management training program on the degree of bother from hot flashes and night sweats among late perimenopausal and early postmenopausal women experiencing an average of 5 or more moderate or severe hot flashes (including night sweats)/day found that mindfulness-based stress reduction is a clinically significant resource in reducing the degree of bother and distress women experience from hot flashes and night sweats.

A study done by Bracy., (2007) on coping with menopause in England, indicated that there are a number of coping mechanisms which can be used to manage menopausal symptoms amongst which were meditation for a few minutes a day (15minutes), exercises of any sort at least 3 times a week, an inventory of life is found to list the things that matter most to a woman and reaching out to a friend or counsellor and medication have were also found to be helpful. In the same study Bracy, found oestrogen to be the most effective treatment for hot flashes and also some blood pressure, anti-seizure, and antidepressants medications were all shown to improve hot flashes in menopausal women. Flaxseed and flaxseed oil play a role in decreasing hot flashes and had the added benefit of reducing joint and muscle pain for some women. Vitamin E, yam phytoestrogen and black cohosh were all being used for many years to combat hot flashes (Bracy, 2007).

2.2.5 Social economic status

Nurs (2012) in his study of measuring the impact of menopausal symptoms on quality of life concluded that quality of life may be severely compromised in women with menopausal symptoms, and perceived improvements in quality of life in users of hormone replacement therapy seem to be substantial.

Utian (2005) in his study of psychosocial and social economic burden of vasomotor symptoms in menopause concluded that menopause-related vasomotor symptoms are very common and can be associated with a high patient and societal burden. These symptoms result in high direct and indirect costs and significantly reduced quality of life. Utianalso found that among women who are eligible for the treatment of menopause-

related vasomotor symptoms, 80% do not seek treatment, receive inadequate counseling, or do not have access to local medical aid (Utian,2005).

In a study conducted by Hard et al., (2005) Cox's proportional hazard models indicated that 95% of the women whose fathers were in a manual social class occupation at three time points during her childhood had an earlier age at menopause than those whose fathers were in non-manual occupations. Similar findings were seen for household crowding. In their study, the two also found out that those women who experienced parental divorce early in life (before five years of age) had 95% rate of early menopause than those whose parents did not divorce. The two Authors concluded that there is some evidence of a cumulative effect of socio-economic circumstances in childhood, but not in adulthood, on age at menopause. Childhood nutrition, cognition and emotional stress possibly underlie the social gradient (Hard et al., 2005).

2.2.6 Effects of menopause

The pelvic floor is certainly influenced by ageing and the menopause, but more research is needed to fully understand the pathophysiology, treatment selection and prevention (Lee, 2009). However, with current knowledge and understanding there is much that can be done to provide good care for women with pelvic floor dysfunction and impact positively on their quality of life. Epidemiological studies have shown that older women are at increased risk of pelvic floor dysfunction, stress urinary incontinence, prolapsed bladder and faecal incontinence. The most significant aetiological factors for the development of prolapsed bladder are advancing age and parity (MacLennan et al., 2000). Hot flashes are one of the commonly reported problems in menopause. Whiteman et al. (2003) in Massachusetts in USA's New England stated that menopausal hot flashes are the most common menopausal symptoms experienced by women in the western world. Mustafa (2011) in a study conducted in India revealed that maximum women experienced hot flashes. Concerning the effect on menopause on memory Hope (2009) and Greendale (2007), who led the study of 2,500 women on effects of the menopause transition on cognitive performance in midlife women concluded that levels of female hormones are the likely cause of memory difficulties just before the menopause begins. Women in the study stated that they have memory problems during the menopause transition

(Greendaleet al., 2007). With reference to gastrointestinal effects, Wolf (2010) in a study done in England indicated that gastrointestinal reflux disease, burping, irritable bowel syndrome and constipation are a common feature amongst women in menopause in his study of menopausal women at the University of Colorado. Pertaining to sexual problems experienced in menopause, Dennerstein (2009) in Australia as quoted by Eden and Wylie (2009) in a study of quality of life and menopause found that the most common sexual complaints occurring around the time of menopause onset are lack of sexual desire or libido, lack of sexual arousal and vaginal dryness. In the same study Dennerstein found that oestrogen hormone maintains vaginal pH and moisture levels, keeping the tissues lubricated and protected. Prolonged oestrogen deficiency, as occurs in menopause, results in atrophy, fibrosis and reduced blood flow to the urogenital tract causing the symptoms of vaginal dryness, soreness and pain related to sexual intercourse. Results of this study indicated that 65% of women reported to have happier sexual life since they did not have to worry about the unplanned pregnancies (Kafeel, 2012). According to Kafeel, women often have misconception and worries pertaining to their sex life after menopause. They are afraid that their partner may no longer be sexually interested in her. Such fears stem from the fact that after menopause one tends to lose their libido (Kafeel, 2012).

The blood vessels become vulnerable and weak due to hormonal changes during menopause. The arteries stand a higher risk of being affected with chances for blockage. To prevent this it is important that women and take good care of the heart by regular checkups and analysis of the condition of the heart and the risk factors associated with it (Dasgupta, 2012). Sallam et al., (2006) in their study on menopause in Egypt: past and present perspectives, found that Egyptian women suffer from osteoporosis, particularly at the femoral neck after the menopause.

2.2.7 Knowledge on Menopause

In the African context, menopausal women have been subjected to unnecessary series of investigations because very few doctors and nurses are able to recognize the signs and symptoms of menopause as early as possible. Kshor and Kailesh (2012), in their study done in Bhavnagar and Surat cities of India about level of education and awareness about menopause among women of 40 to 60 years concluded that as education level increased,

awareness about menopause and related symptoms also increased in women of 40 t0 60 years. Education of grade 12 and above had the highest level of knowledge. According to Kshor and Kailesh, there was an association between education level and awareness about menopause. Mujahid et al., (2013) in their study on sources of knowledge about menopause concluded that the most common source of information about menopause among menopausal women was from medical sources. According to their study, education of grade 12 and above had the highest level of knowledge than those with less education. In a study on knowledge and attitude towards menopause among post-menopausal women in Pakistan, Malik (2008) found out that 90% of the women had heard about menopause. The attitude of the women towards menopause showed that majority considered it a natural event and not a medical condition (Malik, 2008). While a study conducted by Lindh-Astrand (2009) revealed a general lack of knowledge about menopause and Hormone Replacement Therapy (HRT). Women's attitude towards menopause ranged from positive to neutral. Better education about menopause from media sources and healthcare providers is needed regarding the long-term risks associated with menopause and pros and cons of HRT so that women can take informed health decisions which may result in improvement in quality of life. According to Lindh-Astrand (2009) women had a rather limited knowledge of the effects of HRT, the pros and cons of HRT, and even of reproductive physiology itself. Educational level and HRT use may have an impact on the level of knowledge about these three subjects. Pam et al., (2002) in their study on bridging the knowledge gap, recommended that better education about menopause and its management for healthcare providers is needed regarding the long-term risks associated with menopause and the role of HRT so that the physician can take health decisions, which may result in improvement in quality of life of menopausal women.

Nusrat et al., (2008) in a study on knowledge on menopause found that most of the women considered it as a natural process of aging, though bothered by symptoms but did not go for consultation due to lack of awareness and poverty.

2.3 CONCLUSION

The literature review on effects of menopause among menopausal women revealed that many studies have been conducted on the topic, globally and regionally. Nationally, there is scanty literature on the subject. Studies on the effects of menopause among women show that women's experiences of menopause are diverse. There are a number of factors associated to menopause. Many of the studies done have shown that age at menopause varies among different racial/ethnic groups. Socio-cultural factors influence the experience and perception of menopause and also affect health seeking behaviour. Coping strategies used are varied and include replacement of oestrogen hormones, use of phytoestrogen and physical exercises among others. The studies reviewed show that knowledge on physiology of menopause and use of hormone replacement is inadequate therefore, women need education from the health care providers and the media. Economic factors and menopause studies indicated that women with poor social economic status go into early menopause due to early aging of reproductive organs.

In view of the above, the investigators propose to carry out a study on effects menopause among Zambian women. When research is conducted on this topic, the findings will be used to make recommendations to the policy makers so that strategies/interventions to care for menopausal women in Zambia can be formulated.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

This chapter describes the research design, study setting, study population, sample selection, sample size, data collection tool, data collection technique, pilot study, validity, reliability, ethical and cultural considerations of the study.

Methodology is the correct arrangement of thoughts either for the discovery or for the exposition of truth (Gosh, 2002). Methodology is used to give a clear cut idea on how the researcher is carrying out his or her research. In order to plan in a right point of time and to advance the research work, methodology makes the right platform to the researcher for mapping out the research work in relevance to making solid plans (Williams, 2011). The purpose of the study was to describe the effects of menopause among women in Zambia.

3.1 DESIGN

A Research design outlines the plan, structure, and strategy of investigations to answer the research question. It is the overall plan or blue-print that researchers select to carry out their study that entails all the steps in the research process from the definition of variables and formulation of hypotheses through the decision on how the data will be analysed (Basavanthappa, 2008). A descriptive quantitative non-intervention design was used in this study. The study was descriptive and quantitative in nature because it involved identification and description of factors associated with the effects of menopause and no intervention was applied. Quantitative research design is a formal objective systematic process to describe test relationships, and examine cause and effect interactions among variables (Basavanthappa, 2008).

3.2 RESEARCH SETTING

Research study setting refers to the physical location and conditions in which data collection takes place in a study (Polit and Hungler, 2001). A research setting is a place or area where a research study will be conducted (Basavanthappa, 2007).

This study was conducted in Katete, Lusaka, Nchelenge and Luanshya districts under natural settings.

Katete is a rural district in Eastern province and it is about 500 kilometres east of Lusaka. The study was conducted in Greya and Chibolya communities. The target population was drawn from Reformed and Roman Catholic Churches of Zambia. The women from these Churches meet three times in a week to carry out different Church programmes. Greya community is on the eastern side of St Francis Hospital about 3 kilometres from the great east road. Chibolya is also on the eastern part of Katete stores and about 1 kilometre from the great east road. There are about 35 Churches in Katete district. The target population was drawn from Roman Catholic and Reformed Churches of Zambia. The two Churches were conveniently selected by the researcher because they were easy to access. The neighbouring communities are small scale farmers who grow common crops like maize, ground nuts, cotton and vegetables. They also rear live stocks like cattle, goats, chickens and pigs.

Lusaka is an urban district comprising eight zones and the study was conducted in Makeni community. The target population was drawn from Roman Catholic and Seventh day Adventist Churches of Zambia. The two Churches were conveniently selected by the researcher because they were easy to access. The women from these Churches meet three times in a week to carry out different Church programmes. Makeni is south west of the city centre, 10 kilometres from the city centre and 7 kilometres off Kafue road. Lusaka district has approximately 25 Churches.The neighbouring communities are a mixture of small scale and commercial farmers who grow common crops like maize, sunflower, soya beans, wheat, hay grass bananas and vegetables. They also rear dairy animals, chickens (layers and broilers), wild animals like dickers, antelope, birds, horses and kudu. Some are in formal employment and some run small businesses. Others are retirees.

Nchelenge is a town located 1080 kilometres north of Lusaka. It is found in Luapula province and lies 250 kilometres north of provincial town Mansa. For this study, the sample was drawn from United Church and Roman Catholic Churches in Nchelenge Boma.The two Churches were selected by convenient sampling by the researcher as they

were easy to access.There are about 30 Churches in Nchelenge district. On average, Church members meet three times a week to carry out Church activities. The community is composed of people in formal employment, fishermen and farmers.

Luanshya is a town on the Copperbeltprovince of Zambia. It is about 20 kilometres from Ndola which is the provincial capital. Luanshya district has about 35 Churches.For this study the sample came from the United Church and Roman Catholic churches of Zambia located in Luanshya mine area less than 5 kilometres from the town centre.The two Churches were selected by convenient sampling by the researcher. On average, members from the respective Churches meet three times in a week. The community is mostly composed of people in formal employment but there are others are in small scale businesses and few are into farming.

3.3 STUDY POPULATION

The study population is the total group of individuals, people or things meeting the designated interest to the researcher (Basavanthappa, 2007). The study population in this study consisted of all women aged 55 years and above, found in Lusaka, Nchelenge, Luanshya and Katete districts.

3.3.1 TARGET POPULATION

A target population is the entire population in which the researcher is interested and to which he or she would like to generalize the results of the study (Polit and Hungler, 2007). The target population in this study was all menopausal women in Zambia.

3.4. SAMPLING METHOD

Sampling Method is a process of selecting a number of individuals from the determined target population in such a way that the individuals in the sample represent, as nearly as possible the characteristics of the entire target population (Dempsey and Dempsey, 2000). The sample for the study consisted of members of churches which were selected from Katete, Luanshya, Nchelenge and Lusaka districts. In this study, convenience sampling method was used to select the Churches. Convenience sampling is a method of sampling

where the units are selected based on the opportunity, accessibility and closeness (Sidhu, 2006). The Churches from the four towns were conveniently selected because they were closer and easy to access by the researchers. Cluster sampling method was used to narrow down to the study population (the menopausal women). Cluster sampling is a probability sampling method in which the unit of the design is made up of multiple cases, particularly appropriate when the population to study is infinite, where a list of members of the population does not exist (Sidhu, 2006). This method was used to select the menopausal women in churches because it permitted a relatively easy accumulation of sample of the menopausal women. This method was also economical in terms of time and much easier and less expensive than searching for the individual women who are in menopause. After selecting the clusters of the women, the researcher further used simple random sampling to select the individual women. Sidhu (2006) defines simple random sampling as the type of sampling where every member of the sample is selected from the total population in such a manner that all members of the population have essentially the same probability of being selected. The sample comprised 200 menopausal women drawn from Lusaka, Luanshya, Nchelenge, and Katete districts of Zambia. Fifty respondents were selected from each district. To achieve simple random sampling, respondents were selected at random from the sampling frame. Numbers were assigned to respondents and written on slips of paper, placed in a container, mixed well and then drawn out one at a time until a desired sample size was reached. Respondents whose numbers were picked participated in the study.The researchers chose to use this method because it is free from bias and prejudice, free from errors in classification, and is more representative of the population (Ghosh, 2002).

3.4.1 Eligibility Criteria

According to Burns and Grove (2009), Eligibility criteria are 'the list of characteristics essential for inclusion or exclusion in the target population'.

3.4.2 Inclusion criteria

Burns and Groove (2009) defines inclusion criteria as the 'characteristics that the subjects or elements must possess to be part of the target population'. Participants that were

included in the study were menopausal women aged 55years and above. The inclusion criteria also included self-identification of the menopausal symptoms like amenorrhoea of greater than one year in women with natural menopause. The women selected were Zambians from Lusaka, Nchelenge, Katete and Luanshya. This was done because the research was focused on describing the effects and experiences of menopause among women in Zambia.

3.4.3 Exclusion criteria

Exclusion criteria are those characteristics that can cause a person or element to be excluded from the target population (Burns and Groove, 2009). The exclusion criteria included all the women who had not attained menopause and this was done by not selecting women who were outside the age range of 55years and above. Women whose menstrual period had stopped because of medication, radiotherapy, pregnancy or lactation and also women who identified their primary race/ethnicity as mixed were excluded. Women found in Lusaka, Katete, Luanshya and Nchelenge but were not Zambians were excluded from the study because they were not part of the target population and might have different experiences and exposure to coping strategies in menopause. The other exclusion criteria were women who were experiencing menopause because of surgery. Menopausal women on hormonal replacement therapy were also excluded as these might not have been experiencing menopause in a natural way.

3.5 Sample Size

A sample size is the number of subjects or participants recruited and consenting to take part in the study (Burns and Groove, 2009). A sample size of 200 menopausal women was selected. The sample distribution was 50 Katete, 50 Nchelenge, 50 Luanshya and 50 from Lusaka. This was because of the inadequate resources to conduct the study and the short period in which the research was conducted.

3.6 DATA COLLECTION TOOL

Data Collection is precise systematic gathering of information relevant to the research to address a research problem (Burns and Groove, 1993), whereas a data collection tool is an instrument used for collecting data which could either be a questionnaire, an interview schedule, or a projective device (Burns and Groove, 1993).

In this study, a semi structured questionnaire (annex I) was used to collect data. It consisted of 42 questions which were divided into five sections. Section A consisted of demographic data, section B comprised of questions on assessing the knowledge on menopause, section C was on cultural factors associated with menopause, section D was on problems experienced by menopausal women and section E was on coping strategies used by Zambian women during menopause. This data collection tool was chosen because it was relatively simple method of collecting data, was inexpensive to distribute, it was a rapid, efficient method of gathering information and it had the ability to gather data from a widely scattered sample.

3.7 DATA COLLECTION TECHNIQUE

Data collection technique is the process of gathering needed information to address a research problem (Polit and Hungler, 2007). Data collection techniques allow the researcher to systematically collect information from respondents about the objectives of the study.

In this study, data was collected through a semi structured questionnaire using a face-to-face interaction which enabled the illiterate women to express themselves and self administered for the literate women. To collect the needed information from the respondents, the researchers sought permission from the Church leaders for the interviews and interviews were conducted in Katete, Luanshya, Lusaka and Nchelenge. Private rooms were asked for where respondents were interviewed from. The interviews were conducted in private rooms which ensured confidentiality. The researchers introduced themselves to the respondents and explained the purpose and benefits of the research. The researchers also explained to the respondents that participation was voluntary and those respondents were free to stop at any point in time. The researchers

assured the respondents of confidentiality and after all the explanation; the researchers obtained signed consents from each respondent.

The researchers then proceeded with administration of the structured questionnaire and at the end thanked the respondents for their participation.

3.8 VALIDITY

Validity is the determination of whether an instrument actually measures what it is purported to be measured (LoBiondo-Wood and Haber, 2007). Validity constitutes both external and internal validity. Internal validity concerns the extent to which conclusions can be drawn about the effects of one variable on another. It seeks to determine if the observed effect on the dependent variable was due to the action of the independent variable and not something else. Internal validity was upheld by avoiding selection bias of respondents by using probability sampling method of randomization. The researchers ensured that the same questions were asked to each respondent in the same sequence.

External validity is concerned with the extent to which research findings can be generalized beyond the sample size of the study (Burns and Groove, 2009). External validity is important in research as it influences the significance of the study. In this study, external validity was upheld as the researchers detached themselves from the study by being objective during data collection and analysis so that the study findings would be a true reflection of what the respondents said.

3.9 RELIABILITY

Reliability is concerned with how consistent an instrument is in measuring the concept of interest (Burns and Groove, 1993). The instrument used should be able to bring out the accurate information such that when the same instrument is used in similar circumstances after some time it should be able to produce the same response or result. Reliability was ensured by use of a standardized data collection instrument. Research instrument was pre-tested by a pilot study which was conducted to increase reliability of the data collection tool. The results from the pilot study were used as base line data to test reliability. The researcher followed the instructions on the semi-structured questionnaire schedule so that

biases were eliminated by administering the same instrument across the subjects. This also minimised errors.

3.10 PILOT STUDY

A Pilot Study is a small preliminary investigation of the same general character as the major study, which is designed to acquaint the researcher with problems that can be corrected in preparation for the large research project (Basavanthappa, 2008). The purpose of the pilot study was to assess the feasibility of the data collecting instrument and make necessary adjustments to the interview schedule before the major study was carried out. The researchers conducted a pilot study using a sample size of 5 respondents selected by simple random sampling from each of the four selected districts. To achieve simple random sampling, numbers were assigned to respondents and were written on slips of paper, placed in a container, mixed and then drawn out one at a time until a desired sample was reached. Respondents whose numbers were picked participated in the pilot study.

The five respondents that were selected represented 10% of the 50 respondents from each district. This means 20 respondents were selected for the pilot study representing 10% of the total 200 respondents, the sample size of the actual study. The pilot studies were conducted at Roman Catholic Church in Luanshya, Greya community in Katete, Roman Catholic Church in Kaseka township of Nchelenge and Makeni Main Seventh Day Church in Lusaka.

Certain questions were modified and these included; question four, where,"standard one to six" was included since some women did their education during the colonial period. Question seven, an option, "do nothing" was included for those who were not doing anything. Question 16 was ambiguous; therefore, it was changed to "lazy and unable to provide resources for the family." For questions 23, 24 and 26, an option (e) for respondents to specify was added and for question 39, some respondents did not agree that menopausal health care services should be provided. Therefore the question directed respondents to give reason(s) to their responses. The adjustments were made to ensure that the questionnaire was clearly understood.

3.11 ETHICAL CONSIDERATION

Ethical consideration is very important in the development and implementation of research in order to ensure that human rights are protected. Ethics are therefore defined as a system of moral values that are concerned with the degree to which research procedures adhere to professional, legal and social obligation to the study participant (Polit and Hungler, 2001). Written permission to carry out the study was sought from the Council of Churches from Lusaka, Copperbelt, Eastern and Luapulaprovinces of Zambia. Further permission was obtained from Pastors, Priests and Reverends for United Church of Zambia, Roman Catholic, Reformed Church and Seventh Day Adventist Churches located around Lusaka, Nchelenge, Katete and Luanshya. Verbal and written permission was obtained from the study participants before the questionnaire was administered and/or interview conducted. The respondents were assured that confidentiality and anonymity was going to be maintained. Serial numbers were used to identify the participants. The purpose of the study was also explained to all the women who participated in the study.

3.11.1 Right to discrimination

This right states that human beings should be treated as autonomous agents, capable of controlling their own activities (Polit and Hungler, 2008). This principle means that the respondents have the right to decide voluntarily whether to participate in the study or not. The participants who took part in the study were informed that they could withdraw from the study at any time if they so wished and this would not be withheld from them. In addition, the participants were not forced to take part in the study; they were allowed to exercise their rights. A written informed consent was obtained from those who took part in the study.

3.11.2 Beneficence

This principle encourages to do good to the participants and above all not to harm them (Burns and Grove, 2007). This means that the participants should be protected from any harm physically, emotionally, socially, economically and spiritually. This was observed

during the study and the participants answered the questions at their own convenient times.

3.11.3 Justice

Justice is the principle that states that human subjects should be treated fairly (Burns and Grove, 2007). In the study, the participants were treated fairly. They had the right to decide voluntarily whether to participate in the study or not, and to withdraw from the study at any time they so wished.

3.11.4 Fidelity

The principle of Fidelity was adhered to by ensuring that confidentiality was observed throughout the study. To ensure confidentiality, names of respondents were not appearing on the data collecting instrument. Instead, serial numbers were used. The study participants were interviewed from a private room and only one participant was interviewed at a time.

3.12. DATA ANALYSIS

Data analysis is the systematic organisation and synthesis of research data, and the testing of research hypothesis using those data (Polit and Hungler, 2001). Each day of data collection the interviewers checked for completeness of the data collected. A Statistical Package for Social Scientists (SPSS) was used for data analysis.

Analysis of quantitative data involved coding, grouping, categorizing and classifying with table constructions (Polit and Hungler, 2001). Data was presented using frequency tables, pie charts and bar graphs. Tables were suitable because they summarized the findings. Pie charts and bar graphs provided variety of ways in which data was presented and thus prevented the monotony of narrative presentation.

A qualitative analysis is the non-numerical examination and interpretation of observations, for the purpose of discovering underlying meanings and patterns of relationships (Babbie, 2007). In this study content analysis to analyse the data was used. This refers to the process of analysing the content of qualitative materials for recurring

themes and patterns. In qualitative data analysis, data is grouped, categorized and information classified and organized in themes or according to attributes to give meaning. In this study transcription, coding of data, review of content were done.

3.13 DISSEMINATION OF FINDINGS

Dissemination of findings entails the measures that would be undertaken to communicate the findings from the study to others (Polit and Hungler, 2001).

The Researcher disseminated the research findings to the leaders of the Council of Churches in Zambia, the interviewees from individual churches; Roman Catholic and Seventh Day Adventist Church in Nchelenge, Reformed Church of Zambia and Catholic Church in Katete, United Church of Zambia and Catholic Church in Luanshya and in Lusaka, the Seventh Day Adventist Church and Catholic Church in Makeni. The Researchers held meetings with the churches to communicate findings to the respondents as well as other church members. The Researchers also disseminated the findings by making executive summaries of the study document which were sent to the Ministry of Health, Provincial Health Office sand District Health Officesfor reference by programme and policy decision makers. Copies of the research project were distributed to the Department of Nursing Sciences, University of Zambia Medical Library to use as reference material by students and health care professionals. The Researcher held workshops with the health care providers within the catchment area to disseminate the findings.

CONCLUSION

Research methodology provides a foundation for systematic collection of data. For this study, a non-intervention descriptive study was used. The Researchers ensured that the whole process was systematically done taking into consideration the sample size, research settings, study population and all ethical considerations. This process gave credit and meaning to study results.

CHAPTER FOUR

4.0 DATA ANALYSIS AND PRESENTATION OF FINDINGS

This chapter outlines the presentation of information from the study. Data were collected from 200 respondents using an interview schedule. The respondents were 50 from Nchelenge,50 from Luanshya, 50 from Lusaka and 50 from Katete district. The sample included all women aged between 55years and 70years from Seventh Day Adventist Church, Roman Catholic Church, United Church of Zambia and Reformed churches of Zambia. A pilot study was conducted from the four districts involving five respondents from each respective district. Following the pilot study the data gathering instrument was modified.

4.1 DATA ANALYSIS

According to Polit and Hungler (2001), data analysis is the systematic organisation and synthesis of research data and the testing of research hypothesis using those data. For each day of collection of data, checking for completeness and inconsistencies in the data was done. Data was entered on the Microsoft excel spread sheet.

The data was sorted out; responses were verified and coded. The Data entry was partitioned into 5 categories; Demographic Data, Knowledge, cultural factors associated with menopause, social factors associated with menopause, coping strategies used by women in menopause and effects of menopause among Zambian women. The qualitative data, which were derived from open-ended questions, were analysed using content analysis (Polit and Hungler, 2001). Each response was transcribed, read and reread to get the concepts in the responses. The concepts were derived from the characteristics of the responses and then developed into themes that were used to categorise the content into meaningful groupings. A Statistical Package for Social Scientists (SPSS) was used for data analysis.

4.2 PRESENTATION OF FINDINGS

Data is presented using frequency tables, pie charts, and bar graphs. Tables are suitable for summarizing data, Pie charts and bar charts provide a variety of ways to present and thus prevent the monotony of narrative presentation.

4.2.1 DEMOGRAPHIC DATA

Table 2: Demographic characteristics of the respondents (n=200)

AGE	FREQUENCY	PERCENTAGE (%)
55-59 years	100	50
60-64 years	67	33.5
65-70 years	33	16.5
Religion/denomination		
Roman Catholic	101	50.5
Seventh Day Adventist	36	18
Reformed Churches of Zambia	32	16
United Church of Zambia	31	15.5
Marital status		
Married	89	44.5
Single	7	3.5
Widowed	77	38.5
Divorced	27	13.5

Number of children		
0-4	66	33
4-9	116	58
10-14	21	10.5
Educational attainment		
None	38	19
Primary G1-7	42	21
Secondary G8-12	53	26.5
Standard 1-6	25	12.5
College/University	41	20.5
Occupation		
Formal	20	1
Business woman	49	24.5
Farmer	73	36.5
Does nothing	22	11
Housewife	36	18

Of the 200 respondents 100 (50%) were in the age range 55-59 years whilst 33 (16.5%) were in the age range 65-70 years. On religion, 101 (50.5%) of the respondents belonged to Roman Catholic Church whilst 31 (15.5%) belonged to United Church of Zambia and 36 (18%) were from the seventh day Adventist Church. 89 (44.5%) of the respondents stated that they were married whilst 7 (3.5%) stated that they were single. 116 (58%) had 4-5 children whilst 21 (10.5%) had 10-14children. Regarding level of education, 53

(26.5%) went up to grade 8-12, 41 (20.5%) had college/university education, whilst 38 (19%) did not have any formal education. 73 (36.5%) of the respondents stated that they were farmers, 49 (24.5%) were into business, whilst 20 (1%) stated that they were not in formal employment.

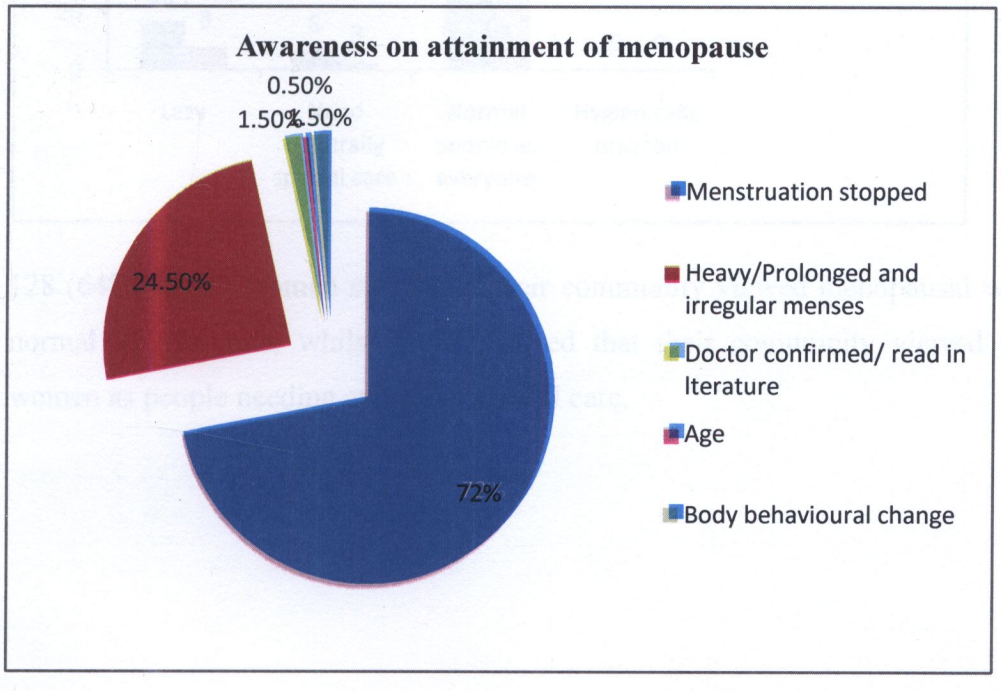
4.2.2 KNOWLEDGE ON MENOPAUSE

Table 3: Respondents' awareness ofmenopause (n=200)

Aware of menopause	Frequency	Percentage %
Yes	180	90
No	20	10

180 (90%) of the respondents stated that they aware of menopause whilst 20 (10%) of the respondents stated that they were not aware of menopause.

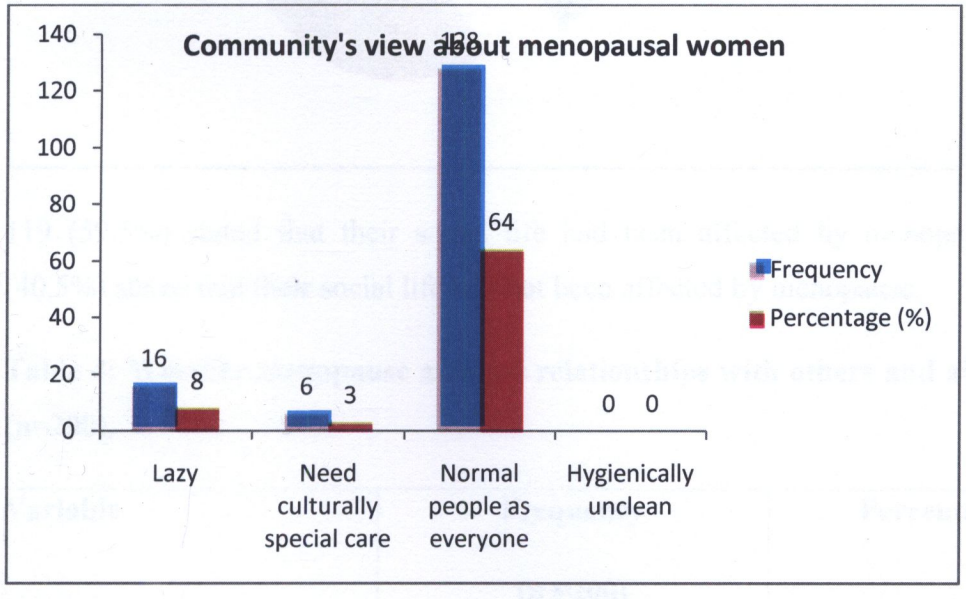
Figure 2: Awareness on attainment of menopause (n=200)



144 (72%) became aware that they had attained menopause because menstruation stopped. The distribution of percentages on awareness on attainment of menopause was similar from the four districts; Luanshya showed 34 (68%), Nchelenge 49 (98%), Katete 20 (40%), and Lusaka 32 (64%) who indicated that menses stopped. However, a small number of respondents 3 (1.5%) did not know until the doctor confirmed, while 3 (1.50%) had body behavioural changes. A respondent from Nchelenge 1 (0.5%) said she did not know that she had reached menopause until she failed to conceive.

4.2.3 SOCIAL CULTURAL FACTORS ASSOCIATED WITH MENOPAUSE

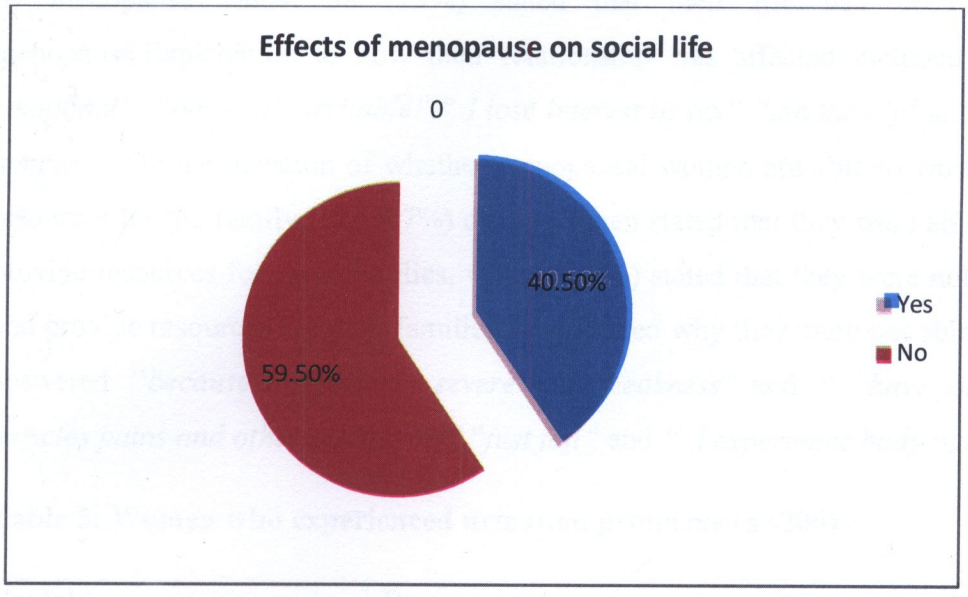
Figure 3: Community's view about menopause (n=200)



128 (64%) of the women stated that their community viewed menopausal women to be normal as everyone, whilst 6 (3%) stated that their community viewed menopausal women as people needing culturally special care.

4.2.4 EXPERIENCES OF WOMEN IN MENOPAUSE

Figure 4: Whether menopause affected social life (n=200)



119 (59.5%) stated that their social life had been affected by menopause whilst 81 (40.5%) stated that their social life had not been affected by menopause.

Table 4: Whether menopause affected relationships with others and ability to work (n=200).

Variable	Frequency (n =200)	Percentage (%)
Affected relationships		
Yes	38	19
No	162	81
Work and provide resources for their families		
Yes	194	97
No	6	3

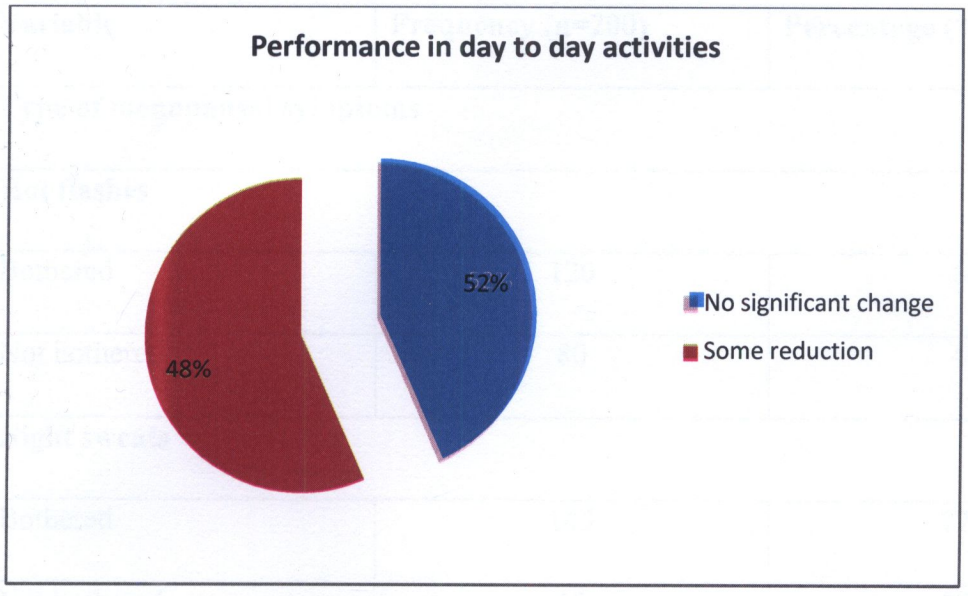
162 (81%) of the women stated that their relationship with others had not been affected by menopause whilst 38 (19%) stated that their life had been affected by menopause.Explanation to how their relationship was affected included "*Tend to be emotional*", "*am easily irritable*"," *I lose interest in sex*" "*am moody*" and "*I have high temper*". On the question of whether menopausal women are able to work and provide resources for the family, 194 (97%) of the women stated that they were able to work and provide resources for their families, whilst 6 (3%) stated that they were not able to work and provide resources for their families.When asked why they were not able to work they answered "*because i experience severe body weakness*" and " *i have joint aches and muscles pains and other discomfort*","*just fail*" and " *I experience body pains*".

Table 5: Women who experienced urination problems (n=200)

Variable	**Frequency**	**Percentage (%)**
Experienced urination problems		
Yes	89	44.5
No	112	56

112 (56%) of the respondents had no urination problems, while 89 (44.5%) had urination problems.

Figure 5: Performance of day to day activities



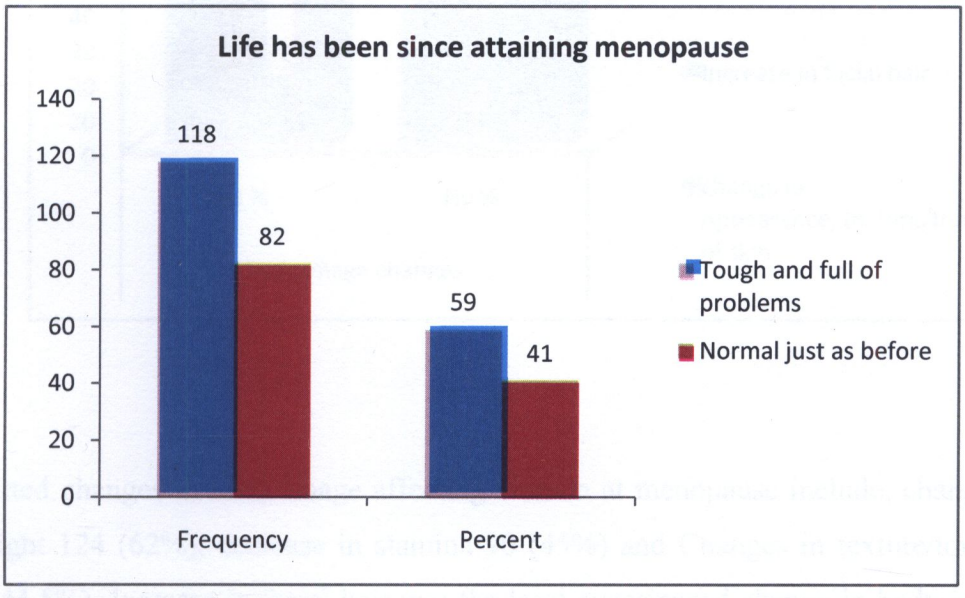
96 (48%) of respondents said that they had experienced some reduction in performance of day to day activities, while 104 (52%) said that they experienced no significant changes in performance of day to day activities.

Table 6: Type of symptoms experienced by women (n=200)

Variable	Frequency (n=200)	Percentage (%)
Type of menopausal symptoms		
Hot flashes		
Bothered	120	60
Not bothered	80	40
Night sweats		
Bothered	145	72.5
Not bothered	55	27.5
Drying of skin		
Bothered	101	50.5
Not bothered	99	49.5
Aching of the muscles		
Bothered	81	40.5
Not bothered	119	59.5

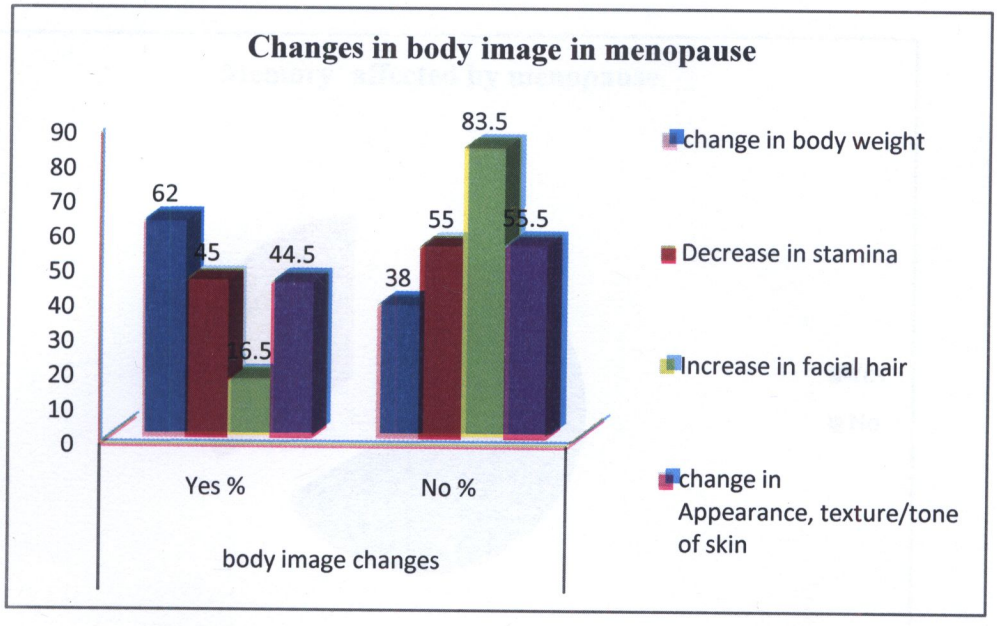
120 (60%) of the respondents reported that they experienced by hot flashes, 80 (40%) experienced night sweats, 101 (50.5%) experienced drying skin and 81 (40.5%) were experienced aching of muscles.

Figure 6: Women's life since attainment of menopause (n=200)



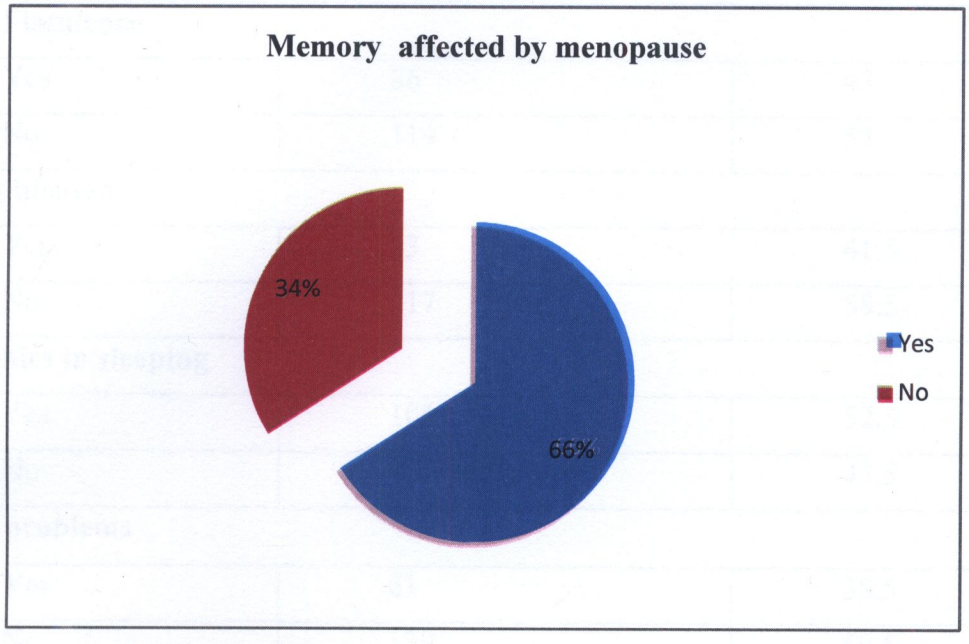
118 (59%) of the women described life since attainment of menopause as tough and full of problems while 82 (41%) described life since attaining menopause as normal just as before. Distribution of the responses to life since attainment of menopause as tough and full of problems were;Lusaka 24 (48%), Luanshya 20 (40%), Nchelenge 34 (68%), while those saying it was normal just as before were Lusaka 26 (52%), Luanshya 30 (60%) and Nchelenge 16 (32%).

Figure 7: Changes in body image in menopause



The reported changes in body image affecting women at menopause include, change in body weight 124 (62%), decrease in stamina 90 (45%) and Changes in texture/tone of skin 89 (44.5%). Increase in facial hair was the least experienced change in body image with 33 (16.5%).

Figure 8: Whether memory affected by menopause



Most 132 (66%) of the women reported having had their memory affected by menopause. When asked on how their memory had been affected most women said "I *easily forget where I put things*", "I *forget easily*", *Not able to remember easily*", "*memory lapses*", "*misplacing things in the home"*, and "*I have become more forgetful than before*" .

Table 7: Problems experienced women in menopause (n=200)

Variable	Frequency	Percentage (%)
Flatulence		
Yes	86	43
No	114	57
Feeling bloated		
Yes	83	41.5
No	117	58.5
Difficulties in sleeping		
Yes	105	52.5
No	95	47.5
Sexual problems		
Yes	61	30.5
No	139	69.5

105 (52%) of the women reported that they experienced sleep difficulties, 86 (43%) experienced flatulence, 82 (41%) experienced feeling bloated, and 61 (30.5%) had experienced sexual problems.

4.2.5 COPING STRATEGIES IN MENOPAUSE

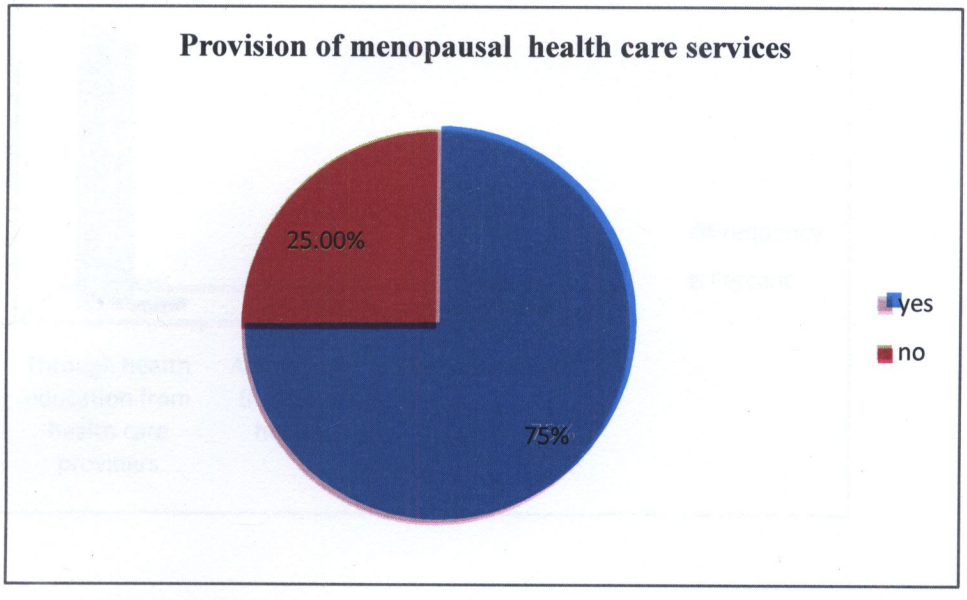
Table 8: Coping strategies in menopause (n=200)

Variable	Frequency (n=200)	Percentage (%)
Management of mood swings		
Sleeping	23	11.5
Herbal remedies	3	1.5
Involved in other activities	84	42
Do nothing	83	41.5
Managementof body fatigue		
Bathing	60	30
Going to Church	14	7
Sleeping	54	27
Do nothing	64	32
Any other	8	4
Management of hot flashes		
Herbal remedies	3	1.5
Cold bath	108	54
Opening windows	48	24
Do nothing	41	20.5
Used any remedies		

Yes	84	42
No	116	58
Type of remedies		
Herbal	19	9.5
Hospital	60	30
Prayers	6	3
Do nothing about it	96	48
Any other	0	0

On management of mood swings 84 (42%) of the respondents stated they managed the mood swings by being involved in other activities, 83 (41.5%) do nothing while 23 (11.5%) by sleeping .When asked how the women managed body fatigue, 64 (32%) do nothing and 60 (30%) manage fatigue by bathing. On hot flashes 108 (54%) manage hot flashes by taking a cold bath, 48 (24%) by opening windows and 41 (20.5%) do nothing. 116 (58%) of the women stated that they did not use any herbal remedies for most of their menopausal problems whilst 84 (42%) stated that they did. About the type of remedies used, 60 (30%) of the women stated that they used hospital remedies while 19 (9.5%) used herbal remedies for most of their Menopausal problems.

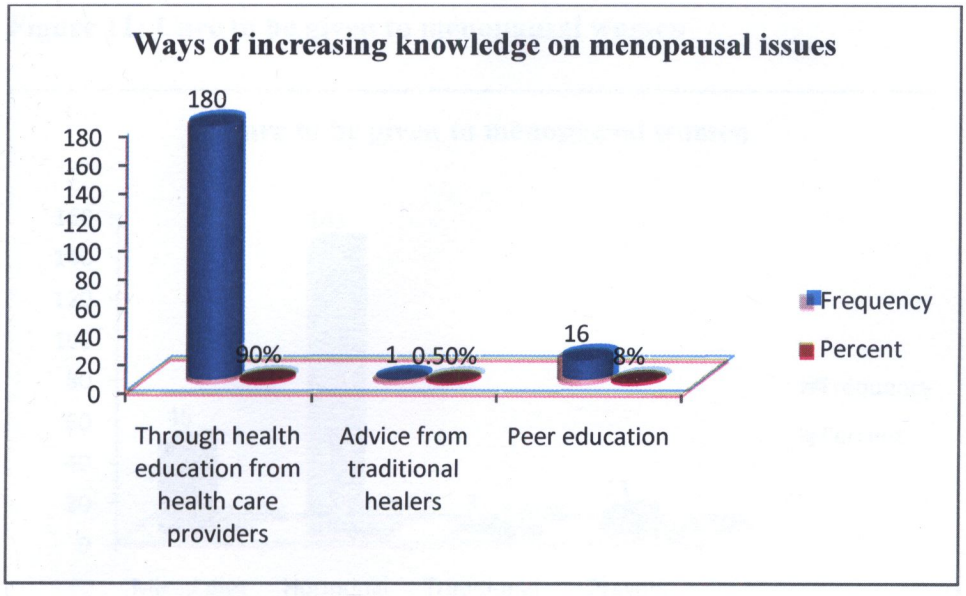
Figure 9: Provision of menopausal health care services



A higher percentage 149 (75 %) of women were of the view that menopausal services should be provided with other health care services. The distribution was; Lusaka41 (82%), Luanshya 36 (72%), Nchelenge 44 (88%), and Katete 32 (64%). The women who said that menopausal health services should not be providedtogether with other health services comprised 51 (25 %) of the sample.

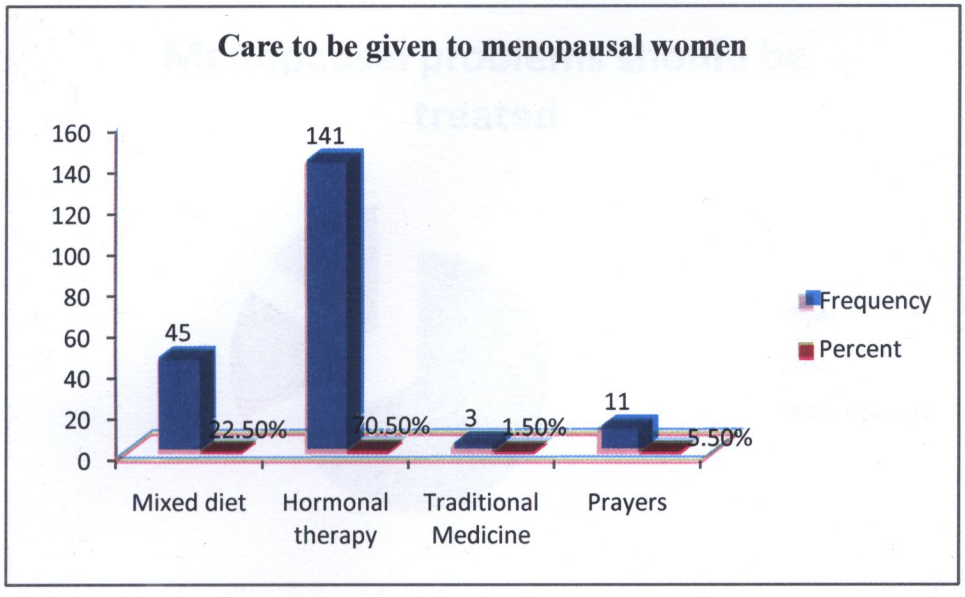
The women who said that menopausal services should be provided with other health care service cited the following reasons: *"it is a serious disease that needs attention" "menopausal problems need care just like other health care problem", to "help those with problems to live a comfortable life", "some women have bad effects", "it affects women", "for health education", "to improve quality of care",* and *"medical help is needed for women in menopause".* Others felt that menopausal health services should not be provided with other health care services giving the following responses: *"menopause is normal", "It is manageable",* and that *"it is a normal life process"*

Figure 10: Ways of increasing knowledge on menopause



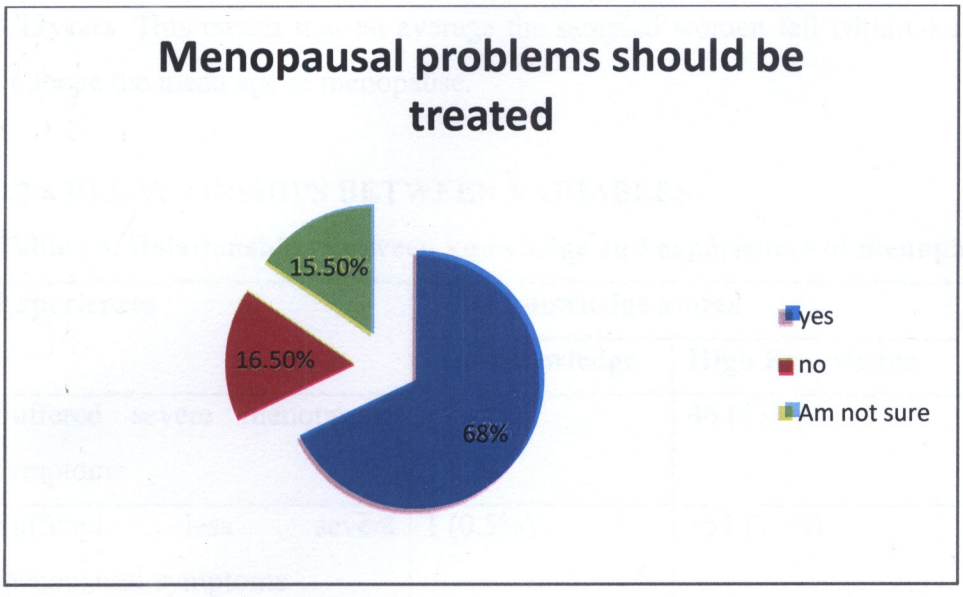
Most of the respondents 180 (90%) said that menopausal women could increase their knowledge on menopausal issues through health education given by health care providers. 1 (0.5%) said that knowledge could increase through advice from traditional healers. The distribution for the above result was; Lusaka 45 (90%), Luanshya 44 (88%), Katete 36 (72%) and Nchelenge 41 (82%). The 1 (0.5%) respondent who said that knowledge could be increased through advice from traditional healers was from Nchelenge.

Figure 11: Care to be given to menopausal women



141 (70.5%) of the respondents suggested that hormonal therapy should be given to women experiencing menopausal symptoms. 3 (1.5%) suggested that traditional medicine should be given to menopausal women experiencing menopausal symptoms. Distribution of those that said hormonal therapy should be provided was; Lusaka 28 (56%), Luanshya 34 (68%), Katete 49 (98%) and Nchelenge 30 (60%). Whilst the distribution for those suggesting traditional medicine was Lusaka, Luanshya and Nchelenge each having 1 (2%) respectively.

Figure 12: Whether menopausal problems should be treated.



Most of the respondents 133 (68%) said that menopausal problems should be medically treated. The distribution of this percentage was; Lusaka 22 (44%), Luanshya 19 (38%), Katete 47 (94%) and Nchelenge 44 (88%). 33 (16%) of the respondents said that menopausal women did not need medical treatment while 31 (31.5%) said that they were not sure if menopausal symptoms required medical treatment.

4.2.7 AVERAGE AGE AT ATTAINMENT OF MENOPAUSE

Table 9: Age at attainment menopause (n=200)

Age category at menopause	Frequency	Percentage (%)
30-34	1	0.5
35-39	4	2
40-44	36	18
45-49	94	47
50-54	57	28.5
55-59	8	4
Total	**200**	**100**

94 (47%) of the respondents attained menopause when they were in the range 45-49years of age. 1(0.5 %) respondent attained menopause when she was 30-34years of age.

The mean age at attainment of menopause was 47.31years with a standard deviation of 4.12years. This means that on average the sampled women fell within 4.12 years below or above the mean age at menopause.

4.2.8 RELATIONSHIPS BETWEEN VARIABLES

Table 10: Relationships between knowledge and experiences of menopause (n = 200)

Experiences	**Total knowledge scores**		**Total**
	Low knowledge	**High Knowledge**	
Suffered severe menopausal symptoms	1 (0.5%)	46 (23%)	47 (23.5%)
Suffered less severe menopausal symptoms	1 (0.5%)	152 (76%)	153 (76.5%)
Total	**2 (1%)**	**198 (99%)**	**200 (100%)**

Three quarters 152 (76%) of the women who had high knowledge on menopause suffered less severe menopausal symptoms. However 46 (23%) of the respondents with high knowledge suffered severe menopausal symptoms.

Table 11: Relationship between coping strategies and experiences (n = 200)

Experiences	**Total coping scores**		**Total**
	High coping	**Low coping**	
Suffered severe menopausal symptoms	37 (18.5%)	86 (43%)	123 (61.5%)
Suffered less severe menopausal symptoms	29 (14.5%)	48 (24%)	77 (38.5%)
Total	**66 (33%)**	**134 (67%)**	**200 (100%)**

Of the women who suffered severe menopausal symptoms 86 (43%) had low coping strategies and 48 (24%) of those who suffered less severe menopausal symptoms had low coping strategies.

Table 12: Relationship between social cultural factors and experiences of menopause

Experiences	Total social cultural scores		Total
	Menopause affected by social cultural factors	Menopause not affected by social cultural factors	
Suffered severe menopausal symptoms	19 (9.5%)	34 (17%)	53 (26.5%)
Suffered less severe menopausal symptoms	11 (5.5%)	136 (68%)	147 (73.5)
Total	**30 (15%)**	**170 (85%)**	**200 (100%)**

Most 136 (68%) of the respondents who had suffered less severe menopausal symptoms were not affected by social cultural factors while 34 (17%) who had suffered severe menopausal symptoms were not affected by social factors.

Table 13: Relationship between age at attainment of menopause and experiences

Experiences	Total scores for age at attainment of menopause						Total
	30-34	35-39	40-44	45-49	50-54	55-59	
Suffered severe menopausal symptoms	1 (0.5%)	3 (1.5%)	29 (14.5%)	73 (36.5%)	40 (20%)	5 (2.5%)	154 (77%)
Suffered less severe menopausal symptoms	0	1 (0.5%)	7 (3.5%)	21 (10.5)	17 (8.5%)	3 (1.5%)	48 (24%)
Total	**1(0.5)**	**4 (2%)**	**36 (18%)**	**94 (57%)**	**57 (28.55)**	**8 (4%)**	**200 (100%)**

73 (36.5 %) of the women who attained menopause between the age range 45-49years suffered severe menopausal symptoms whilst 21 (10.5%) suffered less severe menopausal symptoms.

CHAPTER FIVE

5.0 DISCUSSION OF FINDINGS

5.1 INTRODUCTION:

The study drew a sample of women who had reached menopause. The discussion is based on the data collected from a sample of two hundred (200) respondents who were menopausal women ranging from age 55years to 70years. The sample was derived from four sites namely: 50 from Lusaka, 50 from Luanshya, 50 from Katete and 50 from Nchelenge.

5.2.1 CHARACTERISTICS OF THE SAMPLE:

The menopausal women's age range was from 55 to 70 years. Half 100 (50%) of the respondents were in the age range 55-59 years, 67 (33.5%) were aged between 60-64 years and 33 (16.5%) were aged between 65 and 70 years (Table 2). The study showed that the majority of menopausal women were aged between 55-59 years. The sample composed of women who were Christians with most 101 (50.5%) belonging to Roman Catholic, 36 (18%) were seventh day Adventists, 32 (16%) from Reformed Church of Zambia and 31 (15.5%) were from the United Church of Zambia. Over one third 89 (44.5%) of the respondents were married and only 7 (3.5%) of the respondents were single (Table 2). Over half 116 (58%) of the respondents had four to nine children while 21 (10.5%) of the respondents had 10 to 14 children. It could be attributed to early marriages with subsequent teenage pregnancies, a common trend among young rural women due to lack of recreation activities (CSO, 2009). Regarding the education of the respondents, about 1/8, 38 (19%) had no schooling at all and 41 (21.5%) of the respondents had attained college or university education. Education attainment is positively related to household wealth status (CSO,2009). Regarding the respondents occupation, most of the respondents 73 (36.5%) were farmers and about a tenth 20 (10%) were in formal employment and another tenth 22 (11%) were unemployed. The investigators assumed that, this could be due to the fact that there were more farmers possibly because Zambia is largely made up of farming societies and some of the retirees still get back to their villages and engage in farming.

5.2 DISCUSSION OF EACH VARIABLE

5.2.1 AGE

In this study, the mean age at attainment of menopause was 47.3 years with a standard deviation of 4.12 years (Table 9). The mean age of the sampled women in this study fell within 4.12 years below or above the mean age at menopause which corresponded to the study conducted by Malik, (2005) in Karachi in Pakistan which showed 47.4 ± 3.3 years mean age at menopause. However the findings from Luanshya showed that the average age at attainment of menopause was 47.36 years with a standard deviation of 3.57 years. The findings from Katete reviewed that the mean age for Menopause was 46.64 years with a standard deviation of 4.75years while Nchelenge revealed that the average age of menopause was 46.5 years with a standard deviation of 3.4 years and the findings from Lusaka showed mean age at attainment of menopause to be 48.78 with standard deviation of 4.35 years. The findings for Nchelenge and Katete had similar results which showed the mean ages of 46.64years and 46.5 years. While the results for Luanshya and Lusaka were within the same range of 47-48 years.

On the other hand the findings of this study were different from the results of the study in Switzerland by Dratva et al., (2009) which involved 5,288 women where the mean age at menopause was 50.8years. The findings of Dratva's study were that determinants of women who reach earlier menopause were; currently smoking, body mass index greater than 30kg/m2 and low parity. Because this study was done in Zambia, the reduced age at menopause could be attributed to other factors and also the sample size as this study used a small sample size. Henderson et al., (2009) in his study from data from 26 different countries, both rich and poor, calculated a lower average age of 49.24 years which included Western countries of Italy, Iran Slovenia and USA.

Henderson in their study found Age at natural menopause to range from 40 years to 58 years, with an approximate mean of 51.4 years (Henderson, 2008; Judge, 2008), while a study conducted in India by Mushtaq (2011) showed the average age at menopause was 44.3 years and the normal age range for the occurrence of menopause as being between 45 years and 55 years (Mushtaq, 2011). A study on factors associated with age at natural

menopause in a multiethnic sample of midlife women showed the mean age at attainment of menopause to be 50.4 years for Japanese women, 49.5 years for Thai women and Filipino Malay women were reported to have an average age of 47–48 years at menopause (Ellen et al., 2001).

The variations in age at natural menopause can be explained by the findings in a study conducted by Sievert et al (2001) found that there was a relationship between the number of pregnancies and age at menopause, the study demonstrated that women who never had children had early menopause. Another study done by Sleeve et al., (2001) reported that those women who had no children attained menopause earlier.

Another study done in United States of America showed that timing of natural menopause is driven by a combination of genetic, reproductive and lifestyle factors(Henderson et al., 2008). Sleeve et al., (2001) found out that there was a relationship between tobacco smoking and age at natural menopause. Smoking interferes with the body's ability to make and process oestrogen.

5.2.2 KNOWLEDGE ON MENOPAUSE

In this study 180 (90%) of the respondents stated that they knew about menopause whilst 20 (10%) stated that they did not know anything about Menopause (Table 3). This could be because most of the respondents in the sample were educated and coincides with the study done by Kailesh and Kshor (2012) in Bhavnagar and Surat cities, India on awareness of Menopause which concluded that as educational level increased, awareness towards menopause and related problems also increased in women of 40 to 60 years of age. Education of grade 12 and above had the highest level of knowledge. Contrary, the findings of this study indicate that both women with high levels and those with low levels of education knew about Menopause. Another study by Wang and Zhai (2000) in Beijing revealed that the incidence of symptoms was correlated with education suggesting that better educated women expected menopausal symptoms and so recognised them.

However, the results from Katete district demonstrated that 38 (76%) of the women were knowledgeable on menopause despite having low levels of education. The finding from Katete could be explained in terms of the social cultural transfer of knowledge among

Chewa people who regard menopause as a social cultural phenomenon. Similarly, the results from Nchelenge revealed that 46 (92%) of the respondents had knowledge of symptoms of menopause while 4 (8%) had no knowledge of symptoms of menopause. This shows a high level of knowledge in menopause among women of rural setting which can be attributed to cultural teaching of women among Bemba on their reproductive life. From Luanshya findings revealed that all the 50 (100%) women interviewed heard about menopause. From the 50 respondents, 34 (68%) were aware of the attainment of menopause through the cessation of menstruation while 4 (8%) of the respondents had to get confirmation from the doctor or had read about the symptoms in literature.

In Lusaka findings showed that all the 50 (100%) women interviewed had some knowledge on menopause. The results also signify that 18 (36%) of the respondents were educated and attained secondary education.

The results obtained from Luanshya, Lusaka, Katete, and Nchelenge districts revealed that all women had knowledge on menopause. The menopausal women were educated in menopausal issues either formally or informally by health care providers and village elders respectively. Rural women from Katete and Nchelenge obtained their knowledge from their cultural teachings from their elders in families and communities about life events in a woman such as menarche locally known as "chisungu" (onset of menses)as one grows older in life so they expect such occurrences to happen to them. While urban women from Luanshya and Lusaka got information from books and consulted medical personnel.

Mujahid et al. (2013) in their study on sources of knowledge about Menopause concluded that the most common source of information about Menopause among menopausal women was from (Literature) magazines; internet and consultations from medical doctors.

This is in line with the results obtained in this study which showed that 180 (90%) (Figure 10) respondents indicated that menopausal women could increase their knowledge on menopausal issues through health education from health care providers,

whilst the 1 (0.5%) said that their knowledge could improve through advice from traditional healers.

In a study on knowledge and attitude towards menopause among post menopausal women in Pakistan, Malik (2008) found that 90% of women had heard about menopause which is similar to the findings obtained in Zambia which showed that 180 (90%) of women had heard about menopause through the elders in the family and communities as information was passed on through culture (Figure 10).

5.2.3 SOCIAL-CULTURAL FACTORS ASSOCIATED WITH MENOPAUSE

The study aimed at assessing social-cultural factors impacting on menopause. Most of the respondents 128 (64%) (Figure 3) were of the view that menopause was a normal life process while 6 (3%) said that menopause brought problems such as social stigma and rejection among others whereas others consider it as a *"medical condition"* or treat it as a *disease, women perceive this period of their lives as a "sick" time; a time when they are "patients" waiting for "recovery."* One 1 (0.5%) respondent said that menopausal women are unclean because they believe that the 'dirty' (semen) after coitus remains in their "stomachs" (uterus) since they have stopped having their menses.

Similar finding were revealed in all the four areas studied. The respondents from Lusaka 46 (92%), Luanshya 43 (86%), Katete 40 (80%) and Nchelenge 48 (96%) indicated that menopause is a normal life process. This could be attributed to that the fact that most menopausal women that lived within the target population for this study did not have any cultural restrictions concerning menopause. This finding is similar to the findings from a study by Melby et al (2013) in a study in India on the relationship between culture and menopause which showed without exception that the socio/cultural organization of the course of life in specific geographical locations profoundly affects the meanings and experience of menopause. Factors hypothesized to play a role in the experience of menopause and quality of life during this period includes culturally-influenced behaviours such as diet, smoking and exercise. According to Melby (2013), cultural attitudes towards and expectations about menopause can heavily be influenced by medicalization, meanings assigned to menopause such as whether it is recognized as natural and normal, deviant or as illness. Women's roles, marital status, relationships with

husbands/partners and their attitudes toward symptoms of menopause, social support and the extended family social status, socio-economic status education career and religious beliefs were found to have an influence on menopause. Melby et al (2013) stated that many women may not seek medical assistance because they believe that menopause, like puberty, involves natural changes that are part of development and ageing.

A sample of 200 menopausal women had different views on the freedom to discuss menopausal issues from the four study sites the overall results showed that 93 (46.5%) had freedom to discuss while 107 (53.5%) had no freedom to discuss menopause. The findings from the three districts were; Lusaka 6 (12%) of the respondents were free to talk about menopause while the respondents in Luanshya 43 (86%) and Nchelenge 44 (88%) said that they were free to talk about menopause. However, none from Katete district stated that they had freedom to discuss menopause. This difference could be associated with the fact that the majority of the respondents from the Lusaka and Nchelenge towns regarded menopause as a taboo. This finding is related to the work of North American Menopause Association (2010) which indicated that menopause was linked to the concept of "evil," and this association could be traced back to the Victorian era (1837 to 1901) where link to sin was intimately tied to the cultural identity of womanhood. Women's social roles in the Victorian era, for example, were generally confined to childbearing and domestic roles. The perceived virtues of women at the time of passivity, nurturance and docility were explained by medical and biological processes.

This study showed 128 (64%) respondents stated that the community viewed menopause as a normal process while 8 (16%) stated that menopausal women were lazy (Figure 3). This finding contradicts the results of a study by Nosek et al. (2007) in California in the United States of America who indicated that menopausal women were stigmatized and he demonstrated that these women were also distressed. Nosek (2007) also found that the symptoms experienced by the menopausal women affected their ability to interact with their immediate world. It revealed complex interpersonal and social elements of symptom experience during the menopause transition.

On the question of work and menopause, there was a similar finding in the four sites studied which showed that menopausal women were able to work and provide resources

both for themselves and their families. In Lusaka, 46 (92%), Luanshya 50 (100%), Katete 45 (90%), and Nchelenge 48 (96%) were able to work and provide resources for the families and themselves. Overall picture was 194 (97%) of the respondents indicated that menopausal women were able to work and provide for their families while 6 (3%) indicated that they were not able to work and provide for their families due to body pains and generally ill health (Table 4). The findings imply that culture and tradition in Zambia dictated that women are the custodians of households and should ensure they provide for their homes. Furthermore, the majority of the respondents were widows 77 (38.5%) without spouses to help to work and provide resources for them and their families. This finding is contrary to a study conducted by Gardner (2007) in Netherlands where 200 women were interviewed and revealed that menopausal women had more bothersome symptoms and were less productive at work than the premenopausal women. However, from Gardner's study (2007), the physical symptoms associated with menopause did not affect their ability to work.

5.2.4 EXPERIENCES OF MENOPAUSE AMONG ZAMBIAN WOMEN

Questions on the effects of menopause among Zambian women were aimed at knowing what women in menopause experience in terms of physical, uro-genital, vasomotor, musculoskeletal, cognitive, gastrointestinal and central nervous system disorder. 89 (44.5%) of the respondents had experienced urination problems while 11 (55.5%) had no urination problems (Table5).The findings in Luanshya showed 25 (50%) of the respondents experienced frequent urination and 25 (50%) experienced involuntary urination. The results obtained in Luanshya were similar to the ones obtained in Katete and Nchelenge which both showed that 33 (66%) of the respondents experienced frequent urination and involuntary urination, whilst 17 (34%) did not experience any urination problems respectively. Lusaka findings were different from the other three sites in that the study revealed that 36 (72%) did not experience any urination problems while 14 (28%) experienced frequent micturition.This coincides with the works of Mushtaq (2011) in Srinagar city in India in his study of the psycho-physical changes of menopause and impact on family concluded that hot flashes were more commonly experienced by post-

menopausal women in comparison to other symptoms like fatigue, mood swings among others and they experienced decrease in sexuality as well.

Regarding vasomotor symptoms in Luanshya 30 (60%) of the respondents experienced night sweats and 27 (54%) experienced hot flashes. From Lusaka 4 (8%) of the respondents had hot flashes and 24 (48%) were bothered with night sweats. In Nchelenge, 42 (84%) were bothered with hot flashes and 40 (80%) were bothered with night sweats. Findings from Katete were that 47 (94%) of the menopausal women were bothered with hot flashes and 48 (96%) were bothered with night sweats. Katete, Nchelenge and Luanshya showed that most of the respondents had experienced hot flashes and night sweats while findings from Lusaka showed only 4 (8%) experienced hot flashes. Overall picture of the results was 120 (60%) were bothered with hot flashes, 112 (56%) were bothered with night sweats (Table 6).These results are similar to the findings of the study from Mustafa (2011) in India which revealed that most of the women experienced hot flashes. Similar results were found by Whiteman et al (2003) in Massachusetts in USA which indicated that 75% of women surveyed reported having hot flashes in the period between peri-menopause and post menopause. They stated that menopausal hot flashes are the most common menopausal symptoms experienced by women in the Western world. The study by Whiteman et al. (2003) investigated various life style factors, particularly smoking habits and Body Mass Index (BMI) of over 1000 women aged 40–60 years. Of these, 56% reported hot flashes. There was also a positive link between body mass index BMI and vasomotor symptoms. A high BMI was associated with an increased risk of moderate and severe hot flashes (Whiteman, 2003).

The majority of the respondents 132 (66%) (Figure 8) reported that their memories had been affected by menopause. From Luanshya, 34 (68%) of the respondents reported that they experienced loss of memory since attainment of menopause while 23 (46%) had sleeping problems. Lusaka showed that 25 (50%) had memory problems.The research results indicated in Lusaka out of 50 women interviewed 21 (42%) had difficulties in sleeping and 29 (58%) did not have any difficulties in sleeping. Most of the respondents 29 (58%) reported that their memory had been affected by menopause. They became too forgetful while 21 (42%) reported no effect on memory. Results obtained from all the

four sites showed that majority of the women had experienced loss of memory. Women in Nchelenge, Luanshya and Katete showed that less than half of the respondents experienced sleep problems except for Lusaka which had half of the respondents indicating that they had sleep problems. This coincides with a study by Hope (2009) and Greendale (2007), who led the study of 2,500 women on Effects of the menopause transition on cognitive performance in midlife women and found that levels of female hormones are the likely cause of memory difficulties just before menopause begins. Hope et al. (2009) in their longitudinal study on information about measured cognitive performance during the menopause transition in USA found that the levels of learning improved back to pre-menopausal levels during the postmenopausal stage after treatment and also indicated that 60% per cent of women stated that they had memory problems during the menopause transition.

Abdominal symptoms were reported by the respondents in Luanshya with 26 (52%) experiencing flatulence while 29 (58%) did not and 24 (48%) experienced bloating and 26 (52%) did not. Findings from Lusaka indicated that 20 (40%) of the women experienced flatulence while 30 (60%) did not. Somerespondents, 14 (38%) had bloating and 36 (72%) did not. In Nchelenge, 33 (66%) and 32 (64%) did not experience flatulence and bloating respectively while only 17 (34%) and 18 (36%) did experience flatulence and bloating respectively. In Katete, 21 (42%) of the respondents stated that they experienced flatulence while 29 (58%) did not and 22 (44%) stated that they experienced bloating while 28 (56%) did not.

Most of the respondents did not experience flatulence, while the results for Luanshya showed that at least half 26 (52%) of the respondents experienced flatulence.From the four sites, 86 (43%) of the respondents experienced flatulence and 114 (57%) did not (Table 7). 117 (58.5%) of the respondents experienced bloating while 83 (41.5%) did not (Table 7). The findings of thisresearch contrast the findings from a study done at the University of Colorado by Wolf (2010) in England on gastro intestinal symptoms associated with Menopause which indicated that gastrointestinal reflux disease, burping, irritable bowel syndrome and constipation were common features amongst women in menopause.

In Luanshya, 17 (34%) of the women indicated that they experienced sexual problems while 33 (66%) did not. In Lusaka, 20 (40%) of women reported that they experienced sexual problems while 30 (60%) did not experience any sexual problems. Majority of the respondents from Nchelenge reported that they experienced sexual problems 38 (76%), while the minority 12 (24%) had no sexual problems. The problems ranged from reduced sex desire, painful coitus due to vaginal dryness. In Katete district, 33 (66%) of them did not experience sexual problems since attainment of Menopause and 17 (34%) experienced some sexual problems. Luanshya, Lusaka and Katete districts showed that majority of the respondents did not experience any sexual problems while Nchelenge district showed more than half of the respondents 38 (76%) experienced sexual problems. Overall 61 (30.5%) of the respondents had sexual problems ranging from reduced libido, painful coitus due to vaginal dryness and 139 (69.5%) of the respondents had no sexual problems (Table 7). This coincide with findings from Dennerstein (2009) in Australia as quoted by Eden and Wylie (2009) in a study of quality of life and menopause who found that the most common sexual complaints occurring around the time of menopause onset are lack of sexual desire or libido, lack of sexual arousal and vaginal dryness.

Dennerstein (2009) also found that the hormone oestrogen also maintains vaginal pH and moisture levels, keeping the tissues lubricated and protected. Prolonged oestrogen deficiency, as occurs in menopause, results in atrophy, fibrosis and reduced blood flow to the uro-genital tract causing the symptoms of vaginal dryness, soreness and pain related to sexual intercourse (Dennerstein et al., 2009).

5.2.5 COPING STRATEGIES

Questions on Copying strategies were aimed at exploring ways in which Zambian women cope with menopausal symptoms. In this study, 84 (42%) of the women stated that they managed their mood swings by involving themselves in other activities like 'doing field work or gardening' whilst 7 (3.5%) managed their mood swings by crying, 83 (41.5%) said that they did nothing about the mood swings, 23 (11.5%) slept when they experienced the mood swings while 3 (1.5%) used herbal remedies to manage the mood swings (Table 8). This could be attributed to inadequate coping mechanisms to mood swings as menopausal care is not one of the services provided by the health sector.

Feinamann, (2011) in her study conducted in Oxford, England on how professional women cope with menopause also found that nearly half of women going through menopause had difficulty coping with symptoms at work.

However, on the question of copying with mood swing, the study showed that 84 (42%) of the womenmanaged their mood swing by involving themselves in other activities like gardening or going to the field, while 3 (1.5%) indicated that they managed their mood swing by taking some herbal remedies like aloe vera fello and belly nector (Table 8).

The findings from Katete showed that 33 (66%) of the women did nothing to cope with their mood swing, whilst 6 (12%) coped with mood swings by sleeping. For Luanshya, 28 (56%) of the women coped with mood swings by involving themselves in other activities like going to the field or gardening, whilst the 1 (2%) of the women coped with mood swings by crying. The results for Nchelenge showed that 22 (44%) of the women coped with their mood swings by involving themselves in other activities like gardening and sometimes they did nothing about it while 2 (4%) of the women coped with their mood swings by taking herbal remedies such as aloe vera fello and belly nectar (herbal medicine). As for Lusaka, the results showed that 23 (66%) coped with their mood swings by involving themselves in other activities like working in their fields, whilst 1 (2%) managed their mood swing by using African herbal remedies. The study findings for this study had similar results which showed that the women coped with their mood swings by involving themselves in other activities like going to the fields or gardening. This could be attributed to adequate information given to the women in Luanshya, Nchelenge and Lusaka on what to do to cope with mood swings. However, these results were different from the results obtained from Katete which showed that most of the women did nothing to manage their mood swing. This could be due to the fact that women in Katete had insufficient knowledge or information from health care providers on what to do to cope with mood swing.

About body fatigue, the study revealed that 64 (32%) of the womendid nothing to manage their body fatigue, whilst 8 (4%) managed their body fatigue through other means like gardening and visiting friends (Table 8).

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However, the results from Katete district, showed that 18 (36%) of the women coped well with their body fatigue by taking a bath whilst 2 (4%) by going to church. The results from Luanshya showed that 38% of the respondents indicated that they managed their body fatigue by taking a bath, whilst 5 (10 %) managed their body fatigue by sleeping and by going to church. Findings from Nchelenge showed that 18 (36%) of the women either slept or bathed to relieve themselves from fatigue, while 6 (12%) went to church. As for Lusaka, 26 (52%) of the women did nothing to cope with their body fatigue, whilst 1 (2%) copied with their body fatigue by going to church.

The findings from all the four districts, Katete, Luanshya, Nchelenge and Lusaka showed similar results in that the women indicated that they managed their body fatigue by going to Church. The findings in Katete 18 (36%) were similar to those of Luanshya19 (38%) and Nchelenge 18 (36%) which showed that the women managed their body fatigue by bathing. These results were different from those of Lusaka which showed that 26 (52%) of the women did nothing to relieve themselves of their body fatigue. This implies that women in Lusaka had insufficient knowledge on how to cope with fatigue.

On management of hot flashes experienced by menopausal women during the day and at night, the study revealed that 108 (54%) of the women managed hot flashes by taking a cold bath, whilst 3 (1.5%) managed their hot flashes by taking herbal remedies such as allovera fell and belly nectar (Table 8). Berkoff (2011), in his study in Canada on how diet could make women cope with menopausal problems among Canadian women, found that a low-fat, high-fruit, vegetable and whole grains diet help reduce hot flashes and night sweats. In addition, a significant finding was that women who lost 10 or more pounds or more than 10% of their body weight were significantly more likely to see their night sweats and hot flashes reduced or in some cases disappear than women who maintain their weight over the study period. This was associated with the theory that having more body fat causes the body to retain heat and losing some weight helps the bodies dissipate the heat more easily (Berkoff, 2011).

Bracy (2007), in his study which was done in England found that oestrogen was found to be the most effective treatment for hot flashes and also some blood pressure medications, anti-seizure medications, and antidepressants were all shown to improve hot flashes in

menopausal women. Bracy also found that flaxseed and flax seed oil play a role in decreasing hot flashes and had the added benefit of reducing joint and muscle pain for some women. Vitamin E, yam, phytoestrogens and black cohosh were all being used for many years to combat hot flashes. These findings on coping methods were not mentioned by the respondents in this study which is suggestive that women had little information on what to use to cope with menopause.

However, the findings from Katete district showed that 35 (70%) of the women coped with hot flashes experienced both at night and during the day by taking a cold bath, whilst 1 (2%) coped with hot flashes by taking African herbal remedies that is, aloe vera fello and belly nectar. The results for Luanshya showed that 23 (46%) of the respondents managed hot flashes by taking a bath, while 7 (14%) of the women managed their hot flashes by opening windows. The findings for Nchelenge showed that 35 (70 %) of the women coped with hot flashes by taking cold baths, while 4 (8%) did nothing. As for the Lusaka findings, 24 (48%) of the women coped with hot flashes by opening windows, while 11 (22%) of the women indicated that they did nothing to manage hot flashes.

The findings from Katete, Luanshya and Nchelenge districts were similar and showed that the women managed their hot flashes by taking a cold bath. These results were different from the results for Lusaka which showed that 24 (48%) of the women managed their hot flashes by opening windows.

On the question about whether the menopausal women used any remedies for most of the problems they experienced, 108 (54%) of the women indicated that they did not use any remedies for most of their menopausal problems, while 81 (40.5%) stated that they did use some remedies for the menopausal problems they experienced such as hot flashes and night sweats among others (Table 8).

The Zambian women do not use any remedies probably due to the fact that there is no specific care being offered by the health sector on menopausal women and that there is less or no information on the management of menopausal symptoms.

However, the findings from Katete district showed that 49 (98%) of the women used some remedies such as Paracetamol for most the problems they experienced, and 1 (2%)

stated did not. The findings from Luanshya showed that 42 (84%) of the respondents had not used any remedies, while 8 (16%) used some remedies. The findings from Nchelenge showed that 37 (74%) of the women had not used any remedies to manage menopausal problems while 13 (26%) used remedies. Lusaka findings showed that 39 (78%) of the women did not use any remedies whilst 11 (22%) indicated that they used some remedies aloe vera fell and belly nectar.

The findings from Luanshya, Nchelenge and Lusaka had similar results which showed that most of the women did not use any remedies for most of the problems they experienced. This could be due to inadequate knowledge or information from health care providers among women in Luanshya, Lusaka and Nchelenge on what remedies to use or where to go to seek help. On the other hand, Katete findings were different from the rest in that most of the women did use some remedies.

About the type of remedies the menopausal women used for most of the problems that they experienced, the study showed that 60 (30%) of the women had used hospital remedy like Paracetamol for general body pains and antihypertensive for raised blood pressure (Table 8). Darsarehet al (2012) also discovered that some hospital remedies like aroma therapy massage can help relieve menopausal symptoms. In his randomized placebo controlled study on menopausal symptoms in Asian societies, he concluded that both aromatherapy massage and regular massage treatments reduced menopausal symptoms. However, aromatherapy massage may be more effective and was being practiced among Asian women. Unfortunately these coping options are not readily available in Zambia

However, the findings from Katete showed that 37 (74%) of the women used hospital remedies like Paracetamol for pain relief for most of the problems they faced, whilst 1 (2%) said that they did nothing about their problems. The findings from Luanshya showed that 36 (72%) of the respondents did not use any type of remedies, while 3 (6%) used African herbs such as allovera fello and belly nectar. The findings from Nchelenge showed that 31 (62%) of women did nothing or used no remedies to manage their menopausal problems while 4 (8%) said that they used prayers and 4 (8%) of the respondents said that they used African herbal remedies. As for Lusaka, 33 (66%) of the

women did nothing about their problems, while 3 (6%) used herbal remedies for most of their problems.

The findings from Luanshya, Nchelenge and Lusaka had similar results which showed that most of the women did not use any type of remedies for most of the problems they experienced. This could be attributed to inadequate information or knowledge among women in Luanshya, Nchelenge and Lusaka on what remedies to use or where to seek help for most of the problems that they experienced. These results were different from the results obtained from Katete which showed that most of the women used hospital remedies like paracetamol for general body pains and antihypertensive drugs for raised blood pressure. This implies that Health workers in Katete are active in giving health education among the women in menopause.

5.4 CONCLUSION

The purpose of the study was to explore effects of menopause among Zambian women. A descriptive quantitative non-interventional study design was used in this study. The study revealed pertinent information regarding the extent of effects of menopause among women. This study revealed that 144 (72%) of the respondents indicated that they had knowledge about menopause and its treatment. The respondents' sources of knowledge on menopause were magazines, books and internet. The study findings revealed that Menopausal women experienced a variety of effects. Most, 119 (59%) said that it affected their social life because of their moods, general body pains, urination problems and engagements in activities of daily living. Majority 120 (60%) of the respondents said that they were bothered by hot flashes and did not know how to manage them. Fifty eight percent 116 (58%) of the respondents said that for the many menopausal symptoms they suffered, they did not use any remedies.

Three quarters, 149 (75%) of the respondents said that services should be provided in the health care facilities because they needed to learn more on menopausal symptoms from health care providers and get treated. Some respondents51 (25.5%) stated that menopausal health services should not be provided in the health care facilities because they considered menopause to be a normal life process. This study also revealed that 180

(90%) of the respondents were willing to gain more information on menopause from the health care providers. Most 133 (68%) of the women said that menopausal problems needed medical treatment such as hormonal therapy. The cross tabulations between knowledge on menopause and copying strategies gave a P-value of 0.003. The objectives of the study were achieved and the researchers rejected the null hypothesis stating that "there is no relationship between knowledge on menopause and copying strategies."

The study has shown that Zambian women experienced and suffered from menopausal symptoms silently and most of them did not know whether there were any remedies available from the health care facilities.

This study involved a sample of 200 respondents from four districts of Zambia; Lusaka, Luanshya, Katete and Nchelenge and therefore the results of the study should be generalized with caution. Nevertheless, the results obtained from the study gave a description of the effects of menopause among women in Zambia.

5.3 SIGNIFICANCE OF THE STUDY FINDINGS TO THE FOUR MAJOR FACULTIES OF NURSING

The implications of the study have been discussed under four (4) main domains of Nursing which are related to the topic under the headings Nursing Practice, Nursing Education, Nursing Administration and Nursing Research.

5.3.1 SIGNIFICANCE TO NURSING PRACTICE

The study showed that majority of the respondents experienced a number of problems on Menopause like general body pains 116 (58%), mood swing 167 (83.5%) and abdominal discomfort 12 (6%) among others. Although majority 180 (90%) of the respondents said that they were knowledgeable about Menopause and its effects, much of their knowledge was based on traditional sources. In addition, most of the comments from the respondents indicated the need for more knowledge on menopause from health workers in form of health education pamphlets. This shows that there is need for health workers to strengthen health education at the health facilities so as to educate the women on

menopause, its effects and that the services are available at the health facility. This will help the Menopausal women make an informed choice.

5.3.2 SIGNIFICANCE TO NURSING EDUCATION

The study indicated that 180 (90%) of the respondents were knowledgeable about menopause while the 20 (10%) were not knowledgeable. Although the results of the study show that most of the women were knowledgeable on menopause, most of their knowledge is based on traditional sources. Therefore, there is need for Nurse Educators to continue putting more emphasis on menopause during their course of training so that they can adequately teach women on the subject. Nurses should also be taught skills to enable them screen menopausal women and advise them adequately.

5.3.3 SIGNIFICANCE TO NURSING ADMINISTRATION

The study showed that majority 180 (90%) of the women in the community needed more information on menopause through health education. The nurse managers should be oriented on the topic of menopause as it is not part of the health education system. Nurse Managers should supervise nurses in the health facilities to ensure that they provide necessary health education to the women on menopause as they come to seek health services at the health facility. The Nurse Managers should also ensure that menopausal women are encouraged to seek health services whenever they are experiencing menopausal problems. There is also a need for Nurse Managers to make recommendations to policy makers at the Ministry of Health to include menopausal services in the Health care package and to train nurses on management of menopausal problems.

5.3.4 SIGNIFICANCE TO NURSING RESEARCH

Menopausal effects in Zambia are a major public health concern which needs evidence based policies, practices and interventions to halt it. Women in menopause suffer in silence from the menopausal symptoms while others do not even know whether they should seek care for their symptoms or not. Nurse researchers should consider carrying out further researches on areas that were not fully described by this study such as factors

contributing to severity of menopausal symptoms, sources of knowledge on menopause issues by women in premenopausal and perimenopausal periods. Nurse researchers should also consider carrying out researches on knowledge of health workers on menopause and also on how health workers manage the menopausal symptoms of the clients.

5.5.0 RECOMMENDATIONS

Based on the findings of this study, the under-listed recommendations have been made to appropriate institutions/stakeholders:

5.5. 1. MINISTRY OF HEALTH

The Ministry of Health should introduce menopausal health services in the Basic Health Care package. This will enable health workers provide the necessary advice to clients with this complaint.The Ministry of Health should introduce menopausal health services in the Basic Health care package which will enable health workers to provide necessary care to clients with this complaint.The Ministry should integrate the care of menopausal women in the reproductive health policy which will enable the health care providers to identify women in menopause with symptoms and provide treatment. The Ministry of health should also carry out researches on menopause on a large scale so that results can be generalized and in turn help to have a deeper insight in menopausal issues.

5.5.2 DISTRICT HEALTH OFFICE

The District Health Office Management through the health centers should orient the Neighbourhood committees in Lusaka, Luanshya, Katete and Nchelenge in sensitizing the community on menopause. Health facilities should orient the clients and patients on menopause. Also, a system should be devised on monitoring and evaluating menopausal health care services. The District Health Office through the health facilities should keep accurate records of the care given to menopausal symptoms in order to show the magnitude of the cases and in turn improve the care. The Health Information Management system should include a menopausal component on the reporting forms.

5.5.3 GENERAL NURSING COUNCIL OF ZAMBIA

The General Nursing Council of Zambia should review the curriculum so that students can acquire the skills to enable them screen menopausal women in health facilities.

5.5.4 RECOMMENDATIONS FOR FURTHER STUDY

We recommend that another study on effects of menopause among Zambian women be conducted involving a bigger sample size to enable generalization of findings.For the future research, the level of knowledge on menopause of the women should be measured.

5.6 DISSEMINATION OF FINDINGS

Dissemination of findings entails the measures that would be undertaken to communicate the findings from the study to others (Polit and Hungler, 2001).

The researchers intend to disseminate the findings by making executive summaries of the study document and send to Ministry of Health, Provincial Health Offices for Lusaka, Ndola, Chipata and Mansa and to Council of Churches; to Makeni Central Seventh Day Church, Reformed Church of Zambia in Katete, Luanshya town congregation's United Church of Zambia and Kashikishi Main Seventh Day Church in Nchelenge (sites of pilot study).

Copies of the research report will be distributed to the Department of Nursing Sciences, University of Zambia Medical library and Tropical Health education Trust (THET). More copies of written reports will be distributed to Seventh Day Adventist Church Makeni West and Roman Catholic Church St Anthony Congregation of Makeni in Lusaka; UCZ town congregation in Luanshya and Roman Catholic Immaculate parish Congregation in Luanshya; RCZ's Greya community congregation and St Martins Roman Catholic Church in Katete and St Paul's Roman Catholic Church in Kashikishi and Kashikishi Main SDA Church in Nchelenge (the sites for the main study).

5.7 LIMITATIONS OF THE STUDY

The major limitations for this study were:

- Time was very limited for this study therefore it could not be done on a large scale.
- Funding for the study was inadequate thus the study could not be conducted on a large scale.
- The study was conducted in selected districts of Zambia. Therefore generalization of findings should be done with caution.
- The study used self-administered questionnaires to collect data. Participants could have falsified or distorted sensitive information in order to please the researcher.

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ANNEX1

THE UNIVERSITY OF ZAMBIA

SCHOOL OF MEDICINE

DEPARTMENT OF NURSING SCIENCES

STRUCTURED INTERVIEW SCHEDULE

TOPIC: EFFECTS OF MENOPAUSE AMONG ZAMBIAN WOMEN

PROVINCE:.....

DISTRICT: .....

DATE OF INTERVIEW: .....

PLACE OF INTERVIEW:.....

NAME OF INTERVIEWER: .....

QUESTIONAIRE NO: .....

INSTRUCTIONS TO THE INTERVIEWEE

The questionnaire has five (6) sections A, B, C, D, E and F. Answer all sections.

Please tick in the space(s) ☐ and complete the blanks appropriately.

I thank you in advance for your anticipated understanding and cooperation.

SECTION A

DERMOGRAPHIC DATA

For official use

1. How old are you? (Age on last birthday)

.....

2. Marital status

a) Married ☐

b) Single ☐

c) Widowed ☐

d) Divorced ☐

3. How many children do you have?

.....

4. Level of education

a) No formal education ☐

b) Grade 1-7 ☐

c) Grade 8-12 ☐

d) Standard 1-6 ☐

e) College / University ☐

5. What Tribe are you? .....

6. Which church do you go to? .....

7. What do you do for your living?

a) Formal employment ☐

b) Housewife ☐

c) Farmer ☐

d) Business woman ☐

e) Do nothing

SECTION B

KNOWLEDGE

For official us

8. Do you know about menopause?

Yes ☐

No ☐

9. At what age did you attain menopause?

.....

10. How did you know you had reached Menopause?

.....

11. What has been your experience with menopause?

.....

.....

SECTION C

CULTURAL FACTORS ASSOCIATED WITH MENOPAUSE

12. What is your cultural view of Menopause?

a) It brings problems ☐

b) It is Normal life process ☐

c) Menopausal women are unclean ☐

d) Menopausal women should not participate in social activities ☐

13. Are there things that Menopausal women are not expected to do in your culture?

Yes ☐

No ☐

14. If yes to question 12, mention some of the things

.....

.....

15. Is a woman free to talk about menopause in the community?

a) Yes ☐

b) No ☐

SECTION D

SOCIAL FACTORS ASSOCIATED WITH MENOPAUSE

16. How does your community view Menopausal women?

a) Lazy and unable to provide resourcesto the family ☐

b) Need culturally special care ☐

c) Normal people as everyone ☐

d) Hygienically unclean people ☐

17. Has your social life been affected in any way due to menopause?

Yes ☐

No ☐

18. Has menopause affected your relationships with others?

Yes ☐

No ☐

19. If yes to question 18, explain how it affects relationships

.....

20. Are menopausal women able to work and provide resources for their families?

Yes ☐

No ☐

21. If no to question 19, how do they fail to provide?

.....

.....

SECTION E

PROBLEMS EXPERIENCED BY MENOPAUSAL WOMEN IN ZAMBIA

22. Have you ever experienced urination problems since you attained Menopause like frequent urination and involuntary urination?

Yes ☐

No ☐

23. How has been your performance in day to day activities since you attained Menopause?

a) No significant change in activity ☐

b) Some reduction in performance in activity ☐

24. To what extent have the following problems troubled you?

Hot flashes –

a) Not bothered ☐

b) Bothered ☐

Night sweats – ☐

For official use

a) Not bothered

b) Bothered

Drying skin –

a) Not bothered

b) Bothered

Aching in muscles and joints –

a) Not bothered

b) Bothered

25. How has been your life since you attained Menopause?

a) Tough and full of problems

b) Normal as just before

26. Have you experienced any of the following changes in your body image since you attained Menopause?

a. Weight gain

Yes

No

b. Decrease in stamina

Yes

No

c. Increased facial hair

Yes

No

d. Changes in appearance, texture or tone of your skin

Yes

No

For official

27. Has your memory been affected by menopause?

Yes

No

28. If yes to question 27, how has it been affected?

.....

29. Have you experienced the following abdominal discomforts during Menopause?

a. Flatulence

Yes

No

b. Feeling bloated

Yes

No

30. Do you experience any difficulties in sleeping since you attained menopause?

Yes

No

31. Have you had any sexual problems?

Yes

No

32. If yes to question 31, what are they?

.....

.....

33. Should menopausal health services be provided with other health care services?

Yes ☐

No ☐

34. Give reasons for answer in question33.....

.....

35. How can menopausal women increase knowledge on menopausal issues?

a) Through health education from health care providers ☐

b) Advice from traditional healers ☐

c) Peer education ☐

d) Any other specify: .....

36. What care should be given to the menopausal women experiencing menopausal symptoms?

a) Mixed diet ☐

b) Hormonal therapy ☐

c) Traditional medicine ☐

d) Prayers ☐

37. Do menopausal problems need medical treatment?

Yes ☐

No ☐

I am not sure ☐

SECTION F

COPING STRATEGIES USED BY WOMEN IN MENOPAUSE

38. How do you manage your mood swings in menopause?

a) Sleeping ☐

b) Herbal remedies ☐

c) Involved in other activities ☐

d) I do nothing ☐

e) Crying ☐

39. How have you managed your body fatigue?

a) Bathing ☐

b) Going to church ☐

c) Sleeping ☐

d) Do nothing ☐

e) Any other specify.....

40. How have you managed hot flashes experienced both at night and during the day?

a) Herbal remedies ☐

b) Cold bath ☐

c) Opening windows ☐

d) Do nothing ☐

41. Have you used any remedies for most of the problems you have experienced in menopause?

Yes ☐

No ☐

42. What are those remedies?

For official use

a) Herbal ☐

b) Hospital ☐

c) Prayers ☐

d) Do nothing about it ☐

e) Any other specify.....

END OF INTERVIEW THANK YOU FOR YOUR PARTICIPATION

Any Comments.....

.....

.....

ANNEX II

The University of Zambia Ridgeway Campus,
School of Medicine,
Department of Nursing Sciences,
P. O. Box 50110,
Ridgeway,
LUSAKA

The Chairperson

Copperbelt Province Council of Churches

Zambia.

U.F.S. The Head of Department,

Department of Nursing Sciences,

P. O. Box 50110,

LUSAKA.

Dear Sir/Madam,

RE: RESEARCH UNDERTAKING IN LUANSHYA DISTRICT

I write to introduce **Shilengwe Charity** who is a 5th year student at the University of Zambia Ridgeway Campus in the School of Medicine Department of Nursing Sciences, pursuing a Bachelor of Science Degree in Nursing programme

In partial fulfilment for the award of the Bachelor of Science Degree in Nursing, the student is required to undertake a research study during their final year of training in their area of interest. The research title is "**Effects of menopause among Zambian women.**" The research will be conducted from two Churches. The target population will be all menopausal women who are 55 years and above. The student intends to collect data from 8th October to 2nd November, 2012.

I therefore request for permission to allow the student to interview some of the women from the selected churches.

Thanking you in anticipation,

Yours faithfully,

M. Maimbolwa (Assistant Dean)

The University of Zambia Ridgeway Campus,

School of Medicine,
Department of Nursing Sciences,
P. O. Box 50110,
Ridgeway,
LUSAKA.

The Chairperson

Lusaka Province Council of Churches

Zambia.

U.F.S. The Head of Department,

Department of Nursing Sciences,

P. O. Box 50110,

LUSAKA.

Dear Sir/Madam,

RE: RESEARCH UNDERTAKING IN LUSAKA DISTRICT

I write to introduce **Fungwe Bridget** who is a 5th year student at the University of Zambia Ridgeway Campus in the School of Medicine Department of Nursing Sciences, pursuing a Bachelor of Science Degree in nursing programme

In partial fulfilment for the award of the Bachelor of Science Degree in Nursing, the student is required to undertake a research study during their final year of training in their area of interest. The research title is "**Effects of menopause among Zambian women.**" The research will be conducted from two Churches. The target population will be all menopausal women who are 55 years and above. The student intends to collect data from 8th October to 2nd November, 2012.

I therefore request for permission to allow the student to interview some of the women from the selected churches.

Thanking you in anticipation,

Yours faithfully,

M. Maimbolwa (Assistant Dean)

The University of Zambia Ridgeway Campus,
School of Medicine,
Department of Nursing Sciences,
P. O. Box 50110,
Ridgeway,
LUSAKA

The Chairperson

Eastern Province Council of Churches

Zambia.

U.F.S. The Head of Department,

Department of Nursing Sciences,

P. O. Box 50110,

LUSAKA.

Dear Sir/Madam,

RE: RESEARCH UNDERTAKING IN LUANSHYA DISTRICT

I write to introduce **Tembo Victoria** who is a 5th year student at the University of Zambia Ridgeway Campus in the School of Medicine Department of Nursing Sciences, pursuing a Bachelor of Science Degree in nursing programme

In partial fulfilment for the award of the Bachelor of Science Degree in Nursing, the student is required to undertake a research study during their final year of training in their area of interest. The research title is "**Effects of menopause among Zambian women.**" The research will be conducted from two Churches. The target population will be all menopausal women who are 55 years and above. The student intends to collect data from 8th October to 2nd November, 2012.

I therefore request for permission to allow the student to interview some of the women from the selected churches.

Thanking you in anticipation,

Yours faithfully,

M. Maimbolwa (Assistant Dean)

The University of Zambia Ridgeway Campus,
School of Medicine,
Department of Nursing Sciences,
P. O. Box 50110,
Ridgeway,
LUSAKA

The Chairperson

Luapula Province Council of Churches

Zambia.

U.F.S. The Head of Department,

Department of Nursing Sciences,

P. O. Box 50110,

LUSAKA.

Dear Sir/Madam,

RE: RESEARCH UNDERTAKING IN NCHELENGE DISTRICT

I write to introduce **Chibuye Clifford** who is a 5th year student at the University of Zambia Ridgeway Campus in the School of Medicine Department of Nursing Sciences, pursuing a Bachelor of Science Degree in nursing programme

In partial fulfilment for the award of the Bachelor of Science Degree in Nursing, the student is required to undertake a research study during their final year of training in their area of interest. The research title is **"Effects of menopause among Zambian women."** The research will be conducted from two Churches. The target population will be all menopausal women who are 55 years and above. The student intends to collect data from 8th October to 2nd November, 2012.

I therefore request for permission to allow the student to interview some of the women from the selected churches.

Thanking you in anticipation,

Yours faithfully,

M. Maimbolwa (Assistant Dean)

ANNEX IV

Consent form

Dear respondent

I am a Bachelor of Science Nursing student at the University of Zambia conducting research on the Effects of Menopause among Zambian Women. The research is aimed at identifying the gaps in knowledge and management of Menopausal effects. All responses given will be treated as confidential.

Name.....

Sign

.....

Name.....

Witness.....

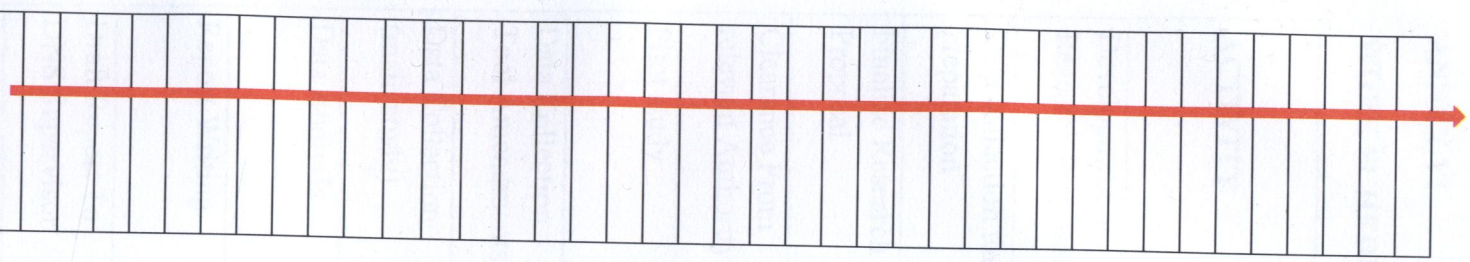
ANNEX V: GHANNT CHART SHOWING VARIOUS TASKS TO BE UNDERTAKEN AND THE TIME REQUIRED FOR EACH TASK TO BE PERFORMED FROM JUNE 2012 TO APRIL 2013.

Months		JUNE				JULY				AUGUST				SEPT				OCT				NOV				DEC				JAN				FEB				MARCH				APRIL	
No of weeks per month		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
Tasks to be performed	**Person responsible**																																										
Development of research proposal	Researcher and supervisor																																										
Finalizing research proposal	Researcher																																										
Data collection Tool	Researcher																																										
Clearance from relevant authority	Researcher																																										
Pilot study	Researcher.																																										

GANNT CHART SHOWING **CONT…**

Months		JUNE				JULY				AUGUST				SEPTEMBER				OCT				NOV				DEC				JAN				FEB				MARCH				APRIL		
No of weeks per month		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3
Data Collection Tool Amendments	Researcher																																											
Data collection	Researcher																																											
Data Analysis	Researcher																																											
Report writing	Researcher																																											
Draft report to DNS Supervisor	Researcher																																											
Finalising the report	Researcher																																											
Dissemination of findings	Researcher																																											

Monitoring and Evaluation	Researcher



ANNEX VI

WORK SCHEDULE /PLAN

ACTIVITY	TIME FRAME		RESPONSIBLE PERSON
	DATES	DURATION	
Development of Research Proposal	20/06/2012 to 28/09/2012.	76 days	Researchers & Supervisor.
Data collection tool preparation	10/09/2012 to 13/09/2012.	4 days	Researchers
Finalize Research Proposal	14/09/2012 to 21/09/2012	5 days	Researchers
Clearance From relevant Authority.	24/09/2012 to 28/09/2012	5 days	Researchers
Pilot study	01/10/2012 to 02/10/2012	2 days	Researchers
Data Collection Tool Amendments	03/10/2012 to 04/10/2012	2 days	Researchers
Data Collection (main study)	08/10/2012 to 02/11/2012	20 days	Researchers
Data Analysis	12/11/2012 to 10/12/2012	21days	Researchers
Report Writing	12/12/2012 to 01/02/2013	36 days	Researchers
Draft Report To DNS Supervisor	04/02/2013 to 20/02/2013	14 days	Researchers
Finalise Report	21/02/2013 to 01/03/2013	7 days	Researchers
Publication of Results	04/03/2013 to 11/03/2013	7 days	Researcher

ANNEX VII

BUDGET

Item	Unit Cost	Quantity	Total Cost
STATIONARY			
Note Books	5000	4	20,000
Reams of Paper	30 000	14	420,000
Pens	60,000	1 x50	60,000
Erasers	1,500	8	12,000
Tip-Ex	12000	4	48,000
Stapler	15,000	4	60,000
Perforator	25,000	4	100,000
Staples	5000	4	20,000
Box File	30,000	4	120,000
Folder Clips	1000	12	15,000
Small Folder	2,000	12	24,000
Field Bag	150,000	4	600,000
Flash Disk	100,000	4	400,000
SUBTOTAL			**K2,045,000**
SECRETARIAL MATERIAL			
Research Proposal typing, printing and binding	5,000	1x110pages	550,000
Research Proposal photocopying. Binding	250 100,000	7x110 7	192,500 700,000
Questionnaire printing	2,000	2x9pages	36,000
Photocopying of Questionnaire	250	9x210	472,500

Research Report writing	3,000x150pages	6	2,700,000
Binding of Final Research Documents	100,000	7	700,000
SUBTOTAL			**K5,351,000**
HUMAN RESOURCE EXPENSES			
Transport during Pilot Study	30,000	4x 2 days	240,000
Lunch Allowance during Pilot Study	50,000	4x2 days	400,000
Transport during Main Study	20,000	4x21	1,680,000
Lunch Allowance for researcher	50,000	4x21 days	4,200,000
Refreshments for respondents	15,000	210	3,150,000
SUBTOTAL			**K9,670,000**
INFORMATION DESSEMINATION			
Refreshments for council of churches leaders.	450,000	1x4	1,800,000
SUBTOTAL			K1,800,000
TOTAL			**K18,866,000**
CONTINGENCY 10%			**K1,886,600**
GRAND TOTAL			**K20,752,600**

ANNEX VIII: BUDGET JUSTIFICATION

This research proposal budget has taken into consideration the aspects of stationary, human resource expenses, secretarial services and contingency.

Stationary

Stationary will be needed for the researchers to be able to carry out this research successfully. For instance, reams of paper will be needed for the printing of the research proposal, formulation, amendments and production of pilot study questionnaires, questionnaires for the main study. The note books will be needed for record keeping during data collection and Analysis. Flash Disks will be needed for storage of vital information like the compilation of data collected and documents such as questionnaires while the other one will be used as back up. To ensure confidentiality and safety of information collected, a bag will be needed with a zipper which can be secured.

Human Resource Expenses

In order to enable the researcher move from point of residence to points where data will be collected during pilot study and final collection of data, expenses for public transport will be incurred to reach those areas. The researcher will also need to have money for lunch-break at the current government rate, and refreshments for respondents to maintain uniformity in the research process.

Information Dissemination

At the end of the research, the findings will need to be presented to stakeholders that include the Council of churches leaders, respective church overseers and the District Health Officer in the area.

Contingency Fund

This is 10 percent of the total budget which has been added to cover for unforeseen extra costs and to cushion inflation that might occur in the due course of the exercise.