Rural women's perspectives of cardiovascular diseases: A study of Gwanda South Rural District, Zimbabwe

By

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DECLARATION

I, Leoba Nyathi, hereby declare that this thesis titled "**Rural women's perspectives of cardiovascular diseases: A study of Gwanda South Rural District, Zimbabwe"** for a Doctor of Philosophy in Gender Studies, submitted to the Institute for Gender and Youth Studies at the University of Venda, has not been submitted previously for any degree at this or another university. It is original in design and in execution, and all reference material contained therein have been duly acknowledged.

Signature ……**Date** ……

Nyathi L

DEDICATION

I would like to dedicate this study to my mother Salume Nyathi for her unwavering support and love. She has been the pillar of my strength with her unconditional love and sacrifice, I am forever grateful MmaGobadu. May God continue to bless her and grant her more years to live and witness His grace.

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ABSTRACT

Historically, the cardiovascular disease (CVD) has internationally been viewed as a man's disease. This is witnessed by the high number of males who have fallen victim to this scourge. However, with rapid changes in today's societies, the disease has increasingly become a public health concern among women also. This study aimed to explore rural women's perspectives of CVD in Gwanda South Rural District. The study was guided by a feminist perspective where theories of gender such as social construction feminism, intersectionality and standpoint theory, were employed as a theoretical framework. In this process, the research endeavoured to unearth some contradictions inherent in the manner in which women view CVD. The population of the study comprised of females aged 21-60 years residing in Gwanda South Rural District of Zimbabwe. An exploratory case study design was adopted and this guided the qualitative data collection and analysis. Purposeful sampling technique was used to select 16 participants for semi-structured interviews and six participants for focus group discussions. Data were analysed using thematic analysis which is an essential tool for qualitative data analysis. Data were presented and discussed as themes and subthemes. The concepts of credibility, transferability, dependability and confirmability were used to describe and ensure various aspects of trustworthiness. Ethical considerations like informed consent, confidentiality and anonymity and no harm to participants were ensured. The following seven themes were derived from the study; women's knowledge of CVD, causes of CVD, prevention of CVD, perceived effects of CVD, difference in experiences of CVD, assistance of women with CVD and management of CVD. Findings revealed that women had limited knowledge of most CVDs but were familiar with hypertension and stroke. Various symptoms of CVD were identified. It was concluded that rural women do not have adequate knowledge of CVDs. A lot should be done by the government and other stakeholders to ameliorate cardiovascular health in rural women.

Key words: cardiovascular diseases, gender roles, health, knowledge, perspectives, risk factors, rural women.

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ACRONYMS

BMI- Body Mass Index

BP- Blood Pressure

CAD-Coronary Artery Disease

CHD- Coronary Heart Disease

CVD- Cardiovascular Disease

DALYs- Disability Adjusted Life Years

DASH- Dietary Approaches to Stop Hypertension

GSRD- Gwanda South Rural District

HIV- Human Immuno-Deficiency Virus

IHD- Ischemic Heart Disease

MDG- Millennium Development Goals

MWIA- Medical Women's International Association

NCDs- Non Communicable Diseases

NGO- Non-governmental Organisation

SDGs- Sustainable Development Goals

SPSS- Statistical Package for Social Sciences

SSA- Sub-Saharan Africa

TA- Thematic Analysis

TB- Tuberculosis

UN- United Nations

US- United States

USAID- United Stated Agency for International Development

WHO- World Health Organisation

CHAPTER 1

OVERVIEW OF THE STUDY

1.1 Introduction

Women's health is a critical subject in Public Health globally. This is because the global burden of disease in women has changed significantly over the past decade. Thus, in order to give high-quality health care, governments need to adopt a gender point of view based on the physical differences of men and women together with other social and cultural factors. The biological, social and environmental factors interact and affect the health of women. Over the years, an effort has been made by feminists to incorporate gender into theories of health so as to assist health professionals understand gender implications on prevention and treatment as well as motivating behavioural change. This is attributed to the fact that there are conditions that only women experience hence these will potentially negatively impact women's wellbeing. Some health challenges affect both women and men, but have a greater or different impact on women and so require responses that are tailored specifically to women's needs.

This section gives an elaborate overview of the global, regional and local trends of cardiovascular diseases (CVD) and how these have developed into a challenge in women. The problem statement, aim, specific objectives and significance of the study, as well as definitions of the key terms, are also provided for in this chapter. The chapter ends with a brief summary.

1.2 Background to the study

Currently, the greatest burden of death and disability among women is attributed to non-communicable diseases (NCDs), most notably cardiovascular disease (CVD), cancers, respiratory diseases, diabetes, dementia, depression and musculoskeletal disorders (Peters, Woodward, Jha, Kennedy and Norton, 2016). The CVD is a group of disorders that involve the heart or blood vessels or both. They include coronary heart disease CHD (heart attacks), cerebrovascular disease, raised blood pressure (hypertension), peripheral artery disease, rheumatic heart disease, congenital heart disease, and heart failure (World Heart Federation,

2017). Globally, mortality from CVD is approximately 17, 5 million annually, which is an estimated 31% of all deaths worldwide. 75% of CVD deaths occur in low-income and middle-income countries and 80% of all CVD deaths are due to heart attacks and strokes (World Health Organisation [WHO], 2017). WHO (2015) elaborates that CVDs are influenced by factors that include ageing, rapid unplanned urbanisation, and the globalisation of unhealthy lifestyles. Such circumstances have led to people being exposed to unhealthy behaviour such as tobacco use, excessive use of alcohol, eating foods containing too much salt and inadequate physical activity. These lifestyles are largely modifiable; hence, it is essential for institutions to know their evolution and trends in different communities and population groups. Better access to medical care for high blood pressure, high blood cholesterol and other conditions that raise the risk for heart disease and stroke can save a lot of lives (Tedesco, garciDi Giuseppe, Napolitano and Angelillo, 2015).

While women have lower mortality rates than men (Annandale, 2014), they also experience greater morbidity and are over-represented in health statisticste (White, 2016). This has given rise to the notion that “men die quicker but women are sicker” (Luy and Minagawa, 2014). This is not withstanding recent figures that show that the gender gap is closing. In addition to overall mortality and morbidity, certain health and wellbeing issues are more commonly associated with one gender. For example, dementia, depression and arthritis are more common in women, while men are more prone to lung cancer, cardiovascular disease (CVD) and suicide (Broom, 2012). The popular biomedical interpretation argues that variations in health and lifespan can be accounted for by inborn biological differences between men and women. However, the sociological interpretation argues that variations in health are as a result of social, cultural and political facets that affect women and men differently.

A decline of deaths from CVD in high-income countries has been noted (Mendis, 2011). On the other hand, these deaths have increased at an astonishingly fast rate in low- and middle-income countries (LMIC), as health and environmental conditions gradually change, most future increases in CVD mortality will occur in developing countries (Beaglehole and Bonita, 2008). However, even though deaths have decreased in high income countries, CVD remains the leading

cause of death in the United States accounting for one in every three female deaths (Mozaffarian, 2015; Garcia, Mulvagh, Merz, Buring, and Manson, 2016). The Australian Bureau of Statistics (2006) states that, in other high-income countries like Australia, women are four times likely to die of heart disease than breast cancer; on average it kills over 200 women per week and 30 women each day.

Ohira and Iso (2013) state that compared with Western countries, Central Asian countries have the highest age-adjusted mortality from CVD, followed by West Asian, South Asian, and South East Asian countries. Asian countries have higher stroke mortality and morbidity than of coronary heart disease (CHD), while Western countries have lower stroke mortality and morbidity than of CHD (Ueshima, 2014). Gupta (2013) reported that in India, two million out of ten million deaths are as a result of CVD, and 40 percent of these deaths are women. CVD are the major cause of premature death in urban and rural states of Indian amongst women (Gupta, 2013).

Historically, the number of epidemiological reports from Africa have been low, with a predominance of projected estimates used to characterize the pattern of cardiovascular risk and disease (Keates *et al.,* 2017). According to Zhou, Oktedalen, Chisango, and Stray-Pedersen, (2016), the few manuscripts available on CVD suggest that there are uncommon in sub-Saharan Africa (SSA). However, Cappucio and Miller (2016) state that CVD deaths are rising in developing countries where the rates are as high as 300-600 deaths per 100000 population. This number is expected to increase leading to unnecessary loss of lives. The major determinants of future increases of CVD in Africa are dependent on the pace of economic development, changes in life expectancy as a result of the impact of pre-transitional disease and violence (Mbewu and Mbanja, 2006).

In South Africa, mortality rates for NCDs are now greater than those of HIV/AIDS and TB joint, and CVD is the leading group of NCDs (Schutte, 2019). According to Maredza, Hofman and Tollman (2011), factors like epidemiological transition have led a rise to NCDs in South Africa, however, transition in South Africa is complex because of a high burden of communicable diseases, road traffic injuries and maternal/perinatal conditions. In addition, globalisation has

contributed to unhealthy lifestyles like tobacco smoking and unhealthy diets such that even in rural South Africa diffusion of urban behaviours is fostering the CVD epidemic (Maredza *et al*., 2011). The proportion of CVD deaths in women aged between 35–59 years is one and a half times more likely than that of women in the United States (World Heart Federation, 2017).

Zimbabwe's health delivery system has been facing a lot of stumbling blocks over the past years due to the withdrawal of donor support and an economic crisis that has led to limited funding to this important sector. This has led to the government neglecting most NCDs as they are regarded as non-priorities compared to communicable diseases like Human Immuno-deficiency Virus and Tuberculosis. According to the Heart Foundation of Zimbabwe (2018), Zimbabwe is facing a challenge of alleviated heart diseases and a shortage of cardiac specialty and this has led to unnecessary deaths.

Historically, diseases suffered by women and their bodies were given very little public attention (Mudler, 2012). This process of not giving women support, guidance and information on prevention or management of diseases led them to completely depend on their husbands and physicians with regards to their health. Gender discrimination and bias not only affect differentials in health needs, health seeking behaviour, treatment, and outcomes, but also permeate the content and the process of health research. According to Bayne-Smith (1996), it is important to view women's health as influenced by a larger system of culture and social structure such as work, education, health care, family structure, the economy, housing and so on. Women's health should not be isolated from their social roles as wives, sisters, grandmothers, daughters, employees as these factors also have a pivotal role to play in their wellbeing. Therefore, it was important to explore rural women's perspectives of CVD so as to understand what they know and understand about this phenomena

1.3 Problem Statement

The NCDs have been the top cause of death globally among females for at least the past three decades and are now responsible for two in every three deaths among females each year (Bonita and Beaglehole, 2014). From time immemorial, women's health focused on menopause, cancer,

maternal health and sexual health (Peters *et al.,* 2016). Consequently, women do not have much knowledge about these CVDs and risk factors associated with them (Oliver-Mcneil and Artinian, 2003). Mosca, Barrett-Connor and Wenger (2011) purport that the recognition of the subtle differences between men and women in CVD have been slow to gain acceptance and these gendered assumptions have had other secondary effects, for example reinforcing the perception among women that they are immune to the risks of developing heart diseases.

Zimbabwe in the past decade has faced a lot of economic challenges such that their health systems have ignored most NCDs as the country is overburdened by communicable diseases. The Zimbabwe National Statistics Agency (ZNSA, 2011) statistics revealed that there is a projected 30% increase of CVD in women by 2030. This increase might lead to disabilities and death in women. Rural women are at a disadvantage as they might not be able to get access to resources that would inform them about CVDs. Hence it was imperative to conduct a study that endeavoured to investigate perspectives of CVD so as to address the knowledge gap regarding what is known and unknown by rural women.

1.4 Rationale of the study

CVD has long been identified as a disease that affects men. Women have been under represented in cardiovascular studies including clinical trials hence a lack of gender-specific data has led to a shortage of evidence-based guidelines to appropriately manage and guide women with risk factors for CVD or CVD itself. This study emphasised the importance of taking a gender-specific approach to cardiovascular research as a way to understand how rural women view it. Although patient perspectives on CVD have been well studied in Western countries, little is known about how CVD is perceived by rural women in Zimbabwe, where racial and societal factors may lead to notable differences from those in Western countries. The results may be used to provide insight to important organisations that can assist in heightening messages on CVD.

1.5 Purpose of the study

The study aimed at eliciting rural women's perspectives of CVD in Gwanda South Rural District, Zimbabwe.

1.6 Study Objectives

The objectives of this study are:

1. To evaluate rural women's knowledge of CVD,
2. To examine the perceived effects of CVD on rural women's lives and their families,
3. To explore rural women's views on prevention of CVD.
4. To assess rural women's perceived experiences and strategies of coping with CVD.

1.7 Research questions

The following are the research questions that guided the study:

1. What are the different types of CVDs and their modifiable risk factors?
2. What are rural women's perceived effects of CVD on their lives and those of their families?
3. What are the measures that can be done to prevent CVD?
4. What are rural women's perceived experiences and strategies of managing CVD?

1.8 Significance of the study

The results of this study might be useful in developing appropriate gender-specific messages to heighten CVD risk awareness and to promote lifestyle changes in order to reduce the risk of CVD amongst rural women. It is hoped that this research might guide government policy makers in formulating policies which will assist in minimizing the health challenges faced by rural women, with the hope of ameliorating the CVD scourge amongst rural women. In most studies, CVD is researched by clinicians who mostly focus on the clinical aspects of CVD, however, this study endeavoured to add to the body of knowledge a gender perspective which has not been clearly put out by most studies. Just like other chronic diseases, CVD has a lot of social and economic implications hence this study aimed to uncap those challenges so that the government and other policy agencies would come up with strategies to address them.

1.9 Delimitation of the study

The study only focused on women who reside in Gwanda South Rural District.

1.10 Definition of concepts

- **CVD-** is a collective term for diseases of the heart and circulatory system such as coronary heart disease, cerebrovascular disease, hypertension, peripheral artery disease, rheumatic heart disease, congenital heart disease and heart failure (Sawyer, 2012).
- **CVD knowledge-** Is the act of being familiar, aware or informed through education or experience by perceiving or theoretically acquiring something (Burger, 2016). In this study it refers to the understanding that women have on accurate recognition of cardiovascular disease risk factors and healthy lifestyle practices.
- **CVD Perception**- refers to the way in which an individual describes their CVD health.
- **CVD risk factors-** Non-modifiable risk factors, on one hand, includes: previous stroke or myocardial infarction, race, family history, presentation of symptoms, and increasing age. On the other hand, modifiable risk factors include tobacco use, hypertension, obesity, diabetes, physical inactivity, and dyslipidemia; one of these factors is considered as modifiable CVD risk factor and each modifiable condition is considered as self-imposed (WHO, 2017).
- **Gender-** According to Health Canada (2011), it refers to "the array of socially constructed roles and relationships, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis". Carretero et al. (2014) argue that gender results in differences in social roles and responsibilities that may have implications for differences in health status and health behaviour, as well as how one accesses and uses health services. In the context of this study, gender means differences in men and women as influenced by society.
- **Gender equality-** refers to the equal rights, responsibilities and opportunities of women and men, as well as girls and boys. It suggests that the interests, needs and priorities of both, women and men are taken into consideration, distinguishing the diversity of women

and men (Medical Women's International Association (MWIA), 2002). According to this, study gender equality means equal rights and opportunities with regards to the health for both men and women.

- **Gender roles**- are particular economic and social roles and responsibilities considered appropriate for women and men in a given society. Gender roles and characteristics do not exist in isolation, but are defined in relation to one another and through the relationship between women and men, girls and boys (MWIA, 2002). This study defines gender roles as roles influenced by the society one lives in.
- **Social structures-** are a set of relationships amongst a group of roles which emerge, are maintained, change and eventually cease (Crothers, 2012). In this study social structures refer to the relationships and roles in a given community.
- **Perceived effects-** in this study these are observed consequences by rural women.
- **Perceived experiences**- in this study these are observed experiences
- **Women's perspectives-** in this study this is women's point of view or attitude.

1.11 Summary

This chapter presented the overview of the study. The following chapter gives an outline of the literature reviewed in the study.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Globally, women's health has always been of great concern. Women are known to live longer but they experience a higher burden of disease and disability. Longer life depends on several factors which vary with countries and communities. Gender related health is a broad topic that is of great significance to public health, thus, its study will help in giving direction during formation of policies that focus on population health so as to reduce gender related health inequities.

This chapter explores different scholars and literature at a broader level. It focuses on the social determinants of health which are a foundation on discovering all the challenges that lead to health inequities in the society. It also reviews social issues that have a great significance in women's health even in modern societies around the world and how these issues contribute to the development of CVD and its effects. The chapter includes a review of gender policies of health that address health globally like the Millennium Developmental Goals, Sustainable Developmental Goals and Gender Mainstreaming. These policies have seen the alleviation of women's health through implementation of programmes that are friendly to women and that can tackle their health challenges. CVD is not a new phenomenon in women, however, it has not been considered much of a threat to women. Due to rapid urbanisation, people are changing their lifestyles, diet and values therefore a rise of non-communicable diseases including lifestyle diseases like CVDs in women has been noted. The chapter also focuses on non-communicable diseases and how they affect women globally and in sub Saharan Africa, this establishes a connection between NCDs, CVDs and their relationship with gender health. A discussion on social determinants of health and the most common risk factors of CVD in women is also done.

2.2 Policies and Initiatives that influence gender health

This section attempts to explain some policies and initiatives that have been taken by governments, United Nations, World Health Organisation (WHO) and other organisations to tackle

the health problems affecting sub-Saharan African (SSA) countries. These programs have worked collectively though some might have failed due to conflicts prevailing in Southern Africa but it is important to mention them as they play a pivotal role in gender, health and development. The study of CVD has always been a biomedical topic and it is important to look at it from a social science point of view as it will give direction to other ideas that have not been considered in the hard sciences.

2.2.1 Brief Outline of the Millennium Development Goals

The Millennium Development Goals (MDGs) were developed as a reaction to the various global problems that were observed in 2000. The 21st century was marked by a global commitment to meet the MDG outcomes in 2015. This was a positive attempt to benefit populations at large as countries were provided with indicators serving as a compass to give strategic direction to service delivery (Mulaudzi, Phiri, Peu, Mataboge, Ngunyulu, and Mogale, 2016). In a way this enabled countries to prioritise their goals.

The world leaders signed the Millennium Declaration and committed to achieving its eight international MDGs by 2015. These MDGs reflect the widespread understanding that health is central to human, social, and economic development. According to Zoghbi, Duncan, Antman, Barbosa, Champagne, Chen, Gamra, Harold, Josephson, Komajda, and Logstrup (2014), the MDG platform encouraged progress in three areas: *targets and milestones*, which allow us to measure progress in developing countries; *funding from developed countries* to implement programs; and *implementation*, which was coordinated with the help of multilateral institutions such as the World Health Organization, the World Bank, and the Global Fund to Fight AIDS, Tuberculosis, and Malaria. Missing, however, was acknowledgment of the growing burden of CVD and other NCDs across the globe. Haines and Cassels (2004) concur that the MDGs mainly had health as the core subject of all goals, however, MDG 6 targeted infectious diseases leaving NCDs exposed (WHO, 2005). These challenges affected health care systems which mainly focused on communicable diseases like HIV/AIDS and sidelining a growing burden which was NCDs.

It is important to note that all these goals were not going to be attainable without changes on food security, gender equality, the empowerment of women, wider access to education and better stewardship of the environment. MDG 3's target was to eliminate gender disparity in education, employment and leadership. Despite this target, a gap had still not been covered in SSA (Organisation for Economic Cooperation and Development, 2012). Women were still underrepresented in decision making in almost every nation and this impacted on the well-being of women as they were supposed to be given a voice so as to ensure a better life for them and their families. Target three of the MDGs aimed at promoting gender equality and empowering women; gender biases in power, resources, culture and the organization of services negatively impacts the nutrition and overall health of females. Evidence shows that investing in girls achieves a range of health and socio-economic development goals, thereby improving the prospects and health of the whole family (World Heart Federation, 2013). CVD-related illness of a loved one can deter young women from accessing the so much needed education, because it results in them either becoming the main caregiver or taking over the mother's responsibilities in the home, or them entering into the labour market for additional income. Women and girls are key agents of prevention: Women, as mothers, educators, healthcare providers and gatekeepers of household nutrition and lifestyle patterns, need to be at the forefront of the fight against CVD (World Heart Federation, 2013).

Mulaudzi et al. (2016) noted that most projects that were placed to address MDGs 4, 5 and 6 were placed on reactionary planning than proactive which meant that they depended on donor driven programmes. These programmes were not addressing problems within an African context. Several limitations of the MDGs became very clear such as attention, which resulted in verticalisation of health and disease programmes in some countries, a lack of attention to strengthening health systems, the emphasis on "one size fits all" development planning approach, and a focus on aggregate targets rather than equity (WHO, 2015). Such approaches were also noted in gender issues wherein women and men were treated equally in health issues. Gender differences make it impossible for men and women to have one approach to address their health

problems. However, in 2015, the Sustainable Development Goals (SDGs) were adopted by all nations and they seemed to be promising a positive change, for example, the health goal in the SDGs is broad as it links with other goals and targets thereby uncovering the integrated approach that is a foundation of the SDGs.

2.2.2 Sustainable Development Goals

According to Dugarova and Gulasan (2017), progress in several areas of MDGs was noted in most parts of the world and is also reflected in the SDGs to be strong. It has been shown in the case of income poverty, education and health service accessibility and improved sources of clean water. However, in some areas, progress has not been much especially in gender equality, nutrition and access to sanitation. Therefore, SDGs are more ambitious and comprehensive as they aim to build peaceful, just and inclusive societies. Their purpose is to complete what was left out on the MDGs and also to target new challenges that the world is currently facing (Dugarova and Gulasan, 2017).

According to WHO (2015), one of the strengths of SDGs is their accommodation of communicable, NCDs and injuries as well as determinants of health. SDG 3 aspires to ensure healthy lives and promote wellbeing for all people of all ages. This goal targets maternal mortality, HIV/AIDS, TB, malaria, tropical and waterborne diseases. It also targets to reduce NCDs by one-third (National Planning Commission, 2015). Southern Africa has shown some challenges on the social front like a high incidence of infectious and NCDs probably related to or being worsened by HIV/AIDS, poor health delivery, unequal distribution of wealth between gender and also in participation and decision-making at various levels (WHO, 2015). SDG 3 target 3.4 states that by 2030 premature mortality from NCDs will be reduced through prevention and treatment and promotion of mental health and well-being (WHO, 2015). It is an extension of the global voluntary NCD mortality target, which defines premature NCD mortality as the probability of dying from any of the four main NCDs between the ages of 30 and 70. This SDG will therefore reduce the burden of NCDs that is about to frustrate African countries that are already facing a serious burden of communicable diseases.

SDG 5 aims at achieving gender equality and empowering all women and girls. A gender gap should be narrowed in the important socio-economic domains of education, health services, employment opportunities and political decision-making (National Planning Commission, 2015). Gender inequalities in education, employment and civil liberties not only deprive women of basic freedom and violate their human rights but they also negatively affect health and development outcomes for societies as a whole. The SDGs widen the focus on gender inequity across a range of goals including health. The right to health was re-emphasized, linked with other human rights particularly for women and vulnerable groups such as migrants and people with disabilities. For the SDG targets to be achieved, an implementation of comprehensive interventions to deal with a context characterised by ageing, rapid unplanned urbanisation and globalisation of markets that promote inactivity and unhealthy diets is required. In a nutshell, SDGs have emphasized the need for a multi-disciplinary approach to targeting social issues.

2.2.3 Gender Mainstreaming and Health

Following the 4th International Conference on Women's Health in Beijing 1994, governments committed themselves to adding a gender perspective to health care policies and this inclusion has been shown to improve the health of both women and men (Medical Women's International Association, 2017). Gender mainstreaming is a direct strategy of International Development Cooperation at least since the 4th World Conference on Women in 1994 in Beijing (Diehl, 2009). Gender mainstreaming is defined as;

> "…the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is gender equality" (Economic Social Council (1997) as cited in Alston, 2014:1).

Gender mainstreaming was formulated as a way of promoting gender equality and it reflects the exploration of the interrelation between gender discrimination, poverty and ill-health. It can be viewed as a strategy for amplifying the concerns and experiences of both men and women integral to the design, implementation, monitoring and evaluation of policies and programmes in all spheres. It is important to consider gender in a public health programme as men and women have different health problems because of biological reasons (Diehl, 2009). Secondly, gender roles influence health-seeking behaviour, vulnerability and home-based care. Practices and violence that are based on gender constructs can directly lead to health problems and women usually end up falling victim to these problems.

The Medical Women's International Association (MIWA, 2017) asserts that gender mainstreaming addresses gender relations and is not merely a euphemism for women's issues as men can also be disadvantaged by their gender roles. However, Diehl (2009) stipulates that it is vital to note that women empowerment is a paramount aspect of gender mainstreaming as women in most cases are disadvantaged compared to men. The way power is distributed in most societies means that women have less access to and control over resources to protect their health, furthermore, are less likely to be involved in decision-making and are more likely to be responsible for caring for the health of a family member and others (Shelley, Diekhaus and Van Moffaert, 2012). According to Ravihran and Kelkar-Khambele (2008), the WHO's gender policies state that the goal of gender mainstreaming in health is to contribute to better health for both men and women through health research, policies and programmes which give due attention to gender considerations and promote equality and equity between women and men. Gender mainstreaming aims to promote equity and equality between women and men throughout the life course and at least ensure that interventions do not promote or perpetuate inequitable gender roles and relations (WHO, 2002).

According to Gomez-Gomez (2002), gender mainstreaming in health depends on four key concepts which are health as a human right, equity in health grounded in principles of social justice and human rights; gender as the social relations of inequality between women and men

intersecting with other sources of inequality. Therefore, gender mainstreaming seeks to understand mostly the societal roles that continue to play on people's health, this gives researchers an idea on how to approach certain health issues when formulating policies. Furthermore, to address health issues, Shelley *et al.* (2012) suggest that gender analysis in health highlights the following;

1. How inequalities disadvantage women's health
2. The constraints women face to improve their health
3. Ways to address and overcome these constraints.
4. Health risk and problems men face as a result of the social construction of masculinity.
5. Other contextual factors that impact health problems in men and women.

Integrating a gender perspective in health implies the application of gender, gender roles, gender socialization amongst others. This is to ensure that both women and men acquire care in accordance with their needs (Gomez-Gomez, (2002); Shelley *et al.,* 2012). In the health sector gender mainstreaming requires attention across multiple stages of policy and programmes to gendered health needs and priorities, as well as to the constraints faced by communities and individuals promoting universal health and access to care for illness and injury (Lamprell, Greenfield, and Braithwaite 2015). The health sector needs to engage more successfully with those aspects of health which cannot be tackled in a clinic or hospital setting (Ostlin, Eckermann, Mishra, Nkowane and Wallstam, 2006).

Tu (2015) states that gender mainstreaming became popular as a strategic development and public policy mechanism which contained programs that connected poverty and gender inequality to help developed or developing countries to establish projects that promoted a field of both women and men by giving them equal opportunities for their need to be met. However, some shortcomings have been noted in gender mainstreaming where Lampell *et al*. (2015) note that it has suffered from a lack of clear conceptualisation and poor operationalisation. In the health

sector, the poor definition of gender and gender equality and poor design of projects has effectively meant the maintenance of the traditional bio-medical approach and the creation of unmanageable initiatives that do not address the societal aspects of health. Gender mainstreaming efforts to help societies work toward gender equality do not consider how such social change and its implementation impacts men at a socio-psychological level, particularly in male-dominated societies (Jennings, 2012). This leaves a lot of gender and health issues unaddressed.

According to Australia's Women Health Network (2014), mainstreaming gender requires high-level commitment, governance mechanisms, and robust structures for monitoring, evaluation and accountability. Gender intersects with health systems which comprise policy-makers in government departments, NGOs including health foundations and the wider system of care providers (Australia's Women Health Network, 2014). Health sector leadership is an anchor for gender-specific responses that support gender equity. Yet, generally there is a lack of responsiveness in Zimbabwe to the issues for health raised by knowledge about gender as a social determinant of health and health inequities. Concentration on scientific research alone will not eradicate diseases because social issues particularly gender, play a significant role in an individual's health, therefore it is important that when designing health policies, models and health promotion campaigns, these factors be included and studied extensively.

2.2.4 Patriarchy and Women's Health

Patriarchy is a political-social system that insists that males are inherently dominating, superior to everything and everyone deemed weak, especially females, and endowed with the right to dominate and rule over the weak and to maintain that dominance through various forms of psychological terrorism and violence. Patriarchy can be defined as a system of stratification and differentiation on the basis of sex, whereby the father is the head of the family and men have authority over women and children (Aina, 1998; Ntoimo and Isiugo-Abanihe, 2014). Patriarchy should be gestated at different levels of abstraction. Walby (1989), came up with six systems of patriarchy, that is;

1. The patriarchal mode of production- where women's labour is commandeered by their spouses or father within unions or families. Wherein the woman's place is in the kitchen and also engages in unpaid labour (Olu Olu, 2007).

2. Patriarchal Relations in paid employment- this is a system of closure of access by men against women by not involving them in paid work and discrimination of women who are on paid labour. This is a common practice in the rural areas as most women are left to take care of their families whilst their spouses go to work in big cities and in the diaspora. This lack of financial autonomy compromises women's health as they will not be able to afford paying for their hospital services, follow a proper diet and even to educate themselves.

3. The state- this is a patriarchal system which excludes women from political issues which controls state affairs, giving them less power and control (Ntoimo and Isiugo-Abanihe, 2014). An example is that of fewer women in the parliament hence they are not included in decision making of marriage, fertility, health and wellbeing.

4. Male violence- this is a form of power over women related to normal patterns of male behaviour and not just a subculture of few violent men (Ntoimo and Isiugo- Abanihe, 2014). It is used to alter women's actions in a systematic and routine way in homes as well as at the work place. Surtees (2003) averred that domestic violence against women is a form of social violence aimed at controlling and creating fear. Such violence leads to stress which might lead to depression; a risk factor of CVD.

5. Patriarchal relations in sexuality- a form of system that results in subordination of women. This is a catalogue of social practices that are historically and culturally viable impacting on gender relations. This is a system that may even prohibit women from performing physical activities as it is labelled as unfeminine.

6. Patriarchal culture- this system distinguishes and shapes gender at the level of experience. It comprises of various system based patriarchal practices that differentiate

masculinity from femininity. Various points of culture promote, entrench and reinforce separation of what is acceptable for men and women (Ntoimo and Isiugo-Abanihe, 2014).

These are a summary of patriarchal systems in our societies that reveal how women are disadvantaged in our societies.

Alvarado (2017) states that patriarchy is a system of domination different from and preceding capitalism, the latter nourishing from it to exploit women and girls throughout the world. A patriarchal culture affords men certain privileges and entitlements that are not available for women. As such, patriarchy pressures women to respond in defined ways which often accommodate and defer to male interests (Dickerson, 2013). Like the way that a woman should look in order for men to find them more attractive. This usually happens in some cultures where fully-bodied women are deemed more attractive compared to the lean ones like in Mauritania where women are fed for marriage from a young age (RT, 2015). The International Federation of Health and Human Rights Organisation (IFHHRO, 2011) asserts that women's bodies are instrumentalised for cultural, political and economic purposes rooted in patriarchal traditions. Such is found within and beyond the health sector and is embedded in multiple forms of social and political control over women. The IFHHRO (2011) further gives some examples of discriminatory practices that affect women such as;

1. Genital mutilation, early marriage and adolescent pregnancy,
2. Discrimination in the allocation of food resulting in malnutrition or poor diets that lead to CVD,
3. Discrimination in access to health care,
4. Disrespect and ill-treatment during childbirth in health facilities,
5. Neglect and abuse in older age, including in health care settings.

Alvarado (2017) gives reference to the health model which is directly related to the prevailing systems of domination, articulating the worldview and social relations that determine the

economy, politics and culture of societies. The rapid increase of NCDs is mostly affecting the poor and disadvantaged women in patriarchal societies like India, where women have very little role to play in their health care issues. Patriarchy always leads to gender bias and health discrimination in health institutions. Findings among female and male patients seeking care for CVD and TB are an example. There have been disparities in treatment and also in health seeking behaviours (Govender and Penn-Kekana, 2008) this is due to gender biased diagnoses.

2.3 NCDs a new health challenge in SSA

As in all other low- and middle-income regions, individuals in SSA suffer from the dual burdens of infectious diseases and NCDs. Far from being diseases exclusively of the wealthy, NCDs are already, and will continue to be, a significant burden on the world's poor. The epidemiological transition from predominantly infectious to NCDs is already well underway in many low- and middle-income countries, as it is in SSA. Therefore, this section seeks to explore how NCDs have impacted on SSA and the initiatives that have been done to confront the challenges faced by especially rural women.

2.3.1 NCDs in sub-Saharan Africa

A rising epidemic of NCDs has been noted across SSA, however, most resources have been focused on maternal and child health including infectious diseases such that NCDs have been ignored (Dalal, Beunza, Volmink, Adebamowo, Bajunirwe, Njelekela, Mozaffarian, Fawzi, Willett, Adami and Holmes, 2011). Omoleke (2013) agrees that the traditional public health challenge in Africa has always been the scourge of infectious diseases such as HIV/AIDS, TB, Pneumonia and Diarrhoea. A 2011 WHO report announced that NCDs will be the leading cause of deaths globally exceeding communicable diseases (Alwan, 2011).

Globally NCDs account for 63% of all deaths and the 80% of NCD-related deaths occur in low- and middle-income countries which most SSA countries are a part of. Current projections reflect that by 2020, the largest increase in NCD-related deaths will exceed the combined deaths from infectious diseases, nutritional, maternal and neo-natal deaths (Juma, Mohamed, Wisdom, Kyobutungi, and Oti, 2016). In 2010, more than 2.06 million deaths due to NCDs occurred in SSA,

a 46% rise from 1990. The total burden of NCDs in Africa shows a growing health iceberg hidden under epidemics of infectious diseases (Naghavi and Forouzanfar, 2013). However, Mendis, Abegunde, Oladapo, Celleti and Nordet (2004) noted that the epidemiology of some NCDs like CVD in the African Region reported mainly on hospitalized patients may not represent the true pattern of heart disease.

Even though NCDs have been regarded as diseases for the rich, Dalal *et al.* (2011) postulates that they will continue to be a significant burden on the world's poor. Prentice (2005) states that in the last three decades researchers have noted a rapid increase in the prevalence of chronic NCDs resulting in a double burden of disease which is potentially overwhelming to the poorly financed health services in Africa. NCDs are an important cause of premature mortality and morbidity for people under the age of 60 in SSA (Naghavi and Forouzanfar, 2013). Since NCDs are chronic they affect adults which leads to a strain in the economic productivity and social responsibilities they bear. According to African Health Observatory (2014), the economic impact of NCDs goes beyond the costs of health services. Indirect costs such as lost productivity can match or exceed the direct costs. In addition, a significant proportion of the total cost of care falls on patients and their families. This will in turn lead to poverty which will deny them the chance to access proper care and medicine.

NCDs have been the leading causes of death among women globally for at least the past three decades and are now responsible for two in every three deaths among women each year. Omoleke (2013) however stipulates that this increase might be attributed to that African countries are undergoing varying degrees of human development and this is being accompanied by nutritional, demographic and epidemiological transition. According to Omoleke (2013), many women in Gambia who stay in the urban environments are housewives, traders or sedentary workers and are poorly educated with little or no dietary awareness. As stipulated above, in some societies being fully-bodied or obese is seen as evidence of affluence /good living or absence of chronic infectious diseases such as HIV/AIDS and TB. Therefore, bad lifestyle habits are developed so as to appease other people.

2.3.2 Effects of NCDs on women

Collectively, NCDs are the leading cause of death among women worldwide. They cause 65% of all female deaths, amounting to 18 million deaths each year (UN, 2010). In developing countries, NCDs are a significant cause of female death during childbearing years and for women with young families. More women per thousand die from NCDs in Africa than in high-income countries (NCD Alliance, 2011). Although on average women live longer than men, they are in poor health for many of those years as a result of CVDs. As well as a high death toll, NCDs cause serious complications and disabilities. NCDs affect the health of women and girls as well as the health and life chances of their children. Being born to a malnourished mother increases the chances of the infant suffering under-nutrition, late physical and cognitive development, and NCDs in adulthood.

NCDs are financially debilitating for individuals and families due to a combination of medical costs, costs of transportation to and from health services, time associated with informal care giving, and lost productivity. Deaths of women or men from NCDs during their most productive years (40-60 years) can result in tragedy for families and catastrophic expenditure. The loss of women's labour can push vulnerable families deeper into poverty, particularly in rural areas in developing countries where the number of female-headed households is increasing as men migrate to seek employment. The major impact of adult female mortality on household welfare is well established, for example, higher mortality amongst small children, food insecurity, children being withdrawn from school, increased work burden on children and loss of assets. Women are often responsible for household work that is also critical to family wellbeing, for example, gathering water and firewood, preparing food and tending livestock. This vital contribution is compromised by NCDs. The burden of NCDs in the family is ultimately endured by girls and women, as primary caregivers in many families. Their educational and income earning opportunities are interrupted when they have to stay at home to care for sick family members.

According to WHO (2011), regardless of NCDs being the biggest killers worldwide, a lack of awareness and misinformation can provoke NCD-related stigma in many countries, preventing

people with NCDs from playing an active role in society. Women and men, girls and boys can suffer discrimination in employment, insurance, education and many other areas of life. Girls and women with NCDs particularly in rural areas can be discriminated against in terms of marriageability, which, in many societies represents their main route to economic and social status. This may discourage families in some societies from revealing the health status of their daughters and discourage them from seeking diagnosis and treatment. Women with NCDs are more likely to be divorced, separated or abandoned by their husbands, leaving them financially vulnerable (WHO, 2011).

2.3.3 Political Declaration of the High-Level Meeting on Prevention and Control of NCDs

In September 2011, the UN General Assembly held the High-Level Meeting on Prevention and Control of NCDs. This was the second time the assembly met on a health issue, the first time being about HIV/AIDS. The world leaders adopted the Political Declaration that outlined the actions to be taken to tackle NCDs at international and national levels (United Nations General Assembly, 2011). The main aim of the conference was to organize commitment to confront the global threat posed by the NCD.

This declaration recognizes that NCDs are an important development issue that must be addressed through multi-sectorial action since many NCD determinants lie outside the health sector's influence. This includes the government collaborating with civil society organisations and the private sector when relevant and appropriate. However, in low-and middle-income countries there has not been evidence to show success on this action (International Development Research Centre, 2017). People now die from chronic diseases at dramatically younger ages; but because NCDs are not always understood as development issues and underestimated as diseases with profound economic effects, many African governments take insufficient interest in their prevention and control (African Health Observatory, 2014).

In July 2014, the UN General Assembly convened a follow-up high-level meeting to undertake a comprehensive review and assessment on the prevention and control of NCDs. In the meeting they found that overall progress was insufficient and highly uneven (Chestnov, Obermeyer, St

John, Van Hilten and Kulikov, 2014). The United Nations review saw no lack of commitment, but witnessed a lack of capacity to act, especially in low- and middle-income countries, due to a lack of access to expertise which is only available through international cooperation. As a way forward, the outcome document adopted by the United Nations review presents a highly focused agenda for strengthening international cooperation (Chestnov *et al.,* 2014). When the Heads of state realised that NCDs can be prevented and their effects reduced, they committed to five broad areas of action which include:

1. Reducing risk factors
2. Strengthening national policies and health systems.
3. International cooperation (including collaborative partnerships)
4. Research and development
5. Monitoring and evaluation.

2.3.3.1Criticisms of the Political Declaration

According to Sivaramakhrishan and Parker (2012), the outcomes of the NCD summit were disappointing as it did not laydown a specific policy commitment for concerted action. International NCD coalitions and experts pressed for time bound targets to make nations accountable such as a 2040 goal for a tobacco-free world at a global commitment of $9 million and norms relating to taxation and industry regulation, these however, proved elusive (Beaglehole, Bonita, Horton, Adams, Alleyne, Asaria, Baugh, Bekedam, Billo, Casswell and Cecchini, 2011). The WHO's political leadership of the summit overlooked the complications of the NCDs agenda and the problems in coming up with political will for its endorsement at the UN Summit (Sivaramakhrishan and Parker, 2012).

2.4 Cardiovascular diseases in women

This section explores CVD in women, its effects, risk factors, and how it has affected men and women differently. It seeks to establish the risk factors of CVD and its link with the social determinants of health wherein the relationship is inevitable.

2.4.1 Global perspectives of CVD

CVD has caused 3.9 million deaths in Europe and other European Union countries (European Heart Network, 2017). The European Society of Cardiology (2017) states that it is the leading cause of morbidity and mortality in Europe, However, a decrease has been noted over the years in nearly all European countries. It has been estimated to cost the European Union economy 210 billion euros a year. This is related to the high levels of risk factors amongst European countries though they vary amongst countries. According to WHO (2017), CVD causes 46 times the number of deaths and 11 times the disease burden caused by AIDS, tuberculosis and malaria combined in Europe. CVD mortality could be prevented or halved through modification of behaviours that expose people to risk factors. Studies indicate that by 2020 CVD mortality would have increased by 120% for women (Belue Okoror, Iwelunmor, Taylor, Degboe, Agyemang, and Ogedegbe, 2009). This raises an alarm to women's health which is already overburden by sexual and reproductive health diseases and cancers that affect them in isolation.

According to Folta, Seguin, Chui, Clark, Corbin, Goldberg, Heidkamp-Young, Lichtenstein, Wiker, and Nelson (2015), CVD is the leading cause of death for women in the United States of America (USA), and heart disease, stroke and hypertension are among the leading causes of disability. CVD in the USA has incurred costs of over $300 billion per year in the US. In the USA about 32% of adult men and 34% of women are obese compared with 21% of both sexes in Western Europe and this prevalence is increasing (McPherson, 2014). Despite this, Ng, Fleming, Robinson, Thomson, Graetz, Margono, Mullany, Biryukov, Abbafati, Abera and Abraham (2014) seem to purport that the prevalence of obesity and overweight (risk factors of CVD) has remained either stable or decreased significantly due to people trying to adopt new lifestyles. Risk factors of CVD like smoking in the US is highly prevalent where one in every five adults is a smoker (Vaidya,

2016) and it has been shown that 20% of all deaths are attributed to heart diseases. Men and women have been shown to smoke however, women who smoke are at a higher risk of getting heart diseases than men who smoke due to biological differences (Vaidya, 2016).

According to Ohira (2013), half of the world's CVD burden is estimated to occur in Asia. Compared with Western countries, most Asian countries have higher mortality from stroke and East Asian countries have lower mortality from Ischemic Heart Disease (IHD), but Central Asian countries have higher mortality from both stroke and IHD. Countries like the China undergoing rapid urbanisation should be monitored for many chronic non-infectious diseases. The rapid economic development has led to a lot of changes in lifestyle and diet (Ning, Zhan, Yang, Yang, Tu, Gu, Su and Wang, 2014). Compared to countries like the United Kingdom and USA, China was found to have a lower rate of obesity in adults in 2013, but the absolute number of obese people in China is exceeded only by that in the USA (The Lancet, 2013). Obesity is a growing threat to health in China even though some developing countries might be showing a decline.

In developed countries, men have a higher prevalence of overweight and obesity than do women, whereas in developing countries it is quite the opposite. In developing countries prevalence is about 30% lower for men and 15% lower for women in developed countries, however it is rising (McPherson, 2014). Increased prevalence of risk factors of CVD has become a serious world concern. A study in 199 countries revealed that 1.4 billion adults worldwide were estimated to be overweight in 2008 and of those, 502 million were obese (Wang, McPherson, Marsh, Gortmaker and Brown, 2011).

According to American College of Cardiology (2017), trends in CVD mortality are no longer declining in high income regions and low and middle-income countries are also seeing more CVD deaths. In high-income countries the decline in deaths have begun to plateau. In 2015, there were more than 423 million individuals living with CVD and nearly 19.9 million CVD deaths worldwide (Mozaffarian, 2017). As from 1990 to 2010, the age-standardized death rate from CVD dropped globally, driven by improvements in high-income countries, but that progress has slowed over the last five years (Science Daily, 2017). In a study looking at the Global Burden of Disease,

prevalence of CVD was mostly high across sub-Saharan Africa, Eastern and Central Europe and central Asia. The lowest rates occurred in high-income Asian countries such as Singapore, Japan and South American countries like Chile and Argentina (Roth *et al.,* 2017).

Worldwide, they are different levels and presentations of CVD as well as infectious and parasitic diseases. There are three factors that are likely to contribute to regional difference which include the stage of economic development, differences in behaviour and lifestyle that exposes populations to different levels of risk and differences in racial and ethnic heritage which determine genetic predisposition to CVD (Bale, Ryan, Reddy and Howson, 1998). An example is that CVD burden is still noticeably high in persons of African descent living in the US. They have been shown to have higher rates of hypertension and as a consequence suffer significantly increased mortality (Dugas, Forrester, Plange-Rhule, Bovet, Lambert, Durazo-Arvizu, Cao, Cooper, Khatib, Tonino and Riesen, 2017).

In conclusion, CVD remains a burden in other continents however, it is important to note that some continents are showing an improvement due to changes in lifestyle.

2.4.2 Overview of CVD burden in sub-Saharan Africa

CVD is a global epidemic; however its prevalence is currently stable in developed countries whereas there is a rapid increase in developing countries particularly those in sub-Saharan Africa (SSA). It normally affects the elderly in developing countries whereas in Africa, it is common among the productive age group (Amusa, 2012). Projections from the Global Burden of Disease project suggest that from 1990 to 2020, the burden of CVD faced by African countries will double and a large proportion of the victims of CVD will be middle-aged people. The poor will suffer disproportionately as a consequence of their higher disease risk and limited access to health care (Kabwe, Lakhi, Kalinichenko and Mulenga, 2016).

SSA countries are currently experiencing one of the most rapid epidemiological transition due to urbanisation and changing lifestyle factors. This transition has to do with development leading to a shift in the pattern of mortality and disease shift mostly infectious diseases and nutritional

deficiencies shift to non-infectious diseases (Belue *et al.,* 2009). Some studies point out that urbanisation and economic development have also led to the emergence of a nutritional transition characterised by a shift to a higher caloric content diet and reduction of physical activity (Popkin, 2003). Another important factor to note is that due to long working hours, people might not have time to monitor their lifestyle leading to bad habits.

CVD is the leading cause of mortality in women, being responsible for a third of all deaths of women worldwide and half of all deaths of women over 50 years of age in developing countries (Amusa, 2012). According to Belue et al. (2009), in countries like Nigeria, Ghana and South Africa the prevalence of chronic diseases is increasing, while the threat of infectious diseases and poverty-related diseases still exists. According to Nwaneli (2010), there is growing concern that the incidence of CHD is rising in Nigeria and SSA countries thereby creating a grave situation in this region where most resources are channeled into combating infectious diseases. The results of the study by Nwaneli (2010) which was focusing on the changing trend in CHD in Nigeria discovered that CHD was uncommon in Nigeria, however, evidence pointed that the incidence of CHD had increased over the past decades due to rapid changes in the environment.

In South Africa, CVD is the second leading cause of death after HIV accounting for up to 40% of deaths amongst adults. In South Africa, CVDs such as hypertension, atherosclerotic diseases and heart failure are becoming prevalent amongst the black population which could be exacerbated by the high number of people living with HIV in SA (Van Rooyen, Fourie, Steyn, Koekemoer, Huisman, Schutte, Malan, Glyn, Smith, Mels and Schutte, 2014). Hypertension has been identified as one of Africa's biggest health challenges after HIV/AIDS (UN AIDS, 2011). Although smoking bans have been shown to reduce CVDs, SSA still lacks strong legislative policies to control the use of such products (Wambua and Jamal, 2012).

Health infrastructures are inadequately equipped for diagnosis and care, and little research takes place. Furthermore, lack of awareness on the part of health personnel, lack of education of the general public, limited access to clinics, unaffordable costs of penicillin and fear of fatal penicillin allergy all need to be overcome (Mendis, Abegunde, Oladapo, Celleti and Nordet, 2004). Despite

these barriers, some attention has recently been focused on CVDs in Africa. Some countries have started with programmes to identify risk factors and set guidelines with some having epidemiological surveys (African Health Observatory, 2014).

To sum it all, CVD is not well documented in Africa especially in Zimbabwe because it has largely been treated as a low priority compared to infectious diseases. It is a challenge to find literature that can really explain the extent of the problems being faced by these developing countries.

2.4.3 Gender differences in CVD

Gender is one of the most robust factors used to explain disparities in morbidity and mortality. It is a multifaceted construct which comprises of genetic, psychological and social differences between men and women. It is a social construction phenomenon implicating different social norms and expectations. It defines the types of behaviours, attitudes and emotions which should be displayed or which are common and required for men and women, for example, classifying disorders as a “male heart disease” and “female depression” (Moller-Leimkuhler, 2007). Marmot Allen, Bell, Bloomer and Goldblatt (2012) mentioned that social roles for men and women play a pivotal role in the kind of risks they are exposed to in their entire life.

In women, it is quite a challenge to diagnose women with heart disease as their symptoms are more subtle and harder to detect (Barouch, 2017). Women have adverse outcomes of CHD compared to men as they are likely to die of Myocardial Infarction (MI; (heart attack)) and have a less chance of survival compared to men (Tan, 2010). However, previously CHD was extensively considered to typically affect male gender and most medical papers have passed the idea that female gender could suffer more from breast cancer than from CVD and CHD (Galiuto and Locorotondo, 2015). High incidence of women’s CVD has been contextualised by factors such as limited presentations in clinical trials and also inadequate medical interventions to prevent and manage CVD (Gonsalves, 2017). Though men and women share several risk factors of CVD, previous male focused studies did not show that women also have their unique heart disease risk factors. According to Tan (2010), they have similar traditional risk factors like obesity, smoking, diabetes, high blood pressure, family history, and metabolic syndrome. However, the following

are factors which are specific to women and they include: relatively high testosterone levels prior to menopause, increasing hypertension during menopause, pregnancy, autoimmune diseases such as rheumatoid arthritis; stress and depression, low risk factors awareness. The fact that there is a gender difference in risk factors has been corroborated by a study in Finland which discovered that there was a difference in high-risk status for men and women, where diabetes was found to be the main cause of high CVD risk in young women whereas in men a history of prior CVD event, smoking and hypertension had vital roles (Lehto Lehto, Havulinna, Jousilahti and Salomaa, 2012).

Most women are completely unaware about the cardiovascular risk often because the healthcare providers do not sufficiently advise them about it; however, literature shows that one in every two women may eventually die of heart disease or staroke compared to one in 25 women for breast cancer (Galinto and Locorotondo, 2015). This is as a result of masculinizing CHD leading to the exclusion of women in cardiovascular research programs (Roeters van Lennep, Westerveld, Erkelens and van der Wall, 2002). Studies have seen a gender bias in the expectations and treatments of the disease such that, for example women are referred for care at later stages in the CVD process than men, and also women are less likely to receive evidence-based care for MI (Hird, Yoshizawa, Robinson, Smith and Walker, 2017).

It is imperative to develop novel screening processes which puts women at increased risk of future CVD considering that there are some diseases which link women to premature CVD (Hird *et al*.,2017). An example is pre-eclampsia which is due to hypertension that causes protein urea in pregnancy is. Pre-eclampsia has been a serious cause of maternal mortality in developing countries.

According to Lehto *et al.* (2012), women usually suffer after menopause which leads to physicians and premenopausal women considering that they are protected from CVD. CVD has been historically underdiagnosed and inadequately treated in women for reasons related to issues of gender bias, lack of public and medical awareness of its prevalence and its unique presenting symptomatology in women (Robins, McCain and Elswick, 2012). Therefore, women are still more

likely than men to present with advanced disease and to experience higher CVD related morbidity and mortality.

2.5 Social determinants of health

As a way of increasing population health status and reducing health inequalities, it is vital to identify and understand the main factors that protect and promote good health (National Health Committee, 1998). These factors are known as the determinants of health. This section will mainly focus on the social determinants of health which are defined by WHO (2011) as the conditions in which people are born, grow, live, work and age, including the health system. Furthermore, these are as a result of distribution of money, power and resources at global, national and local levels, which are themselves influenced by policy choices. The social determinants of health are mostly responsible for health inequities which is the unfair and avoidable differences in health status seen within and between societies. Ansari, Carson, Ackland, Vaughan and Serraglio (2003) explains that modern epidemiology is becoming too narrow in scope as it has become too focused on analysis of risk factors in individuals and ignoring the sociological and ecological perspectives of health which is equally important. Gender roles, social norms and social expectations influence health in different ways which makes it imperative for the study of sociological factors thus giving a deeper and richer understanding of all these dynamics.

There are three distinct components of social determinants that have been identified by Ansari *et al.* (2003). These include socio-economic determinants (e.g., age, sex, occupational status and education), psychosocial risk factors (e.g., social support, self-esteem, chronic stress, isolation) and community and societal characteristics (e.g., income inequality, social capital including civic involvement, level of trust, race and ethnicity), social support (including social networks), culture (including language), access to medical care, and residential environments (Havranek, Mujahid, Barr, Blair, Cohen, Cruz-Flores, Davey-Smith, Dennison-Himmelfarb, Lauer, Lockwood and Rosal, 2015). These are discussed below:

2.5.1 Socio-economic determinants of health

In every society there is unequal distribution of material and other resources which can be portrayed as a system of social stratification or social hierarchy. Attainment of these positions is due to social class, occupational status, educational achievement and income level. Solar and Irwin (2010) define these as socio-economic position. Socio-economic position can be operationalised as social stratification and social class. With the former meaning social orders is where individuals or groups can be arranged along a hierarchy of some attribute like income or education. On the other hand, social class is defined in relations of ownership or control over productive resources. According to scholars like Weber, social positions can be categorized centered on three dimensions which are class, status and power. Class indicates ownership and control resources and is presented by measures of income. Status has to do with prestige or honour in the community or access to life chances based on social and cultural factors. Power is related to a political context.

Worldwide, wealth and income are becoming more focused. Growing literature is suggesting that the distribution of income together with the absolute standard of living enjoyed by the poor are a key determinant of population health. In agreement with the above the National Health Committee (1998), posits that factors that have been shown to have the utmost influence on health in various backgrounds are income and poverty, employment and occupation, education, housing, and culture and ethnicity. It is highly likely to find serious illnesses and premature deaths in people with low socio-economic status.

Wilkinson and Marmot (2003) explain that the social gradient in health runs right across the society such that in the middle-class office workers lower ranking staff suffer more ill-health and earlier deaths compared to higher ranking staff. Hajduchova and Urban (2014) concur that the environment determines and controls the quality of health of an individual. They explain that a large gap between rich people and poor people leads to higher mortality through the breakdown of social cohesion. The recent surge of income inequality in many countries has been accompanied by a marked increase in the residential concentration of poverty and affluence.

Abbot (2015) further states that exposure to societal and environmental disadvantages influences poor health outcomes for low-socioeconomic groups. In countries like the United States, the African Americans are the ones who are more disadvantaged hence their exposure to a lot of diseases that include HIV, diabetes, CVD. Braveman, Egerter and Mockenhaupt (2011) observe that health gradient increases for African Americans with education and income levels compared those without. According to Artiga and Hinton (2018), in the United States, lower education levels are directly correlated with lower income, higher likelihood of smoking, and shorter life expectancy. Apparently, children born to parents who have not completed high school were more likely to live in an environment that poses barriers to health. Their neighborhoods are more likely to be unsafe, have exposed garbage or litter, and have poor or dilapidated housing and vandalism. They also are less likely to have sidewalks, parks or playgrounds, recreation centers, or a library.

According to Lahelma, Martikainen, Laaksonen and Aittomaki (2004), occupational and social class positions represent power and status hence indicating material conditions which are related to paid work. Income requires individuals and their household necessary material resources and it also determines their power of purchasing. Therefore, income is a contributory factor to resources that are essential in maintaining good health.

Braveman and Gottlieb (2014) asserts that socio-economic factors may be as a result of relatively direct and rapid acting exposures. An example is the exposure of people to pollution and allergens (which is more common in disadvantaged communities) which may aggravate conditions like asthma. Non-availability of fresh produce and a concentration of fast food outlets with limited recreational facilities may lead to poorer nutrition and less physical activity hence exposure to CVD. Matthews and Gallo (2011) explain that children who are from low-socioeconomic communities face direct physical challenges to health status and health-promoting behaviours, this is due to emotional and psychological stressors which might be family conflicts or instability which is a result of inadequate resources.

However, Chen and Miller (2012) in their model disagree with life span theories that postulate that as a result of accumulated life experiences, low socioeconomic status individuals come to value secondary control coping strategies as an ideal.

2.5.2 Education

Education has been seen to impact positively on levels of social engagement which will generate more cohesive, safer and healthier societies. At an individual level; the knowledge, personal and social skills provided through education can better equip individuals to access and use information and services to maintain and improve their own and their family's health (Higgins, Lavin and Metcalfe, 2008). Low levels of education are related to an increased prevalence of CVD risk factors, higher incidence of CVD events and an increased CVD mortality, independent of sociodemographic factors (Havranek *et al.,* 2015). Education has been described as a very important dimension of socioeconomic status as it influences future occupational opportunities and earnings (Li et al., 2013). Literature suggests that education is inversely related to risk of mortality as well as those of morbidity and disability, on the other hand, it is positively related to health promoting behaviours, better self-reported health and longer life expectancy (Li *et al*., 2013). Bharmal, Derose, Felician, and Weden (2015) states that education is linked in three interrelated ways; it is associated with better health as it increases health knowledge and behaviours. Secondly it creates better employment opportunities which determine the economic resources that influence health. Thirdly, it also impacts on social and psychological aspects in that the more learned someone is, they might greater perceived personal control, higher social standing and increased social support as well.

According to Walker (2017), more than half a billion females globally are illiterate. These women are faced with numerous challenges that end up leading to poor health outcomes that include CVD, mental illness including high rates of HIV/AIDS. The maintenance and expansion of education for women will play critical role in driving improvement in female health outcomes. Literate/ better educated women and girls are more likely to use contraception that will delay childbirth, partake in physical activity, follow proper diet and will be generally health conscious

(Walker, 2017). Literacy eliminates ignorance by providing information on healthcare; a literate woman can autonomously search for information on how to secure the proper care for herself and her children. It is especially empowering to a rural woman and will instill in her confidence to acknowledge and secure her fundamental health rights which is preventative measure for avoiding premature deaths from a lot of controllable NCDs like CVD.

2.5.3 Gender

Gender is an important influence on how one is viewed and evaluated by other people, this also has an impact on how that person evaluates others. It is an indicator of characteristics of women and men, which are socially determined depending on psychosocial and cultural factors. As human beings grow, they learn and adopt different behaviours strongly influenced by the society that ultimately lead to gender identity and gender roles. Gender provides a foundation for discrimination which is a situation whereby members of a socially defined group are not treated the same (unfairly) due to their inclusion in the group (Krieger, 2001). Socially constructed models' masculinity can have health consequences for men and boys especially when they encourage unruly behaviours. However, in women, it has a huge consequence as they bear the burden of negative health effects from gender-based hierarchies (Solar and Irwin, 2010). Gender inequality based on hierarchical structures can lead to differences in health outcomes between men and women due to distinctive social roles and expectation (Jackson and William, 2006 as cited in Caiola, 2015).

Previous studies have revealed that gender influences perceptions of healthy and unhealthy lifestyles and that there are differences in making health-related decisions (Budesa, Egnor and Howell, 2008). The analysis of high-risk behaviours indicates that gender attitudes and behaviours promote different patterns of healthy or unhealthy lifestyles amongst men and women (Ristvedt, 2014). In addition, various roles and unequal relations between genders strongly interact with differences in social and economic aspects such as opportunities and resources available the possibility to make decisions and fully exercise human rights (Vari, Scazzocchio, D'Amore, Giovannini, Gessani and Masella, 2016). This allows us to understand the reasons why different

and sometimes inequitable exposure to health risk, including bad lifestyle occur in the population impacting on health outcomes.

Women are affected due to their lower social status and lack of control which exposes them to health risks. However, Idler (2003) argues that women are more aware and knowledgeable about most health issues. This motivates women to seek help from health care sources and more likely to seek information about health. Women also frequently visit health practitioners including physicians, psychologists, gynaecologists and plastic surgeons, this is because they are more health conscious due to their unique biological challenges.

2.5.4 Psychosocial factors

Stansfeld, Fuher, Cattell, Wardle and Head (1999) assets that psychosocial factors may include stressors (risk factors) and protective factors (resources) in relation to health. These stressors may include life events, chronic major difficulties, social isolation, high job demands, bad relations and low job control (Stansfeld *et al.,* 1999). On the other hand they may be protective factors like social support from family or friends, high levels of control over work and skills discretion. According to Lancheros and Perez (2015), various psychosocial characteristics at the ecological level have been related with diverse cardiovascular health aspects such as poor cardiovascular risk profile and incidence of major cardiovascular event. Neylon, Canniffe, Anand, Kreatsoulas, Blake, Sugrue and McGorrian (2013) states that psychological factors can influence health behaviours and act as barriers for adherence to treatment thereby increasing the risk of coronary artery disease (CAD).

Socio-economic inequalities in morbidity and mortality cannot be entirely explained by well-known behavioural or material risk factors of disease for example in CVD outcomes, risk factors such as smoking, blood pressure can explain less than half of the socio-economic gradient in mortality (Solar and Irwin, 2010). Factors such as social support which is an important determinant of health, have been discovered to increase medical care utilisation. According to Hawkins, Watkins, Kieffer, Spencer, Espitia, and Anderson (2015), studies have revealed that traditional sex roles can impede the acceptance of social support. Hawkins *et al.* (2015) further give an example of

African American men, their need to maintain autonomy can lead to them setting limitation to the type and extent of social support they participate in.

A sense of self achievement increases the feelings of self-worth and self-efficacy thereby improving positive mental health status as well as the ability to have the psychological well-being necessary for good health. Han *et al.* (2015) claim that studies have revealed that self-esteem is related to life outcomes like human relationships, work, health and healthy aging.

According to Bharmal *et al.* (2015), chronic stress is a causal factor of disease, the strain from stressful experienced may trigger substances that can damage the immune system, vital organs and physiological system resulting to rapid onset of chronic illnesses like CVD (Adler and Stewart, 2010 cited in Bharmal *et al.,* 2015). A study conducted by Ahnquist (2011) discovered that in women, financial stress was detrimental to their overall health over a long period of time such as psychological distress and musculoskeletal disorders. Self-reported financial stress was associated with poor health outcomes in women. Ahnquist (2011) further attests that it is not low income but the feeling of being unable to manage financially in daily life that is shown to be the most vital to health. Pohl (2014) corroborates that mental health influences productivity and satisfaction as it influences self-rated health status and how men and women utilise health care services. Pohl (2014) further explains that people who have psychological distress feel less physically healthy which leads to pessimism and an increase in awareness of symptoms of diseases leading them to reporting their health as poor (Barsky *et al*., 1992 cited in Pohl, 2014).

There has been evidence showing that stressors such as the loss of a loved one can increase the risk of cardiac events. Stress at work has been discovered in many studies as linked to CVD and has also shown to increase the risk of metabolic syndrome (Neylon *et al.,* 2013). Greco, Steca, Pozzi, Monzani, D'Addario, Villani, Rella, Giglio, Malfatto, and Parati (2014) assert that there is substantial evidence indicating that there is a relationship between depression and the progression of established CVD where some studies claim that 20% of people suffering from CHD show indications of depression. According to Greco *et al.* (2014), some studies have discovered that patients with positive representations of illnesses like (Myocardial Infarction (heart attack)

and chronic illnesses) have better health outcomes as they respond better to treatment, attend rehabilitation and maintain post-rehab activities. On the other hand, those who have negative feelings of their illness may view it as “more serious and uncontrollable, the time of healing as longer, and the consequences as more severe” (Greco *et al.,* 2014: 222).

WHO launched a study on the Global Burden of Disease which predicted that CHD and depression will be one of the leading disabling disorders globally by 2030 (Mathers and Loncar, 2006). Handberg, Eastwood, Eteiba, Johnson, Krantz, Thompson, Vaccarino, Bittner, Sopko, Pepine, and Merz (2013) purports that psychosocial factors that affect women include depression, early life adversities and post-traumatic stress disorder; these are pervasive and have shown strong relations with CVD. Depression is a common factor severe in women more than men, this makes it a doubled risk factor among females than in males (Smolderen, Strait, Dreyer, D'Onofrio, Zhou, Lichtman, Geda, Bueno, Beltrame, Safdar and Krumholz, 2015). Not only does depression act as an independent factor for CVD deaths, but it also causes deaths for many other diseases (Zhang, Devlin, Smith, Imperatore, Thomas, Lobelo, Ali, Norris, Gruss, Bardenheier and Cho, 2017). According to Marmot *et al.* (2012), women’s source of psychosocial stress in their life course is trying to balance care giving, paid work and household chores. However, for men it is usually working conditions that impact on their psychosocial stress.

2.5.5 Cultural factors

Culture influences how health is viewed, how symptoms of illness are expressed and when and how help is sought (Pandalangat, 2011). It gives a picture of the world and enables people to understand what they know. It is a complex but stable set of goals, beliefs and attitudes synonymous or mutually common to a group of people (Ravindran and Meyers, 2011). Napier, Ancarno, Butler, Calabrese, Chater, Chatterjee, Guesnet, Horne, Jacyna, Jadhav, and Macdonald (2014) add that culture is not only understood habits and beliefs about perceived wellbeing but also includes political, economic, legal, ethical and moral practices and values. Culture determines health seeking behaviour and how one undertakes treatment and also their perceptions towards that treatment. Uskul (2010) purports that our socio-cultural environments

shape our psychology regarding health and illness, which is our feelings, thoughts and actions towards our physical states. Uskul (2010) encourages cross-cultural work as it can assist researchers to test theories and hypotheses in different cultural environments thereby assisting practitioners to be equipped with information to network with individuals from diverse cultural backgrounds.

A study looking at socio-cultural factors and immigrant women's mental health discovered that immigrant women in that study who had better mental health were those who disagreed with patriarchal rights that support intimate partner violence (Alvi, Zaidi, Ammar and Culbert, 2012). This validates that autonomous women are more open-minded and this allows them to talk about their issues which will in turn reduce depression, stress and other mental health issues. According to Uskul (2017), some cultural norms control gender relations even in healthcare where women feel uncomfortable being examined by someone of the opposite sex.

Furthermore, Beard, Tomaska, Earnest, Summerhayes and Morgan (2009) identify culture as an enabling factor for behaviours such as smoking, sedentariness, abuse of alcohol and drugs. Marmot *et al*. (2012) elucidate that risk taking and other behaviours observed in men such as violence, heavy drinking are due to gender norms which endanger both sexes. These gender norms are influenced by cultural practices or norms. Women may find it challenging to partake in physical activity as they believe they have to remain nurturers and passive as feminine gender-role socialisation dictates (Eisker and Hersen, 2012). The groups of women usually affected by such are the elderly and overweight women. Older women may not view exercise participation as an option with their own histories unlikely to include organised physical activity. These women may have been actively prohibited to actively participate in sport and this is a challenge in that there is a link between past exercise experience and future activity patterns. Older women must also overcome long-standing beliefs regarding the appropriateness of exercise, diet and body size. Therefore, intervention programmes must address these belief systems and the power structures guiding them. Even if women are willing to exercise, their caring duties might preclude them from participation. Studies have revealed that 70% of women are carers of ailing family

members and this results in them suffering from stress or depression. These women might respond to the stress by abandoning regular physical activity (Eisker and Hersen, 2012), hence exposure to risk factors of CVD such as obesity.

2.5.9 Social support

Kahn and Antonucci cited in Schumaker and Czajkowski (2013: 24) describe social support as'

> "interpersonal transactions including one or more of the following: affect (expressions of liking, admiration, respect or love); affirmation (expressions of agreement with or acknowledgement of the appropriateness of some act or statement of another person); and aid (transactions in which direct aid or assistance is given, including things, money, information, advice, time, and/or entitlement".

Howard Creaven, Hughes, O'Leary and James (2017) accentuate that social support has two categories which are, perceived social support and received social support. The former is described as the support a person perceives would be given during periods of life challenges, the latter then refers to the actual support received during periods of stressful life challenges (Zinva *et al.,* 2017). Howard *et al.* (2017) claim that social support is associated with the reduction of CVD development due to that when individuals perceive that support is there, it will motivate individuals to assume that they have more coping resources at their disposal. Therefore, the kind of support that one gets will influence their recovery during times of ailment.

Berkham, Kawachi and Glymour (2014) state that social networks also play a pivotal role in influencing health by additional mechanisms such as forces of social influence, levels of social engagement and participation, regulation of contact with infectious diseases, access to material goods and resources and negative interactions. Social networks influence health behaviours as it is gives an opportunity for sharing behaviours, norms and support for behavioural decisions. These behaviours may include smoking, diet, sexual activity, substance abuse, binge drinking and even physical activity (Berkham *et al.,* 2014). Furthermore, Vianna and Barbosa (2017) state

that social network has a vital role in health as it regulates access to resources and opportunities to its members, modelling their behaviour which may be higher or lower risk.

Liu *et al.* (2017) elucidate that there is structural support which is the size and frequency of contact within the individual's social; and functional support which is the quality of the individual's social network. It denotes the assistance an individual acquires from their social circles which can be emotional support and also in the form of advice. According to Lett, Blumenthal, Babyak, Strauman, Robins and Sherwood (2005) cited in Liu *et al.* (2017), some evidence has revealed that functional support is essential compared to structural support in reference to CHD. It moderates the relation between major depression and CHD such that depression can be a predictor of CHD when functional support is low. Petrova, Garcia-Retamero, R., Catena, Cokely, Carrasco, Moreno and Hernández (2016) agree that social epidemiology reveals the importance of social support towards the prevention of CVD. They link more social support with less likelihood of individuals developing or even dying from CVD if they develop it.

2.5.6 Accessibility

Levesque, Harris and Russell (2013) note that access has been defined as a product of supply factors which comprise of things such as location cost, on the other hand, as demand factors such as burden of disease, knowledge and attitudes and skills. Access is therefore the use of services depending on the need and the time those services are needed (Bidgeli *et al*., 2012). Among barriers to health care services that have been identified are geographical, economic and socio-cultural factors; and these have been identified as the main barriers to access to health care services (Parajuli and Doneys, 2017).

Summers (2015) states that government policies must be in line with the Sustainable Development Goals (SDG) which state that they should be widespread and timely access to healthcare so as to relive poor households in developing countries from burden of diseases and other significant health expenses. Cummings, Allen, Ko, Bonney, Hunter-Jones and Cooper (2016) highlight that access and the use of healthcare services may increase if resources are more enabling or supportive, present safety, if the routes are more convenient to accessing

healthcare services. However they further stipulate that access will be reduced if there are a fewer resources for the poor (Cummings *et al*., 2016).

Parajuli and Doneys (2017) articulate the influence of gender barriers on women's and girl's access to health care in rural areas (WHO, 2010). These barriers include those that are faced due to gender dynamics that are as a result of inequalities that affect men and women uniquely in the society. Such obstacles prohibit women and girls from travelling to seek care, lessen their access to sources of income and restrict them from partaking in vital household and community decision and activities (Parajuli and Doneys, 2017).

2.6 Risk factors of CVD

The term risk factor is used to describe a specific behaviour or physical characteristic that increases the likelihood of a disease or injury (Adodo and Omoifo, 2011). According to Adodo and Omoifo (2011), CVD risk factors are characteristics which an individual possesses or is exposed to that increases the chance that they might develop a heart disease. CVD burden is projected to increase in the near future with the low-and middle-income countries expected to experience a significant increase (Vilahur, Badimon, Bugiardini and Badimon, 2014). This increasing prevalence in these countries is due to lack of prevention programmes, high exposure to CVD risk factors and lack of access to efficient and equitable healthcare services. It is also documented that women will be at the receiving end of this CVD burden with low-to-middle income countries suffering more.

The significance of CVD for women has been well document, however, subjective awareness is limited. Vaccarino, Badimon, Corti, De Wit, Dorobantu, Manfrini, Koller, Pries, Cenko and Bugiardini (2013) elucidate that over the past decade, the recognition of the importance of CVD in women together with an increasing awareness of gender differences in natural history, prevention strategies, treatment and prognosis of CVD and a shift of focus from men to women on CVD has been witnessed (Vilahur *et al.,* 2014). A study by Oertelt-Prigione, Seeland, Kendel, Rücke, Flöel, Gaissmaier, Heim, Schnabel, Stangl, and Regitz-Zagrosek (2015) discovered that women at an increased risk are also the ones less aware of the risk and thus, identifies new

challenges in the development of future preventive measures. In the USA, there are health promotion campaigns held by American Heart Association “go red for women” which are to a certain extent effective (Oertelt-Prigione *et al.,* 2015). However, literature dictates that in most sub-Saharan countries little or nothing has been done to create CVD literacy and awareness.

The section below reviews literature on modifiable risk factors of CVDs that are most common in women. These include abnormal blood lipids, hypertension, physical inactivity, diabetes, diet, obesity, menopause, physical activity, smoking tobacco and alcohol use.

2.6.1 Abnormal blood lipids

These include increased blood cholesterol (fat) and this has a direct link to Ischemic Heart Disease (IHD) (Tennakoon, 2012). According to a study in South Africa by Oldewage-Theron (2013), looking at abnormal lipids, also known as dyslipidemia, in low-income women aged 18-90 years discovered that body mass index, age and education were strong predictors of abnormal lipids where there was a correlation of abnormal blood lipids with a higher BMI, hypertension and age. Dyslipidemia was discovered to be correlated with employment meaning that education could lead to affluence and the consumption of energy rich foods, resulting in obesity (Oldewage-Theron, 2013).

A study for women’s health reported that high levels of cholesterol is significantly associated with an increased risk for ischemic stroke even in women who are healthy (Kurth, Everett, Buring, Kase, Ridker and Gaziano, 2007). A study in Zambia (Muula, 2012) reported that overweight participants had a higher chance of having raised cholesterol (abnormal lipids) than obese participants. This might be because those who are obese might change lifestyle habits and may also use health care services compared to the overweight. If lowering cholesterol drugs are used, they may be prescribed for obese patients compared to those with lower weight (Muula, 2012).

2.6.2 Hypertension/ High blood pressure (HBP)

Hypertension is regarded as the most significant risk factor for stroke. It weakens the blood vessels thereby predisposing them to damage and causing the heart to work extra hard to keep

the blood circulating (World Heart Federation, 2017). This is a significant risk factor for stroke as well as CHD development (Tennakoon, 2012; Ariesen, Claus, Rinkel, and Algra, 2003).

Blood pressure can be regarded as the pumping movement of the heart and the resistance of the vessels through which the blood flows (Guo, 2015). Hypertension is the increase in peripheral resistance and the stiffening of arterial walls. It can be caused by sedentariness, high salt intake and alcohol abuse (Guo, 2015). Player and Peterson (2011) expound that anxiety and stress may also result in symptoms that might increase blood pressure. A study discovered that women with phobic anxiety had a higher risk of fatal CHD and even cardiac death (Player and Peterson, 2011). High blood pressure is a growing global burden which aids in cardiovascular deaths and morbidity. According to Dalusung-Angosta (2010), even though hypertension and cardiovascular risk is loosely related, some hypertension patients do not experience cardiovascular events during long life spans.

During pregnancy, the woman's body changes so as to adapt to the new changes in their body and this is viewed as "stress test". Pregnancy can lead to a lot of complications which include hypertensive disorder or gestational diabetes thereby placing a woman at a future risk of developing CVD (Harvey, Coffman and Miller, 2015). It actually increases maternal risk of poor pregnancy hypertension and also stroke (Wilson, Watson, Prescott, Sunderland, Campbell, Hannaford and Smith, 2008; Davis and Duvenoy, 2011). CVD and pre-eclampsia are not limited to the time of pregnancy alone but there is a chance of them persisting to later in life after the pregnancy (Cusimano, Pudwell, Roddy, Cho and Smith, 2014). Pregnancy-related heart complications even after being resolved post-pregnancy follow women as an increased risk factor later in life (Kurth and Malik, 2015). People born to mothers who had gestational hypertension are also at the risk of developing high blood pressure though the "how" part has not yet been established.

2.6.3 Diabetes

This is a major risk factor for CVD especially for women as they are at a high risk for CHD. It is usually regarded a CHD equivalent in terms of its risks and it continues to be a serious health

concern all over the world which has added to the number of deaths, morbidity and increasing health records (Player and Peterson, 2011). It has been regarded as the seventh leading cause of death making it a priority risk factor. It is responsible for cardiovascular events like myocardial infarction (MI) or stroke (Gaede, Lund-Andersen, Parving and Pedersen, 2008). Type 2 diabetes results from a combination of genetic and environmental factors. Despite the genetic factors, the risk for diabetes is also exacerbated by factors such as hypertension, overweight or obesity, physical inactivity and uncontrolled diet (Kilkenny, Dunstan, Busingye, Purvis, Reyneke, Orgill, and Cadilhac, 2017). Type 2 diabetes is projected to become the second leading burden of disease in women by 2023 (Begg, Vos, Barker, Stanley and Lopez, 2008).

CVD risk in people with diabetes is two or three times higher than in those without the disease and CVD causes between 50% and 80% deaths in people with diabetes (Peters, Huxley and Woodward,0 2014). A study revealed that major differences in risk factors of CVD in individuals with or without diabetes were higher in women than in men (Peters et al., 2014). Diabetes-related excess risk of stroke in women is due to their having a chronically raised cardiovascular risk profile in the prediabetes state, and this is more likely to be undetected and therefore untreated than in men. This statement has been corroborated by Kurth and Malik (2015) who purport that there is a difference in the detection of diabetes in women than in men.

Gestational diabetes mellitus affects pregnant women and it is known as glucose intolerance that leads to hyperglycemia (excess glucose in the bloodstream) which is first recognised during pregnancy. There is a high chance of a woman who had gestational diabetes to develop diabetes within five years after pregnancy thereby increasing the risk of CVD (Davis and Duvernoy, 2011).

2.6.4 Diet

According to Hghighatdoost et al. (2013), from time immemorial, it has been established that nutritional habits and dietary intakes are strongly related to CVD events (Raza, Snijder, Seidell, Peters and Nicolaou, 2017). Nutritional foods such as vegetables, fruits, fibrous foods and fish have a protective effect against CVD, diabetes and obesity, however, dietary items like sugar, fat and carbohydrates through excessive consumption of soft drinks, milk based products, meat and

rice can be detrimental to health. Excessive consumption of dairy products could lead to weight gain although recent evidence is showing that high fat dairy product assists in reducing weight compared to low fat dairy (Bonthuis, Hughes, Ibiebele, Greenand Van Der Pols, 2010; Raza *et al.,* 2017). The intake of low fibre refined grains and sweetened beverages increases the risk of diabetes and other CVD risk factors. In combination with an inactive lifestyle, diet has been proven to be one of the most imperative modifiable risk factors, giving effective means to achieve healthy and nutritious diet so as to prevent CVD (Htun, Suga, Imai, Shimizu and Takimoto, 2017). One study in Japan concurs with the above as it discovered a significant association between vegetable-rich diet pattern with favourable blood lipid profiles in women (Sadakane, Tsutsumi, Gotoh, Ishikawa, Ojima, Kario, Nakamura and Kayaba, 2008).

Htun *et al.* (2017) enunciate that dietary patterns are determined by lifestyle, socio-economic and environmental elements which include income, individual preferences, cultural beliefs and food prices. Socio-economically challenged groups are closely related with CVD deaths, it is justified to presume that diet plays a role in the deaths of this group. According to Larriue, Letenneur, Berr, Dartigues, Ritchie, Alperovitch, Tavernier and Barberger-Gateau (2004), studies have discovered that low socio-economic groups prefer unhealthy choices of food that include white bread, potatoes, pasta or rice and other refined foods. However, the high socio-economic groups prefer healthier choices like unrefined foods, whole meal foods, fruits and vegetables as they can afford them. Furthermore, USAID (2014) purports that women tend to consume foods that are high in carbohydrates and fats, which further increases their risk of NCDs, either due to their inability to access healthy food options or because some cultures favor women with higher body weight, which is seen as a sign of wealth and prosperity.

2.6.5 Obesity

In adults, overweight is defined as Body Mass Index 25 to 29 kg/m^2 and obesity as BMI equals or greater than 30 kg/m^2. Other indexes that have been used less commonly but possibly with more predictive power include body fat, waist circumference, waist-to-hip ratio and weight-to-height ratio. Obesity has various adverse effects especially on CV health. It increases total blood volume

and cardiac output, and cardiac workload is greater in obesity which means the heart has to put extra pressure for blood to flow in the arteries. Obese patients are more likely to be hypertensive than lean patients and weight gain is typically associated with increases in arterial pressures (Lavie, Milani and Ventura, 2009). Obesity is associated with premature atherosclerosis, increased risk of MI and heart failure and decreased survival largely because of cardiovascular deaths specifically in extreme weight categories (Apovian and Clarke, 2012). According to Barnes (2013), evidence has shown that obesity independently increases the risk of CVD in women even in the absence of other metabolic abnormalities.

Rutherford, Gough, Seymour-Smith, Matthews, Wilcox, Parnell and Pringle (2014) stipulate that not only does the prevalence of obesity and its morbidity impact on gender and socio-economic inequalities and premature mortality, it may also have an effect on an individual's image. According to USAID (2014), women are more likely to be obese than men, due to an array of cultural norms. In certain societies it is not acceptable for women and girls to exercise, especially in public, while the same is not true for males. Physical inactivity is a contributing factor to obesity, which increases a person's risk of becoming diabetic and developing other types of obesity associated NCDs such as hypertension. Even women who work in agriculture and who are physically active do not always have access to the foods they farm; these women often lack autonomy and authority, and their produce is usually sold by their husbands or partners for income.

2.6.6 Menopause

Menopause is a representation of a phase in a woman's life where there is a stoppage of the menstrual cycle for twelve months. The woman loses ovarian hormones during this period which results in physiological, biochemical and structural changes thereby altering the general health status of a woman (Nwagha, Ikekpeazu, Ejezie, Neboh and Maduka, 2010). With age comes stiffness of blood vessels which also increases chances of hypertension. Ogwumike, Adeniyi, Dosa, Sanya and Awolola (2014) also state that a change in hormones also increases blood pressure during the menopausal transition. Due to all the changes that occur in a woman's body,

a likely factor for CVD that has been seen in women is the gradual decline of oestrogen (hormones) levels (Sullan and Watson, 2013).

Whilst menopause is not a modifiable risk factor, it is important to look at it as it directly affects women. Before menopause, the incidence of CVD in women is lower than recorded in men, however, it becomes common between the ages of 45-55 years. Then the number of women increases compared to that of men. If a woman gets to menopause before the age of 55 years she has an increased chance of suffering CVD (Davey, 2007). The Framington study in a sample of 2873 women, showed that in all age groups incidence of CHD was lower in premenopausal than post-menopausal women (Gordon, Kannel, Hjortland and Mcnamara, 1978). Sallam and Watson (2013) concur with the above that women are usually affected by CVD a decade later compared to men, despite that, premenopausal women who have MI have a worse prognosis than men.

According to Ogwumike *et al.* (2014), it is imperative that women in the premenopausal years embark on a lifestyle of improved physical activity as well as change their dietary patterns so as to reduce a chance of getting CHD.

2.6.7 Physical activity

This is an important risk factor for CVD. Physical activity is any bodily movement that muscles produce which causes energy expenditure. If energy inside the body brought in through food and drink is not balanced with energy expenditure through activity over a certain period of time, the unused energy will be stored as fat, leading to obesity/ overweight. Thompson, Buchner, Piña, Balady, Williams, Marcus, Berra, Blair, Costa, Franklin and Fletcher (2003) state that people who are physically inactive are approximately as twice likely to die from CHD compared to physically active. Physical inactivity has been linked to other risk factors as well.

Regular aerobic exercise helps in strengthening the heart muscle, maintaining blood vessels and generally improving the circulatory system to transfer blood and oxygen to all parts of the body (Adodo and Omoifo, 2011). According to Kurth and Malik (2015), for a woman to maintain a

healthy lifestyle she should have a Body Mass Index (BMI) of less than 25 kg/m^2, abstain from smoking and be physically active for 150 minutes per week of moderate exercise or 75 minutes of vigorous activity.

2.6.8 Smoking

According to Watson and Sallam (2013), many mechanisms of cigarette smoking-induced CVD have been postulated and smoking is known to increase inflammation, thrombosis and oxidation of cholesterol all of which are contributors to building up of plaque in the arteries (atherosclerosis). According to studies, women who smoke have a higher chance of developing atherogenic (tending to promote the formation of plaque in the arteries) CVD compared to men (Huxley and Woodward, 2011). Gratziou (2009) purports that when one gives up smoking their cardiovascular system functioning improves and the risk of cardiovascular death reduces. Smoking contributes to more hospitalization and deaths than alcohol and illicit drug use combined.

Similar to diabetes, smoking is a higher risk factor for women than men. According to Humphries, Izadnegadar, Sedlak, Saw, Johnston, Schenck-Gustafsson, Shah, Regitz-Zagrosek, Grewal, Vaccarino and Wei (2017), a large cohort study of 11472 women and 13191 men in Copenhagen discovered that the risk of a heart attack was 50% higher in female smokers than male smokers across all ages.

2.6.9 Alcohol

Epidemiological studies have identified alcohol consumption as a factor that may either positively or negatively influence many diseases including cardiovascular disease, certain cancers and dementia. Often there seems to be a differential effect of various drinking patterns, with frequent moderate consumption of alcohol being salutary and binge drinking or chronic abuse being deleterious to one's health (Cahill and Redmond, 2012). Long-term of drinking alcohol in excess can lead to CVD such as stroke, heart disease, hypertension, heart failure (Begg, Vos, Barker, Stevenson, Stanley and Lopez, 2007). Alcohol is a source of energy and therefore must be considered for its potential to increase body mass and lead to overweight and obesity.

With few exceptions, studies from several countries demonstrate a 20–40% lower cardiovascular disease incidence among drinkers of alcoholic beverages compared with non-drinkers (Cahill and Redmond, 2012). The general consensus currently is that compared with abstinence, frequent moderate consumption of alcohol is associated with the lowest risk for coronary heart disease incidence and mortality (Ronksley, Brien, Turner, Mukamal and Ghali, 2011). For example, 1–2 drinks per day is a negative risk factor for atherosclerosis and its clinical sequelae myocardial infarction and ischemic stroke. On the other hand binge or heavy episodic drinking, defined in the USA as consuming 5 or more drinks in a relatively short time period, is associated with increased cardiovascular disease and mortality (Mukamal, Maclure, Muller and Mittleman, 2005). Okeefe, Bhatti, Bajwa, DiNicolantonio and Lavie (2014) are in agreement with the above that habitual light to moderate alcohol intake (up to 1 drink per day for women and 1 or 2 drinks per day for men) is associated with decreased risks for total mortality, coronary artery disease, diabetes mellitus, congestive heart failure, and stroke. However, higher levels of alcohol consumption are associated with increased cardiovascular risk.

Okeefe *et al.* (2014) further state that heavy alcohol use is one of the most common causes of reversible hypertension, secondly it accounts for about one-third of all cases of non-ischemic dilated cardiomyopathy, thirdly it is a frequent cause of atrial fibrillation, and markedly increases risks of stroke—both ischemic and hemorrhagic.

2.7 The Impact of CVD on Women's Lives

CVD can create a large burden of a person's finances for example if someone is hospitalized due to heart attack, the short term expenses will be very high, furthermore CVD still remains expensive for the long-term due to the price of drugs, tests and frequent physician appointments. This might pose a challenge to women in rural areas where rates of unemployment are very high. According to Zimstats (2016), rural women in Zimbabwe face numerous problems in accessing basic services such as health, education and other means of production unlike those in urban areas. A study in Kenya revealed that sickness was a significant determinant of household income which had negative impacts (Mwai and Muriithi, 2016).

CVD and stroke can lead to death as well as serious illness, disability and reduces/lowers the quality of life. Stroke may actually result in paralysis, speech retardation and psychological problems. Some individuals after a heart attack suffer fatigue and depression making it more difficult for them to partake in physical activities (Million Hearts, 2017). Schofield, Kelly, Shrestha, Passey and Callander (2012a) noted that for elderly women, living standards will be harder as a result of high expectations of living standards that have developed. It also affects their day to day lives as women as they usually take care of their families. This will prohibit them from performing their duties at their fullest potential, thereby affecting the wellbeing of their families as well.

CVD has substantial indirect costs that are as a result of lost productivity and early retirement from the workforce (Leal, Luengo-Fernández, Gray, Petersen and Rayner, 2006; Schofield *et al.,* 2012a). It also results in significant indirect costs for women in terms of lost income and lost savings. Schofield *et al.* (2012a) claims that the costs of reduced labour force participation and the reduction of the individual's financial assets are also affected at that time. Swoboda and Lipsett (2002) asset that many families are unprepared for the financial impact of a long term health condition like CVD and hence, they might end up using the savings that they have. In a low resource setting, treatment for CVD may drain household resources which will lead the family into impoverishment (Mwai and Muriithi, 2016). If those affected are breadwinners, it will mean that they will be a reduction in spending on food and education, loss of care and investment in children. This might lead to women losing their main sustenance of families leading to family instability.

Diagnosis with CVD correlates to a decreased life expectancy, therefore, CVD can have a large impact on family structure. Individuals with CVD are less likely to live to see their grandchildren, or even children, grow up. Thus, young individuals are sometimes required to grow up without the influence of a parent or a grandparent. This can be a challenge in countries like Zimbabwe, where traditional family structure is greatly valued. Individuals growing up with a lost parent or grandparent may feel more or less alone or unsupported. Golics, Basra, Finlay and Salek (2013) agree that chronic illnesses like CVD impact families in similar areas that include "emotional

impact, financial aspects, social life, time commitments, personal relationships and family time such as family holidays (vacations)" (Golics *et al.* 2013: 788). According to Saligram and Gumbanzvanda (2017), most of the times if there is a sick person at home, women and girls are the ones who provide care leading to these missing school or even work. They further stipulate that given that women make up two thirds of the illiterate adults worldwide, this disadvantages them to even learn about prevention of CVDs. Furthermore, socio-cultural beliefs prohibit women from engaging in physical activity as this might be viewed as unfeminine.

CVD can affect women's self-rated health and cognitive functions which can trigger the occurrence of depression in turn worsening chronic diseases (Zhang et al., 2017). Patients with heart attack, especially amongst women, may be later affected by disorders such as depression, anxiety and post-traumatic stress disorder (Kumar and Nayak, 2017). These have negative impacts on recovery, they are disabling, they reduce the quality of life and they also lead to increased death rate amongst heart attack patients. After someone has been diagnosed with depression after having a heart attack, there is a notable reduction in the quality of life, their stress levels and exhaustion increase, and it often leads to the hospitalisation of the patient (Kumar and Nayak, 2017). Carol *et al.* (2012) agree that depression is a common factor amongst patients with cardiac illness and is related with increased morbidity and mortality. CVD and depression reinforce each other leading to a downward spiral relationship.

CVD restricts one's mobility, ability to care for themselves and even to communicate normally as well as their employment (Australian Institute of Health and Welfare, 2010). Schofield (2012b) reported that those who have retired at work due to CVD are more likely to be impoverished as they will not have income to sustain their standards of living. Kawada (2012) explains that the percentage of poor health was higher amongst those with heart and circulatory diseases than for other health conditions.

The effects of CVD are not limited to health, but can seep into social aspects of life as well. Because heart disease is a chronic illness and not something one can be cured of, the presence of heart disease becomes a permanent part of a patient's life. A website created for

heart disease self-help warns patients that they will have to adjust to a life with no strenuous exercise and that they will have to forgo drinking alcoholic beverages (Improve Heart Health, 2009). Depending on the type of lifestyle a patient had previously been used to, these restrictions may represent significant changes in their life.

2.8 Conclusion

This chapter reviewed literature on CVD with particular focus on women. It established that CVD in women has not been thoroughly researched as it has always been regarded as a man's disease. Also, CVD has been researched on the bio-medical aspects but the social facets have not been much considered.

CHAPTER 3

THEORETICAL FRAMEWORK

3.1 Introduction

In 2005 the World Health Organization set up an international commission to explore social effects on health, and gender was amongst the noteworthy concerns as it was seen as one of the 'structural drivers' producing the unequal living conditions leading to inequalities in health (WHO, 2010). Health theories are therefore important because they provide an insight into health behaviours and what influences them. However, the biggest limitation in those theories with respect to this study is that they have not addressed the gender aspects of health comprehensively (Cornell, 2012).

Over the years, an effort has been made by feminists to incorporate gender into theories of health so as to assist health professionals understand gender implications on prevention and treatment as well as motivating behavioural change. However, there is insufficient knowledge on women and cardio-vascular disease (CVD) research as most of these researches focus on sexual and reproductive health, HIV/AIDS, gender-specific cancers whilst ignoring other non-communicable diseases (NCDs) like CVD which are killing hundreds of women everyday worldwide. It is therefore paramount to develop a conceptual framework that will assist in understanding women's perceptions of CVD.

This chapter therefore presented a discussion of the main strands of feminism and their contribution to health research. It then focused on social construction feminism, intersectionality theory and standpoint theory. These theories were incorporated so as to explain how social issues play a part in how women view diseases.

3.2 Brief Overview of Feminism and types of feminism

Feminism is used to refer to historical political movements in America and Europe which believed that women live in an unjust world with no rights and equality, these movements were performed by women on behalf of the rest of the women. Feminism is a representation of women's difficulties

and suffering together with their dreams in equal opportunities in societies controlled by men (Ghofhrati and Medini, 2015). McCann and Kim (2013) assert that feminism was vastly used in the United States women's movements from the 1970s and this indicated opposition/resistance to women's subordinate social positions, spiritual authority, political rights and economic opportunities. Since feminism is used as a way of amplifying the voices of women and also contending that women's unjust conditions must be changed, it is important to use it in this study as a way of uncapping women's thoughts about CVD and what can be done to attend to the challenges they are facing in a world that still does not pay attention to women's overall health needs.

Gardiner (2004) elucidates that feminist movement saw the birth of various theories that expounded on the root causes of male domination, these theories also strived to correct the flawed assumptions about both women and men, and to envisage the new kind of individuals in new circumstances. Feminist theory is a tool used to change women's inferior social position and the social, political and economic discrimination that propagates it (Lindsey, 2005). It is a philosophy which provides scholarly tools where historical agents can examine the injustices they are dealing with and construct rationales to debate their particular demands for change (McCann and Kim, 2013). Feminist theories apply their tools to building knowledge of women's oppression, this information is used to enlighten measures for resisting subordination thereby making women's lives better. Feminist theory accentuates that theory should be accountable to politics and it should be able to tackle problems that affect women, and this should be done by women for women (McCann and Kim, 2013). Health issues are some of the challenges that can be dealt with politically, but however, it is very common to find women's health issues being tackled by a panel that constitutes of a majority of men who are not in a position to represent women. Therefore, these feminist theories seek to analyse gender and power relations (where men have more say compared to women) and how this imbalance could be challenged and transformed. Feminist theory in this study will help in unpacking the trends of gender and power relations and how these have affected women's perspectives on health issues. It will also assist in making recommendations that are applicable to women and that can be easily adopted by women.

Pererira (2012) postulates that numerous feminist writers view their scholarship as progressive and an essential intercession in the institution of gender. This is because their aim is to generate knowledge and also to query and transform existing various forms of knowledge production. Through this, feminism can be described as a way to ask questions and also bring out solutions that can help emancipate and change women's health. This can be done through engagement with women affected by CVD or those who have cared for such women.

Feminist movements have at different moments been viewed as a series of 'waves' where the first wave of feminism is described as a movement that intended to agitate suffrage and also aimed to achieve votes for women (Evans and Chamberlain, 2015). The second wave, was more complex as it focused on various aspects of women's lives that included the right of equal opportunity at work and also the right to decide the fate of their bodies. Focus was also directed towards sexual liberation so as to eliminate the oppressive gendered double standards the society had (Baumgardner and Richards, 2000; Evans and Chamberlain, 2015). The second wave focused on women's enthusiasm to pursue careers, reproductive rights, violence against women and equal wages (Trier-Bieniek, 2015). The third wave of feminism has a broader focus and it is faced by feminists who have grown up in the cyber age, it also focuses on the rejection of notions of post-feminism and contentions that feminism is for white women alone (Trier-Bieniek, 2015).

As stated above from the outset, feminism has always been advocating for the significance of taking care of a woman not just by giving her jobs or letting her vote but also by giving her health a priority since she has the most sensitive and fragile body structure in addition to pregnancy and other motherhood responsibilities. Every aspect of a woman's health should be treated as a priority and that is what feminism strives to achieve.

The section below gives a brief overview of some feminist theories that have been formulated to address several issues that affect women. It also looks at a brief history of Women's Health Movement and how it has played a part in emancipating women's health. It then proceeds to discuss the intersectionality theory and social construction of feminism and how they were incorporated into a CVD study, and further looks into the standpoint paradigm which underpins this study.

3.2.1 Liberal feminism

Liberal feminism is a movement set to emphasize the power an individual person has to alter discriminatory practices against women. It encourages individuals to use their abilities and the democratic process (constitution) to help everyone both females and males to become equal under the law and society (Ghofhrati and Medini, 2015). This could be achieved through organisations that advocate for women's rights and those that support the liberation of women from patriarchy and other harmful practices. Liberal feminism recommends that women should have the freedom to control their social role as much as men thereby requiring the removal of patriarchal law that sabotages women's rights. In a nutshell, it aims at delivering equality of both males and females in the organisation of the current social systems. For example, if women are given an opportunity to be educated, they will become the main contributor towards the prosperity of the society as they will construct their families in a better way (Burke, 2001; Nahdiyati, 2009). It means they will be exposed to better access and to greater opportunities which will enhance their socio-economic status, consequently increasing a better chance of good health.

3.2.2 Radical feminism

It was formulated in the 1960s and early 1970s after the realisation that liberal feminism did not make much difference to women's oppression despite winning the areas of law, voting and employment (Dugbazah, 2008). Radical feminism is one of the most influential theories which contributed to the demonstration against male violence in women and it looked at the how, its effects and the solutions to end it. Radical feminism describes male violence against women "as both a cause and consequence of male supremacy and female inferiority and as a symptom of patriarchy" (Mackay, 2015:11). According to Lorber (1997), radical feminism mainly claims that men's oppression and exploitation of women is very hard to eradicate because it is rooted deeply in most men's consciousness. The root being the assumption that women are different and inferior to men in every way.

The purpose of feminism is to end patriarchy as Bell Hooks attests that it is to "challenge, change and ultimately end patriarchy" (Hooks, 2004:108). Patriarchy mainly describes a male rule or

dominance. Feminists use this word to refer to “male supremacy, to a society where men as a group dominate mainstream positions of power in culture, politics, business, law, military and policing, for example-societies like ours” (Mackay, 2015: 5). A society pronounced by female supremacy (matriarchy) has never existed and that it is not what feminism is aimed at as most myths describe it. Feminism is thus a revolutionary movement aimed at changing the world marked with inequalities (Mackay, 2015). Such inequalities would also include health inequalities that result in women dying from diseases due to their inability to access resources that should be available to them.

Radical feminism has however been criticised for not being sufficient in discussing issues of gender and development in Africa, hence African women came up with African feminism that also described their struggles as women in Africa.

3.2.3 African Feminism

Gaidzanwa (2011) asserts that Africa has been subjected to imperialism and has been at war of liberation for a long time. Modern strands of feminism in Africa have emerged during all these anti-colonial and anti-imperial struggles leading to the development of strong actions focusing on the assertion of the rights of women. Feminism in Africa has been critiqued for revealing women’s lack of power and exposing men’s dominance in public life, the economy, politics and society.

Marxists and other organisations labelled feminism as “diversionary, ‘un-African’ and Western-Inspired”. This occurred when issues relating to “customs and traditions that undermine African women’s land and property rights, violence against women in public and private spaces, gender-based inequalities in education, health, economic and political power …” (Gaidzanwa, 2011). According to Mikell (1995), there have been issues of hegemony where African women believe that Western academics and activists want to incorporate them into “a movement defined by extreme individualism, by militant opposition to patriarchy, and ultimately, by a hostility to males”. Western conceptualisation of feminism does not accommodate the African context due to the differences in social, cultural and political affairs.

3.3 Women's Health Movement

It was formulated around late 1960s and early 1970s by feminists who wanted to focus on ending sex discrimination and gender stereotypes perpetuated in mainstream medical contexts. Nelson (2015) articulates that feminists argued that women's insignificant status of being treated as second class citizens was due to legal and medical institutions that prevented women from making their own choices regarding reproductive health care. Doctors in free clinics failed to treat women's health issues seriously and did not pay attention to their specific problems. Women were told by their doctors that their issues were trivial and they often dismissed them. Therefore, women involved themselves in women's liberation movement and started to build clinics that dealt with women's issues. According to Nichols (2000), several groups were formulated which were expressing dissatisfaction with health care, their mutual aim was to regain "power from the paternalistic and condescending medical community and assuming control of their own health" (Nichols, 2000:1).

During the early years of Women's Health Movement and as it progressed, women of colour also started to advocate for the eradication of socio-economic barriers to health. Kickbusch (2005) stipulates that it is important to incorporate precolonial, colonial and postcolonial globalization so as to clarify the reason international health programs have often missed their targets when it comes to Africa. International policies and agendas are often inconsistent with domestic ones, this therefore poses a barrier to the performance of initiatives such as Women's Health Movement (Desai, 2005). It is important that African countries direct some of their resources to funding research that is based on women's health especially emerging diseases like NCDs.

If women are involved in policy formulation, their input of what needs to be done will be very clear and specific, unlike thinking that Africa's male leadership has all the answers to the continent's health problems. Nhondo-Simbanegavi (2005) explains that it is to be noted that government-focused international forums that involve delegates to converge at a European or North American venue may not address problems for women in Africa effectively. Such gatherings are likely to be

attended by men hence the challenges faced by women may not be addressed. Nhondo-Simbanegavi (2005) affirms that,

> " if international organisations moved out of their ivory towers in Europe or North America and headed south for such meetings they will be more likely to make contact with grassroots organisations where women dominate" (2005: 154).

This would facilitate working relations and understanding so as to close the gap between international and domestic gender issues. It will also facilitate in the implementation of approaches that can tackle health issues in African countries, especially issues that concern women the most.

3.4 Social Construction Feminist Theory

The social construction feminist theory focuses on gender inequality where women and men are socially differentiated in order to justify treating them unequally. It looks at the practices that create gender differences and also presents the structure of gender as invisible.

According to Makoba (2008), learning about the social construction of gender helps us to understand how gender is shaped and given meaning by the social structure of a society. Within the realm of feminism, the social relations of gender are ones in which women are treated as inferior and subordinate to men, and thus gender divisions are exploitative and oppressive. The social construction of gender creates in each of us a self-image of who we are as females and males and how we should behave. From this perspective, the cognition that "I am a woman" functions to activate a woman's entire experience of femaleness in society, and serves as a general schema that shapes women's current and future activities (Worrell and Remer, 1992). In the context of this study, the social construction of gender gains currency in the fact that women may be influenced by the society to indulge in unhealthy lifestyles so as to maintain a fuller figure which is more "African like". This in turn might become harmful to their health as it may breed deadly NCDs such as CVD. In some societies, women are mostly not encouraged to participate in sporting activities as these are viewed as man's activities and the woman's duty is to take care of her husband and family.

Courtnay (2000) supports the above by articulating that from a constructionist perspective, women and men think and act in the ways that they do not because of their role identities or psychological traits, but because of concepts about femininity and masculinity that they adopt from their culture. Their behaviours are shaped according to the society's expectations of them. Nanjunda (2014) asserts that culture is a shared concept of the specific social groups. The concept of health, hygiene, wellbeing and sickness are the fundamental issues present in all types of cultures across different societies. Every culture has its notions, concepts about health and illness. Culture is a significant tool used to conduct health studies among rural populations. This is because individuals convey distinctive health behaviour and medical pluralism as mitigated by their gender and cultural belief systems in their different communities.

According to Nanjunda (2014), illness has three domains which are illness as a sanction (punishment for doing wrong), illness as deviance (form of social control) and illness as an indicator of social system performance (indicative of the performance of an existing social system). Nanjunda (2015) contends that illness has social and medical deviance. Culture determines the stigmatisation of illnesses, it also chooses what should be considered a disability or not, and those that are deemed contestable or definitive. Social stigmas prohibit people from being integrated into society for example society and healthcare discriminates against certain diseases or conditions like AIDS, mental disorders, disability, sexually transmitted infections, skin disorders and many other conditions. It is also the society that determines which illness is more intense than the other which results in some diseases being deemed as unimportant. Nanjunda (2015) agrees that some diseases are stigmatised in societies based on the type, duration and severity- it may be different as well in urban and rural areas. The thoughts of illness and health are socially constructed inside each society of every culture. The illness experience is constructed by culture and a patient's personality. Culture plays a huge role in a person's perception of a disease.

According to Bird and Rieker (1999), ever since the reduction of maternal mortality there has been an increase in women's life expectancy. However, women experience higher rates of illness,

stress, and other psychological problems. It has been noted that men have higher mortality and lower morbidity, however, they still suffer life threatening chronic diseases especially those of the heart, cancer, liver and kidney (Tower, 2017). Whereas women face chronic disorders like arthritis, anaemia, thyroid conditions etc. although men suffer earlier onset of many life-threatening chronic diseases, women tend to experience the same health problems somewhat later in life (Steptoe, Deaton and Stone, 2015). However, biomedical research has primarily focused on men's experience of life-threatening chronic diseases like CHD which are common in both sexes, while limiting the study of women's health problems primarily to sex-specific diseases like cervical cancer (Gonsalves, 2017). According to Bird and Rieker (1991), it is not valid to assume that treatments developed by studying men are directly generalizable to women.

In most African settings, there's still a high rate of sexual segregation where women are still having low status and lower paying jobs compared to men. Some women have a higher chance of becoming single parents, becoming carers for their extended families, and their low incomes will not sustain them enough to even have health insurance. In the rural areas one can note that women are not employed and they depend on cultivating crops. In the previous years of drought, most women in rural Zimbabwe have not harvested much to sell let alone sustain their families. Therefore, seeking healthcare has not been prioritised especially for diseases that might be presumed minor. Due also to the heavy burden of communicable diseases in Zimbabwe, NCDs like CVD have not been prioritised as they have been believed to be diseases of the west (Gonese, 2015). Patriarchy is still rife around these areas as modernisation has not yet deeply penetrated them. Therefore, this gives a disadvantage to these societies as they may show a lot of ignorance in the causes of different diseases which are not considered a priority (even though they are killing thousands every day).

This study focuses on women from a rural setting which is mainly constituted with poor people of a lower class. According to sociologists, the understanding of sickness and disease is an outcome of the organisation of society. Unfavourable working and living conditions make people sicker and the vulnerable people die compared to the rich. Even though there might be better living

conditions and health facilities but if inequalities are ignored the gap between the poor and the rich will widen. Warin, Zivkovic, Moore and Davies (2012) stated that it had been discovered that poor women are more likely to be obese, and this will likely lead them to being impoverished because of their body size.

White (2016), argues that disease is not solely caused by biological factors or individual lifestyle choices but other social factors also contribute to the experience and shaping of a disease. Feminists who study sociology of health contend that medicine and patriarchy control women by "enforcing passivity, dependence and submission as appropriate feminine traits" (White, 2016: 145). White (2016) articulates that women's bodies are defined as weak compared to their male counterparts, therefore, women are described as inferior, sicker and more at risk for chronic illnesses compared to men. Therefore they are constructed as inferior and sicker on account of their reproductive capacity. Enforced passivity will lead to sedentariness which is a major risk factor of developing CVD.

According to Groscz (1988) as cited in White (2016), there are three ways in which medical knowledge has reflected male interests, that is:

1. It discriminates women by differentiating them from the more positively valued image of men, for example some studies suggest that women have smaller brains compared to men or not representing or underrepresenting women in important clinical trials. Famous clinical trials without women subjects like that of The Physicians Health study of 1988, which was supposed to demonstrate the effect of aspirin on reducing the risk of CVD, was based on clinical study of 22 071 men without female participants. Another one is The Multiple Risk Factor Intervention Trial which studied CHD risk factors used a sample of 15 000 men.
2. Medicine is patriarchal in its claims about knowledge that is, men are "rational, logical, clear and unemotional" making male knowledge to sound objective, truthful and independent whereas women's knowledge is said to be intuitive, emotional and unreliable.

3. Medical knowledge is phallocentric which means that women's issues are represented in general terms that refer only to male characteristics.

As the standpoint feminist theory highlights, making male knowledge more important than that of the females isolates major reflectors of health issues that will be difficult to deal with if knowledge is not derived from the women.

3.5 Intersectionality theory

Intersectionality theory is a framework which emanated from the second wave academic feminism. It was coined by feminist and womanist scholars who believed that feminism at that time was all about middle-class, educated white women. They believed that it is important for feminism to use another angle to view oppression like using race or even social position. They stipulated that it is imperative to include women's standpoint in the intersections of gender with other significant social identities such as the health of an individual, class, and/or race (Shields, 2008; Bauer, 2014). Intersectionality theory also derives a part of its ideologies from Carl Marx. McGibbon and McPherson (2011) state that Marx was the first person to come up with a methodological approach which defined the linkages amongst societies, economics and history. Marx articulated that for a society to exist, they should be a production and reproduction of material necessities of life and this is based on the premise that economic factors are governed by politics and ideologies created by a society. As the poverty-wealth gap is increasing, there are profound consequences for women's health and well-being. Intersectionality theory provides a comprehensive foundation for interrogating these consequences.

Roger and Kelly (2011) use the intersectionality theory to address issues of social justice. They point out the congruency of social justice with Rawls's theory of justice. This theory has three basic principles which state that "a just society will guarantee basic rights for people; benefits to the most disadvantaged people in a society must also benefit the least advantaged; and some things may benefit only the least advantaged." Rawls acknowledged that inequalities will always exist but they should be avoided at all costs or minimised. Efforts of identifying and working actively must be done to eliminate subtle acts of discrimination in order for the oppressed to

achieve the basic human right of good health. Even though the disadvantaged might gain a little, efforts must be put to place by shifting the research process to a more equitable system. Social justice will be achieved when the gap between those with good health and those with poor health closes.

Hanskivsky (2012) articulates that intersectionality theory is of the notion that human lives cannot be reduced to single characteristics. Not one factor can best describe experiences but all factors create an experience. Pertaining to human experience, there is a correlation amongst factors. Most gender and health researches elucidate that sex and gender is shaped by social context and they cannot stand alone as they are influenced by various factors that include biological factors, social locations and other systems of oppression (Bowleg, 2012).

According to McGibbon and McPherson (2011), all those sociodemographic factors denote social location, a powerful determinant of one's access to the social and material necessities of life. They stipulate that the main focus of the intersectionality theory is its focus on questioning of power in the society and the structural antecedents of oppression. Focusing on structural causes of inequities makes this theory a basis for informing policy to confront inequities in the social determinants of health as they concern women and other vulnerable populations. In this study this theory helps in unpacking the relationships that different factors have on gender and even gender knowledge, attitude and perceptions.

Bauer (2014) states that some health inequalities can be as a result of biological factors like sex and genetics. However, sociodemographic factors are as a result of social inequity, policies and practices that upsurge incidence of disease in some groups while shielding the other. Intersectionality provides a clear picture of identifying inequalities, coming up with strategies and in making sure that results are relevant to specific communities. It has been used as a theoretical framework for health and most significantly for sex and gender studies (Bauer, 2014). Using this framework allows researchers to note the explanatory limitations of single axis designs centered on sex and gender, for example, research on CVD shows that focusing on sex and gender often obscures the fact that CVD is disproportionately experienced by racial ethnic and low-income

groups whose lives are shaped by intersecting processes of differentiation along the lines of age, sex, ethnic groups affiliation, socio-economic class and geography (Hanskivsky, 2012). Rogers and Kelly (2011) concur that intersectionality explains the various, multifaceted dimensions of inequality and power structures that create roles of domination and subordination under the preface of race, class, gender and sexuality. It therefore explains that oppressions in the society do not work independently but they intersect in complex patterns. They should not be viewed as additive but rather interlocking and cannot be separated (McGibbon and McPherson, 2011).

The intersectionality theory of gender will serve as a way of unearthing not only gender, ethnicity or race aspects, but rather it explores other factors that might have an impact on women's standpoint of CVD which include social class, location, economic position and culture amongst other factors.

3.6 Standpoint Theory

Stand point theory is rooted in the awareness that women hold a particular standpoint based on their experiences as women (Kowalski-Braun, 2014). It is a theory which suggests that what one knows is solely dependent on the position they hold in life or society. What one knows of the world is in the way they experience it and the way they see it on the location they are in (Appelrouth and Edles, 2010). This notion draws from Marxist Theory claim that the work we do shapes what we know and how we behave. Standpoint theory does stress on the experiences of one person within socially constructed groups, it stresses more on the social orders that establish such groups. Feminist standpoint refers not simply to identity locations (like being a woman, poverty and race) but to the critical understanding of these locations shaped through reflection and struggle (Hesse-Biber and Leavy, 2006; Kowalski-Braun, 2014).

According to Appelrouth and Edles (2010), standpoint theory emphasizes that the standpoint of men has consistently been privileged however, that of the white male upper class pervades and dominates other world views. This is because this class of people is rich and controls the political, economic and other important aspects of running the world. Yuill (2012) agrees that the standpoint theory derives its concepts from Marxist ideologies which is of the opinion that people's

consciousness of their life and situations reflect material conditions and power relations, hence inequality disables and oppresses marginalised groups. For survival, the oppressed group attains an outsider status with respect to dominant groups, allowing them to see things about social structures and how they function that members of the dominant group cannot see (Yuill, 2012). This forces those on the "outside" of dominant social and political groups to learn not to only how to get along in their own world, but also how to get along in the dominant society. Yuill, (2012) states that feminists adopting this theory believe social sciences research should be practiced from the standpoint of women as they are better equipped to understand certain aspects of the world. It is important for marginalised groups to voice out their opinions making it easier for areas of research to be identified as they have epistemic privilege that gives them an opportunity to see difficulties either not seen or viewed differently by the dominant group (Swigonski, 1994).

Standpoint emphasises on the role of research as a tool for social changes and empowerment as it focuses on woman's agency and giving an account of women's oppression. It is concerned with an emphasis upon research for women. It drifts away from traditional science-based accounts of women's experiences and it generates new thesis accounts through which to bring about social change. In this study the standpoint theory was used to understand women's perspectives of CVD.

3.6.1 Situated Knowledge in Standpoint Theory

Standpoint theory is about power relations in the production of knowledge. It explores situated positions and experiences of women and men and the effects of gender processes on one or both sexes. It is based on the premise that scientific research was biased towards male knowledge, interests and experiences (Bird and Reiken, 1999); Wylie (2003); Appelrouth and Edles, 2010). It seeks to address specific problems that are related to women than just generalising every experience as common to men and women. CVD has been associated with men however, it affects women as much hence, it is important to look at it from a woman's perspective. Standpoint theory gives women a voice to express their challenges so as to avoid generalisation of

knowledge. Therefore it was an asset to this study as it assisted the researcher to acquire information from the real sources.

Standpoint theory is against early feminist presentation of women's oppression in monolithic terms. It favours situated, local and communal constitution of knowledge. This theory magnifies difference across cultures/ diversified experiences, for example, culturally diversified collectivities. Standpoint analysis is committed to situational knowledge thesis; what an individual understands is shaped by their location in a hierarchically structured system of power relations. It magnifies differences across cultures or contexts. According to Wylie (2003), those who are underprivileged, oppressed, marginalised are likely to be discredited epistemic agents because they might be regarded as uneducated, uninformed, and unreliable. These individuals might actually know things that those who occupy better positions do not know. This is relevant to this study as it amplifies rural women's voices which are generally believed to be constituted of people from lower classes.

3.6.2 Standpoint theory and CVD health

According to Klima (2001), feminism is associated with political and social activism, however, to look at socio-political events as the only historic milestone of feminism is to ignore the deeper meaning of the philosophic beliefs behind the Women Health Movement. Yuill (2012) agrees that indeed feminism has played a pivotal role in improving women's health and position in the society even though this term feminism has been associated with women who hate men. As stated above in the Women's Health Movement, health issues that affect women have at least gotten attention especially sexual and reproductive health. However through standpoint theory, this study strives to address a health issue that has been regarded as minor or irrelevant to women and has even been ignored by many governments especially in Africa. Through the standpoint paradigm women gave an account of their views from their standpoint and this might inform health professionals about the perspective women have on CVDs.

Andrist (1997) came up with the following concepts of standpoint theory which are applicable to women's health and they include;

1) Women are the actors and definers of their experiences therefore inquiry and practice should begin from them. Healthcare professionals need to listen to the everyday experiences of women to understand the root of cause of illness.

2) It is the aim of the feminist theories to attempt to transform current structural power relations in society for example activists have criticised the healthcare system which has oppressed women where relationships with providers are hierarchical and based on patriarchal models.

3) The new psychologies of health indicate that 'women are relational beings', meaning they act in the world within the context of relationships.

4) Several studies have suggested that women have objectified their bodies hence women have eating disorders; these disorders might lead to binge eating as women would want to appear appealing to men.

5) Feminist epistemology therefore seeks to change healthcare for all women. Its foci is intended to instill a consciousness that leads to new socio-economic values for transformation.

The standpoint theory seeks to transform women's health and wellbeing through exposing the challenges that they face and giving them a voice to fight the social and political injustices that they face.

3.7 Conclusion

It can be seen from the discussions that gender has made long strides within the development discourse, and subsequently in health literature. The work of gender advocates and feminist scholars has helped to keep gender issues alive in the development agenda in some form or other since the 1970s (Mies, 1999). The critique of the dominant development theories led to changes in the ideological environment of development. Greater attention began to be focused on bringing about sustained improvements in the well-being of the individual, and benefits to all.

This change in perspective is reflected in the corresponding change in the concepts used by feminist scholars in gender analysis, which has gradually impacted the thinking and practice of health care provision over the last three decades (Dugbazah, 2008). Underlying all these categories is the need to challenge dominant notions of women's position in society with a view to improving their circumstances in relation to men (Hook, 1988). This can be achieved through an integrative approach that combines feminist theories and gender analysis to uncover gender differences with respect to the perspectives that women have towards CVD and its effects on their lifestyle. Knowledge of these dynamics is essential for understanding issues pertaining to health in rural Zimbabwe.

3.8 Summary

This chapter discussed various theories that informed this study and it wrapped up with the stand point theory which undergirds this study. The following chapter narrates the methodological approaches followed in this study.

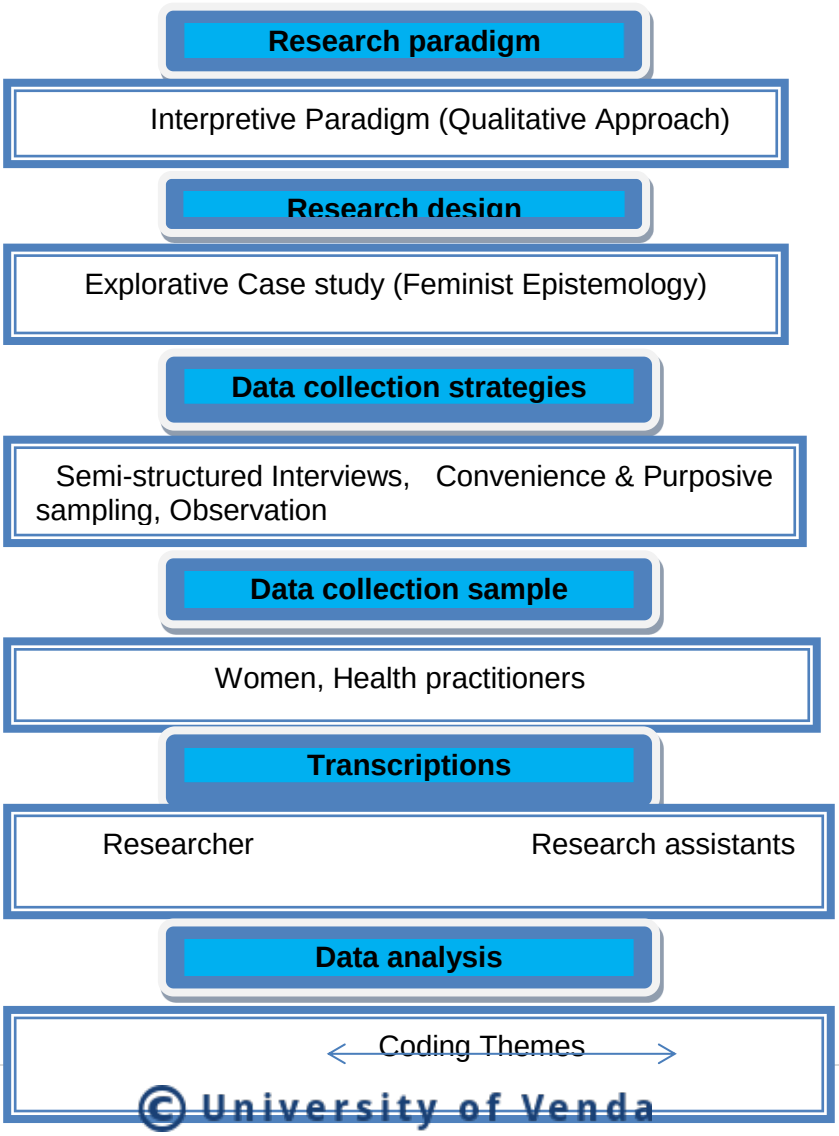
CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

This chapter describes the methodology that was used to carry out the research. The discussions begin with the study aims, the research approach, and descriptions of the study setting and specifics of the data collection stage. On the data collection procedures, the target population, issues in sampling, including the interviewing methods are presented. In addition, measures of trustworthiness are outlined, ethical issues and considerations are also discussed. Data analysis techniques are also described. Figure 1 below describes the processes that were followed by the researcher to meet these objectives.

Figure 4.1: Methodological Processes



4.2 Research Paradigm

The term paradigm is a set of assumptions or beliefs about fundamental aspects of reality which give rise to a particular world view (Maree, 2016). The research paradigm serves as the lens or organising principles by which reality is interpreted. Chilisa and Kawulich (2012) define a paradigm as comprising of three elements which include a belief about the nature of knowledge, a methodology and criteria for activity. Bogdan and Biklen (1992) state that the research paradigm influences the way knowledge is studied and interpreted. It is the choice of paradigm that sets down the intent and expectations for the research.

This study used an interpretivist paradigm which postulates that the world is constructed, interpreted and experienced by people in their interactions with each other and with wider social systems (Tolley et al., 2016). According to Tolley et al. (2016), the interpretivist paradigm has three key components which are subjective perceptions and understandings, which arise from experience; objective actions or behaviour and context. Willis (2007) agrees with the above that interpretivism usually seeks to understand a particular context and the core belief of this paradigm reality is socially constructed. This paradigm assisted in discovering reality through the participant's opinions, their own background and experiences. Interpretivists are of the opinion that reality is not objectively determined. Studying women in their social contexts (rural) enabled the understanding of how CVDs would affect the participants' lives. Schwartz-Shea and Yanow (2013) concur with the above that researchers who use interpretivist paradigm discover reality through their subject's opinions, their own background and experiences.

The interpretivist paradigm in this study gave the women an opportunity to relate their experiences, perceptions and knowledge in accordance to their own social context and standpoint. This is because interpretive paradigm values subjectivity and believes that there is no precise way to information and there is no technique that leads to intellectual progress. According to Thahn and Thahn (2015), interpretive researchers do not seek the answers for their studies in rigid ways. Instead, they approach the reality from subjects, typically from people who own their experiences and are of a particular group or culture. Therefore the researcher managed to

approach various rural women from different backgrounds who gave out valuable information by narrating their perceptions on CVDs. This unfolded a lot of new things that had not been anticipated.

4.3 Research Method

This study used a qualitative approach to understand how rural women account for their experiences in their own context, to also explore how they construct their worlds and the meaning they attribute to their experiences (Merriam and Tisdell, 2015). The researcher was keen to make sense of the meaning rural women have constructed in their own world of how CVD affect their lives as mothers, as wives and also in their careers. These meanings also triggered curiosity on how they think CVDs can be prevented. Silverman (2013) corresponds that qualitative research comprises of various ventures most of them concerned with the scientific study of realities which are objective. Qualitative research approach is most suitable for studies that are concerned with exploring people's lived experiences or everyday behaviour (Silverman, 2013). It is more concerned with inquiry about 'what' or 'why' of a phenomenon whilst the quantitative approach is more focused on 'how many' or 'how much'. According to Green and Thorogood (2018), qualitative research approach is more appropriate if the researcher wants to understand the perspective of participants, explore the meaning they give to phenomena or observe a process in-depth. In this study, this approach helped researcher to capture freedom, natural development of action and representation of the phenomena as women narrated their thoughts. It gave the researcher an opportunity to understand and argue by using evidence from data and literature what the phenomena being studied was all about (Taylor, Bogdan and DeVault, 2015).

4.4 Research Design

The research design in the study was used to explain data requirement, the methods that were used to collect and analyse data, furthermore, it elaborated how those methods were used to answer the research questions. Yin (2017) elucidates that research design is the logical sequence that connects the empirical data to a study's initial research questions and, ultimately to its

conclusions. This study used an exploratory case study design. An exploratory case study often examines a phenomenon that has not been investigated before and can lay a foundation for more studies to be undertaken (Yin, 2003).

The exploratory approach typically occurs when a researcher examines a new interest or when the subject itself is relatively new. This approach was appropriate for this study because there is very little existing research on the subject of rural women and CVDs (Van Wyk, 2014). Based on the literature reviewed in Africa and in Zimbabwe, there has not been much research done on CVDs and women, most studies focus on the clinical aspects of investigation and there has been no significant inquiry on the social aspects of health and their contribution to CVDs. For example, these studies focused on clinical aspects of CVDs (Garcia *et al*., 2016; Zhang, 2010; Tedesco *et al*., 2015; Mensah *et al*., 2015; Rapeport, 2011; Mutowo *et al*., 2015). However, little attention has been given to women's standpoints of CVD and how they think it might affect them. This study intended to understand the perspectives of women from Gwanda South Rural District and also to know their perceptions and knowledge of risk factors of CVDs. The exploratory part of the research helped the researcher identify the boundaries of the environment in which the problems, opportunities and barriers of women's perceptions of CVDs lie. According to Vogt, Gardner and Haeffele (2012), exploratory research helps in discovering how people view their own development over a certain period of time and across their life cycle. Babbie (2013) states that exploratory studies are done for three purposes that is, first to satisfy the researcher's curiosity and desire for a better understanding; secondly, to test the feasibility of understanding a more extensive study; thirdly, to develop the methods to be employed in any subsequent study.

A case study design was chosen for this study. It refers to a systematic and in-depth investigation of a particular stance in its context so as to generate knowledge (Rule and John, 2011). This approach assisted the researcher in generating an understanding and gave an insight into the perspectives of rural women who have lived with CVDs and those who have observed people with CVD. It gave a thick description of the women's perceptions and knowledge of CVDs (Rule and John, 2011). Though most scholars have debated the generalisation of case studies, to a certain extent the researcher believes that the results of this case study will shed light on other

similar cases hence providing a level of transferability. Crowe, Cresswell, Robertson, Huby, Avery and Sheikh (2011) suggest that case studies must be approached depending on the epistemological standpoint of the researcher and in this study the researcher used an interpretivist standpoint that tries to understand individual and shared social meanings. As stated in the theoretical framework, this study was underpinned by a standpoint feminist epistemology which focused on women as participants. The standpoint principle emphasizes the equality of the power relationship between the researcher and the participant. According to Duffy (1985), as cited in Abdul (2014), these principles are stated as follows:

- If the aim of the investigation is to study women,
- When the study is focused on women's experiences,
- If the study has a potential to help participants together with the researcher,
- If the main investigator is a woman,
- If the word feminist is used in the report,
- When feminist epistemologies are applied that include interaction between the researcher and participant, non-hierarchal relation between the researcher and participant, expressions of feelings and concerns of values,
- When a language that does not reflect sexism is used,
- If the write-up includes feminist literature in its Bibliography.

The critical stages of exploratory case studies are in the ways in which they are conducted. Hence, the following stages were followed which include: defining the case, selecting the case, collecting and analysing the data, interpreting the data and reporting the findings (Crowe *et al.,* 2011). This is explained in detail in the following sections below.

4.5 Setting

This study was conducted in Gwanda South Rural District (GSRD), which is located in Matabeleland South Province of Zimbabwe. Matabeleland South has an area of 54,172 km² and a population of approximately 683,893 (ZNSA, 2012). Gwanda town is the capital of the province and the administrative town for the province where provincial government offices are found. The province shares borders with South Africa and Botswana and ethnic groups found in this province include the Khalanga, Tswana, Sotho/Pedi, Ndebele and Venda speaking people. Education and analysis of the province show that it has 95% literacy rate though dropouts from school are substantially high (Zimstats, 2012). Over 52% of the female population completed their primary schooling nationwide. 73% of women aged 15-49 and 77% men of the same age range attended secondary school or completed high school.

Gwanda South constituency has seven wards all under Gwanda Rural District Council and each ward is represented by an elected councilor. Poverty levels are as high as 80.2% (Zimbabwe Poverty Atlas, 2015). People in this District mainly survive through communal farming, cattle ranching, brick molding, irrigation farming, gold panning, fishing, vending and cross border trading. Generally, livestock rearing is a dominant economic activity in this province. As stated above, the soils are not very fertile and the district is characterised by low rainfall which has led to dependence on donor assistance. The Parliament of Zimbabwe (2016) reported that they are 22 NGOs operating in Gwanda District which cover mostly HIV/AIDS, education and health. Zimbabwe Women's Resource Centre and Network is the only NGO in the district which advocates for women rights and protects the girl child rights.

According to The Parliament of Zimbabwe (2016) report, GSRD has eight clinics with one clinic each ward and a district hospital at Manama Centre. Most of these clinics do not have the basic infrastructure, medicine and equipment to facilitate effective operation. The District hospital has one doctor, whereas at least each clinic has qualified nurses and nurse aides.

GRSD has a total of 38 business centres, only Manama is a growth point, whilst the rest are rural business centres. It is a service centre with the Evangelical Lutheran Mission that has a bible school, hospital and a high school, a small commercial centre and a bus rank. This hospital serves a lot of wards around Gwanda South District, hence it was a suitable place to get participants who met the inclusion criteria. Just about one kilometer from the hospital is the shopping centre which comprises of various shops, market, a lodge, several bottle stores and a night club. This was another convenient place to find participants as one could find women of different age groups. About 40 km away from the business centre is Ntepe business centre which was also noted as another appropriate place to collect data. Ntepe business centre serves a lot of people from various villages hence it was quite convenient to get participants there.

4.6 Research methodology

Research methodology is the procedure by which researchers go about their work of describing, explaining and predicting phenomena (Rajasekar, Philominathan and Chinnathambi, 2013). Its aim is to give the work plan of the research. Methodology in research can be considered to be the theory of correct scientific decisions which researchers take. The following sections outline the procedures that were followed in this study.

4.7 Population

According to De Vos (2011), population refers to individuals in the universe who possess particular characteristics that represent all the measurements of interest to the researcher. It is any group that is the subject of research interest. In this study, the population comprised of Gwanda South Rural District women who were between the ages of 21 years to 60 years old. This population assisted the researcher in finding out as much information as possible on rural women's perspectives of CVDs.

4.8 Study sample and Sampling technique

Gentles, Charles, Ploeg and McKibbon (2015) define sampling in qualitative research as the selection of specific data sources from which data are collected to address the study objectives.

Members of a sample are chosen with a purpose to represent a larger population in relation to a key criterion (Ritchie, Lewis, Nicholls and Ormston 2013). Merriam and Tisdell (2015) highlight the importance of sampling which reflects the purpose of the study and guides in identification of information rich-cases. They state that the criteria used should not only be clearly stated but also it is important to state the reason for using the criteria. The sample was selected based on the participant's ability to provide the best information and eligibility in the inclusion criteria. The researcher firstly determined the selection criteria important for selecting the people and sites that were to be studied. The study sites included Manama Hospital, Manama Shopping Centre and Ntepe Business Centre. The researcher created a list of attributes that were important to this study which made it easier for them to locate units matching the list.

This study included participants who were between the ages of 21 to 60 years old. These women were supposed to have a history or experience with CVD (or its risk factors) or have some knowledge of heart disease through the experience of other family member(s). The women also had to be able to speak either Ndebele or English which were the languages used to conduct the interviews. However, those who spoke Sotho were also accommodated because there was a translator for that purpose. An eligibility checklist was used as a way to substantiate that all the participants met the inclusion criteria. It was filled in and eligibility was verified by the researcher prior to obtaining consent.

Women were selected through the process of purposive sampling, where one contact from the various data collection sites represented recruiting the rest of the participants. At Manama Hospital the hospital administrators asked a nurse to look for women who suited the eligibility criteria. The other contacts were recruited through word of mouth where the researcher engaged with the local community members at Ntepe and Manama Business centres to gain entry. These participants were selected on the basis of age, some knowledge or experience of CVD, place of residence and the will to cooperate in the research. They were selected purposively so as to guarantee diversity in backgrounds of educational level, sources of income, hobbies and marital status. None of the contacts reported any challenges in recruiting participants for this study.

Cleary, Horsfall and Hayter (2014) stipulate that the adequacy of participant number involves thoughtful decision-making, a small number may risk adequate depth and breadth. However, a large number may also produce superficial volumes of data. The number of participants or the stopping of data gathering in this study was determined by the point of data saturation where the researcher noticed a redundancy in giving out of information. After each interview, the researcher went through transcripts to assess if there were no new ideas being generated from the participants. After interviewing 16 participants and conducting a focus group discussion, the point of data saturation was achieved and the interviews were then discontinued. Sobal (2001) agrees that discontinuation of an interview is guided by adequacy and appropriateness together with analytical redundancy whereby information from previous material, one or many will not provide additional insights.

4.9 Data collection procedures

Firstly, the researcher went to seek permission to use the Manama Mission Hospital from the Headquarters of the Evangelical Lutheran Church in Zimbabwe which owns the Manama Mission. The District Administrator of Gwanda South District was also approached to acquire permission to use the Manama and Ntepe Business centres. After permission was granted, the researcher then made arrangements over the phone with the medical superintendent of the hospital on the date and time they were going to collect data. When it was time for data collection, the hospital made arrangements of the venue for the interview which was in a secluded place away from noise and other forms of distractions. At the two business centres, the researcher arranged with two shop owners who offered a room at the back of their shops. So arrangements were made with participants on time and date for the interviews.

Following the sampling procedures, consent was sought from each and every participant (see appendix B). The researcher fully disclosed the aim of the study and what was expected of the participants both in IsiNdebele and English languages. Verbal and written agreement implied consent and this was clarified before the commencement of each interview. The consent form was translated from English to IsiNdebele for clarity to those who did not understand. The

translator additionally served as a witness and co-signed the consent form to confirm that this was a clear process for all participants and to affirm that the consent process was transparent. This translator was present for all discussions to ensure that all questions were clarified appropriately. The participants were under no compulsion to partake in the study and they were free at any time to pull out without consequence. No interviewees exited the study. No monetary or gift compensation to participate was issued to the participants and this protected them against coercion.

According to Marshall and Rossman (2014), a researcher can choose to combine data collection methods, bearing in mind that each method has particular strengths and that it would help in eliciting certain desired information. This study used one focus group discussion and semi-structured one-on-one interviews as a way to obtain as much data as possible. The researcher used an interview guide which was designed with the objectives of the study in mind (Table 1 below shows how these were met and the relevant people and material that were used to acquire information). This type of interview guide gave the researcher opportunities to probe the perceptions, knowledge and experiences of the participants. Probing enabled the researchers to explore new paths which had not been considered initially (Gray, 2004). These paths created room for flexibility during data collection and created space for the interviewer to pursue lines of enquiry stimulated by the interviewer. The interviews were conducted in the participants' preferred language and an interpreter was available in all interviews incase clarity in vernacular was needed. These interviews were conducted in two months and each lasted between 30-45 minutes. This length of time was enough for dialogue because of the amount of content covered and the participants' enthusiasm to share their views and feelings about CVD. The interviews were semi-structured with open-ended questions which guided and prompted the discussions. The women were asked to talk about their knowledge of CVD and through this knowledge they talked of how they think it would impact on their lives. The questions were developed in English, translated to IsiNdebele and back-translated to English to check for consistency.

Table 4.1: Data collection outline

Objective	Research Questions	Variables or Measurements	Data Sources	Data Collection Methods, Techniques and Tools
a) To understand women's knowledge on the modifiable risk factors of CVD.	What are the different types of CVDs and their modifiable risk factors?	• Age, highest educational level • Types of CVD • Naming of risk factors • Knowledge of risky behaviours	• Females	• Focus group discussion • Semi structured interviews
b) To explore the perceived effects of CVD on women's lives and their families.	What are women's perceived effects of CVD on their lives and those of their families?	• Social, economic, psychological effects • Impact on family	• Female participants	• Semi-structured interviews • Focus group discussion
c) To assess women's perceived experiences and strategies of coping with CVD.	What are women's perceived experiences and strategies of managing CVD	• Perceived differences of experiences in women and men • Coping strategies	• Female participants	• Semi structured interviews • Focus group discussion
d) To assess women's views on prevention of CVD	Which measures can be taken to reduce CVD?	• Prevention of CVD	• Female participants	• Semi structured interviews • Focus group discussion

4.10 Process of the interview

The interviewer explained the purpose of the study to the prospective participants and got their permission to cooperate by signing a consent form. Pseudo names were used so as to maintain confidentiality and anonymity (Alston and Bowels, 2003). The participants were told why pseudo names were used. The researcher wrote down detailed notes of non-verbal behaviour of the participants and observations that they noticed. The notes included everything that was said during the interview and a voice recorder was used to assist in capturing all the information provided verbatim.

Welman Kruger and Mitchell (2012) elucidate the importance of the way interviewers should present themselves to the participants. They stress that the researcher must put into consideration wearing the appropriate clothing as first impressions can have a profound impact on the interview. In order to establish a position of trust, the researcher tried at all costs being honest and frank to the participants about the purpose and requirements of the study (Welman *et al*., 2012). The researcher ensured that participants did not feel that they are just a part of a big crowd subjected to questioning but that their presence is appreciated and needed. The participants were encouraged to feel free to voice out their opinions of the subject without the fear of being judged or fear of disapproval from the interviewer. Good rapport was established which enhanced the collection of important information. Rapport was achieved by the interviewer having an open mind to the participant's answers and not judging them whether they were wrong or correct. Language and cultural values of the respondents were taken into consideration. A Sotho speaking interpreter was used to help in translating during the interviews. Participant's religious, sexual and political affiliations were not propagated.

Focus group interviews are distinguished from any other form of interview by the use of group discussions to generate the data, as opposed to individual interviews (Merriam and Tisdell, 2015). Focus group interviews allow the researcher some control over the line of questioning. While

open-ended questions are asked, some structure is imposed on the subsequent discussions to ensure that these remain within the parameters of the problem statement. Questions were asked to enable the informants to explain and fully discuss their experiences, actions and interpretations. The researcher viewed each informant's perspective as equal to any other's. The participants were encouraged to focus on the questions being asked. Questions were rephrased and further explained to those informants who did not understand what was asked. This was done so as to enable the researcher to elicit data that were directly relevant to the research questions.

4.10.1 Observation

In this study the researcher also observed the setting, lifestyles and social lives of the people in the area being studied. Observation is the process of enabling researchers to learn about the activities of the people being studied in the natural setting through observing and participating in those activities (Kawulich, 2005). This involves a systematic noting and recording of events, behaviour and artifacts in the social setting chosen for study (Marshall and Rossman, 2014). This gave the researchers an opportunity to check the description of terms that participants used in the interview, note events that participants could have been unable to share when doing so would be inappropriate, impolite, or insensitive, and also note situations which participants had described in the interviews. This made them aware of misrepresentations or inaccuracies in descriptions that would have been provided (Marshall and Rossman, 2014).

4.11 Data analysis

Data analysis is a mechanism for reducing and organising data to produce findings that require interpretation by the researcher. Data analysis is a challenging but creative process characterised by an intimate relationship between the researcher, the participants and the generated data (De Vos, 2002). Data were managed using computer aided thematic analysis with Atlas t.i 7.5.7 (Friese, Soratto and Pires, 2018). Atlas.ti has been rightly acknowledged as an essential tool that facilitates researchers' ability to undertake well-organized, systematic, effective and efficient data

analysis in many studies (Rambaree, 2013). Data were analysed using the six phases suggested by Maguire and Delahunt (2017) and they are described below;

Step 1: Familiarising with the data

The first phase started during data collection and continued when the researcher was transcribing the data. At this stage the data collected were revisited so as to clean it up for it to be manageable. Labels were chosen and assigned to different parts of data. A repeated reading was done so the researcher could immerse themselves with the data. After obtaining an overall understanding of the data, the researcher created an ATLAS.ti project and added all documents. ATLAS.ti automatically assigns a number to each document, based on the order in which they are added to the project. This software is a great tool for data management hence it was considered in this data analysis.

As the researcher was working through the data, when they detected a fragment of text which held meaning to the focus of the study, they assigned a certain label to the text (Rule and John, 2011). This label was then used as the code which was used to code other data.

Step 2: Generating initial codes

The aim of the researcher in this study was to address specific research questions so the data were analysed with that in mind. Each segment of data that were relevant to the research questions was coded. Important to note is that not every piece of text was coded. Open-coding was used as they were no preset codes but codes were developed and modified as the coding process progressed. As stipulated in the first step, preliminary ideas had been already brainstormed. So in each transcript every segment of text which was relevant or addressed the research questions was coded. Now codes were general and some existing ones were modified. After having developed the coding frame, the investigator had a good overview of the data as refining the codes required to read and re-read the data many times.

Step 3: Searching for themes

In this step, codes were examined and some of them clearly fitted together into a theme. At the end of the step the codes had been organised into broader themes that seemed to say something specific about a specific research question. These themes were descriptive in nature.

Step 4: Reviewing themes

At this stage the preliminary themes were reviewed, modified and developed. Data that was relevant to each theme was gathered and colour-coded. Data associated with each theme was read to assess whether the data really did support it. It was also considered if the themes worked in the context of the entire data set.

Step 5: Defining themes

The themes were refined so as to identify the essence of what each theme was about. An interaction and relationship between themes and subthemes was established.

Step 6: Write-up

An analytic narrative was then woven together, adding extracts from the data in order to be able to tell the reader a coherent and persuasive story.

4.12 Measures of trustworthiness

According to Graneheim and Lundman (2004), research findings must be evaluated in relation to the procedures used to generate the findings so as to ensure trustworthiness. The description in the qualitative research process of what was done, how it was done and why it was done together with adherence to the identified criteria for qualitative research, ensures the authenticity and trustworthiness of the research process (Vosloo, 2014). Trustworthiness is the extent to which the study is worth taking note. As a way of ensuring trustworthiness the concepts credibility,

dependability, transferability and confirmability were used to describe various aspects of trustworthiness.

4.12.1 Credibility

Credibility refers to confidence in the truth of the data and the interpretation (Lincoln and Guba, 2012). The researcher conducted the study in such a way that the findings are credible; in other words, the reader would make sense of them and believe them. To create links between the data and interpretations, an extensive engagement with data was done. This included data from recordings, notes and transcripts. Two qualitative researchers crosschecked the data and interpreted it within and across each category for triangulation purposes. The researcher was in the field until data saturation was achieved. Prolonged engagement with and observation of the participants' responses was made. The researcher gained an in-depth understanding of the topic, as well as specific aspects of the participants' perceptions. Member checking was done through sharing findings with the participants to allow them to verify their responses. This ensured that their opinions were accurately represented, as well as ensuring credibility. Peer debriefing was conducted where the researcher met and discussed with an expert of qualitative research. This allowed questions and critiques of research activities to be done.

4.12.2 Dependability

Dependability involves the provision of evidence in such a way that if the study is to be done again with the same or similar participants in an analogous context, the findings would be similar (Brink, Van der Walt and Van Rensburg 2012). This test is done to show indications of stability and consistency in the process of inquiry (Vosloo, 2014). In this study, dependability was achieved by describing the research findings, interpretations and recommendations, using an auditable trail so as to corroborate data and ensure that it is internally coherent. A tape recorder was used to increase reliability of all interviews.

4.12.3 Confirmability

Confirmability is concerned with establishing whether data represent information provided by the participants and that the interpretations of the data are not fueled by the researcher's imagination (Brink *et al.,* 2012). In this study, confirmability was ensured by making use of an independent coder. This was reflected by the voice of the participants and not the researcher's perceptions. The technique that was used to support or enhance confirmability in this s z07tudy was an enquiry audit in which the researcher clearly described, explained and justified each stage of the research process.

4.12.4 Transferability

Lincoln and Guba (2012) argue that the description of data gathering must be inclusive enough to enable findings to be transferred to other situations. Descriptive interpretation resulting from the data analysis should apply to other areas. The researcher provided a complete description of the research methodology findings and verbatim quotes from individual interviews to ensure applicability of the study to other contexts. The researcher also requested someone with research experience to randomly read selected transcripts and to identify major categories, so that readers may have a clear picture of the findings.

4.13 Ethical considerations

Ethical considerations are main principles that were applied in this study. The researcher informed the participants about the purpose of the study, the methods, and the procedures that would be followed when conducting the study. These principles are based on human rights that need to be protected in research (Brink *et al.,* 2012). The research proposal approval was done by the University Higher Degrees Committee. Then University of Venda Research Ethics and Publication

Committee ethically cleared the proposal. The following aspects were applied to ensure adherence to ethical principles of research:

4.13.1 Informed Consent

According to Welman *et al.* (2012), consent is a key aspect of ethics that should be considered in every study. The University standard consent form was issued to research participants before the commencement of the study to ensure that they all participated in the study out of their own free will and knowing what they are involving themselves in. The researcher ensured that the respondents were aware of the type of information needed, why the information was being sought, for what purpose, how they were expected to participate in the study and how the study would directly or indirectly affect them. After thoroughly and truthfully enlightening them on the research process in their preferred language, the researcher then gave them informed consent forms to sign as an indication of their agreement to participate in the study. Participants were informed of their right to discontinue participation at any moment they were feeling uncomfortable.

4.13.2 Anonymity and Confidentiality

Confidentiality is related to the researcher's management of private information shared by the participants. The researcher refrained from sharing the information without the authorisation of the participants. No one had access to the study data without authorization (Burns and Groove, 2009). Only the researcher, the interpreter and the promoters had access to the data. Tapes were kept in a safe place where no one could reach them. The use of pseudo names helped to ensure anonymity.

4.13.3 Harm to participants

The researcher ensured that no physical, psychological or emotional harm was inflicted on the participants. The researcher constructed questions in an appropriate manner; without being judgmental to avoid inflicting anxiety and psychological discomfort during the interview process. Other possible dangers were revised and guarded against.

4.14 Summary

This chapter described all the methodological processes that were followed during data collection up until the writing of the report. The following chapter presents and discusses findings.

CHAPTER 5

PRESENTATION AND DISCUSSION OF FINDINGS

5.1 Introduction

In the previous chapter, research methodology, research design and procedures for analysis were described. This chapter presents, interprets and discusses findings. The data is presented and discussed as guided by the research objectives and questions. For each objective, data is presented using the structure of the interviews. The results are presented following themes that answer the research objectives of the study.

Each section is structured in accordance with the themes that arose during the engagements with women on one on one interviews and the focus group discussion. These findings reflect the perceptions of 16 participants and one focus group discussion (FGD). Where appropriate, the number of participants who identified a particular theme is mentioned. The researcher makes use of direct excerpts which are an essential part of data presentation in qualitative studies. These quotations provide invaluable perceptions, in the respondent's own words about their understanding of CVD. The selection of quotations was guided by two factors which are, their representativeness of the theme. Secondly, based on inspiration in that sometimes participants articulated meaning in new or surprising ways or participants expressed their responses in an authentic, captivating manner.

5.2 Profile of the participants

This study had participants from various backgrounds and all of them were women. Table 5.1 below shows a presentation of their occupation, marital status, educational background, the number of children they have and their hobbies.

The participants ranged from the ages of 21 up to the age of 60. Seventeen out of twenty-three participants between the ages of 20-40 had secondary or tertiary education. The older women

mostly had primary education only compared to the younger ages. Three of the participants were self-employed whilst five were employed and the rest were unemployed. The unemployed mostly depended on subsistence farming and temporary jobs. Eleven of the participants were married and five had their husbands staying with them at home whereas others were working in South Africa, Gwanda and Bulawayo. It was noted that older women had more children compared to the younger generation and most of them were unemployed. Furthermore, older women seemed to do more active hobbies like gardening and cleaning whereas the younger women were more into passive hobbies like reading, sleeping and eating.

Table 5.1: Profile of the participants

Respondent	Age	Occupation	Marital Status	Education	Number of Children	HOBBIES
1	33	S.E	M	Primary	8	Gardening
2	25	U	M	Secondary	1	Reading, Cooking
3	21	S.T	M	Secondary	1	Drinking
4	23	U	M	Secondary	1	Fishing
5	24	S.T	S	Tertiary	0	Watching TV, Reading
6	31	U	M	Secondary	1	Eating, Reading
7	32	E	S	Tertiary	2	Watching soccer, Reading
8	25	S.T	S	Tertiary	0	Going out, Reading
9	40	S.E	S	Secondary	0	Travelling, Going out
10	27	U	S	Secondary	0	Sleeping, Drinking
11	26	E	S	Secondary	1	Reading, Watching TV
12	22	E	S	Secondary	0	Eating, Sleeping
14	21	S.T	S	Tertiary	0	Social media
15	38	E	S	Secondary	2	Sleeping
16	44	U	M	Primary	5	Gardening
17	60	U	M	Primary	6	Cleaning, Gardening
1 (F.G)	35	U	M	Secondary	3	Gardening
2 (F.G)	52	U	M	Primary	4	Gardening
3 (F.G)	28	S.E	S	Secondary	1	Cleaning, Fishing
4 (F.G)	41	U	M	Primary	0	Gardening, Sewing/ Knitting
5 (F.G)	24	E	S	Secondary	2	Going out
6 (F.G)	38	U	M	Tertiary	2	Drinking

Abbreviations U= Unemployed; S. T= Student; S. E= Self-employed; S= Single; M= Married

SECTION B: THEMES FOR OBJECTIVE 1

The first objective was to assess women's knowledge regarding CVDs. The interview questions that were addressed are as follows:

1. In your opinion which diseases are classified as cardiovascular diseases? Explain
2. What do you understand by the term "stroke or hypertension"?
3. In your opinion, what are the things that people do in life that puts them at risk of CVDs?

5.3 Theme 1: Knowledge of CVD

Three subthemes emerged from this theme and are discussed in this section. These include types of CVDs, characteristics of hypertension and characteristics of stroke. Amongst the types of CVDs that affect women, the respondents mentioned conditions like pericardial effusion, heart attack, gestational hypertension, stroke, heart failure and hypertension. However, some women seemed to express confusion of whether these were CVDs or not. Some could only describe the type of condition without the knowledge of what it is called hence the researcher had to deduce the name of the condition.

5.3.1 Subtheme: Types of CVD affecting women

The types of CVD which were identified by women include pericardial effusion, heart attack, gestational hypertension, stroke, heart failure and hypertension. A few women managed to describe various conditions from which the researcher deduced the type of CVD. One of the participants described pericardial effusion when she mentioned that:

> *"I usually hear people saying that they are told at the hospital that their heart is surrounded by water and this leads to swelling of the stomach."* Respondent 2

According to Adler, Charron, Imazio, Badano, Barón-Esquivias, Bogaert, Brucato, Gueret, Klingel, Lionis and Maisch. (2015), pericardial effusion is the presence of an abnormal amount of fluid

and/or an abnormal character to fluid in the pericardial space. This condition can be as a result of a variety of local and systemic disorders and sometimes due to unknown causes. The pericardium is a double-walled sac containing the heart and the roots of the great vessels (Adler *et al.,* 2015). The pericardial sac has two layers, a serous visceral layer and a fibrous parietal layer. It encloses the pericardial cavity, which contains pericardial fluid. The pericardium fixes the heart to the mediastinum, gives protection against infection and provides lubrication for the heart (Jung, 2012). The pericardial fluid acts as a lubricant between the heart and the pericardium. Excess fluid or blood accumulation in this cavity is called pericardial effusion (Jung, 2012).

Among the types of CVD, the most known was hypertension which they knew as “B.P” for blood pressure. Hypertension is mostly identified as a heart disease whereas according to medical practitioners it is also known as a risk factor of CVD. Blacher, Levy, Mourad, Safar and Bakris (2016) assert that hypertension is associated with stiffening and thickening of both vessel walls and ventricular walls, which can lead to clinical signs of cardiovascular diseases, including coronary heart disease, stroke and heart failure. To the respondents, it is a condition that usually affects the elderly, pregnant and obese people. The respondents described it as an extremely fatal and dangerous condition that usually leaves people dependent on the medication. Some of the respondents indicated that;

> *“Whereas BP is mostly found in women who are pregnant. It is usually found in women who are pregnant and about to give birth. A very deadly and silent disease indeed.”* Respondent 10

Another respondent echoed that;

> *“I am not sure if this is also a part of it but I also know of BP. This is a condition where someone’s heartbeat is fast and usually, they end up being on medication. It usually affects the elderly and people who are fat.” Respondent 5 (focus group)*

This is attested by Gil-Extremera and Gomez-Gonzalez (2015) who state that elevated blood pressure is asymptomatic, detectable, challenging to control and in so many times has acute fatal complications such as stroke. This confirms what the respondents had mentioned about hypertension involving palpitations. The respondents strongly believed that hypertension is for older women and men because their immune system would have been weakened because of age. Similarly, in a study by Osuala, Oluwatosin, Osuala and Ibe (2016) looking at perceptions and knowledge regarding hypertension among rural dwellers in Nigeria, the participants perceived that hypertension was for the older generation and cannot occur in young people.

On the other hand, some respondents identified hypertension during pregnancy which is known as gestational hypertension. They indicated that it is a condition found in pregnant women who are about to give birth,

> *"BP is usually found in women who are pregnant and about to give birth. It is a very fatal and silent disease indeed." Respondent 10*

Literature has projected that gestational hypertension, one of the hypertensive disorders of pregnancy, affects about 5 – 8 % of all pregnant women worldwide (Muti, Tshimanga, Notion, Bangure and Chonzi, 2015). It is one of the causes of mortality and morbidity amongst pregnant women in Zimbabwe (Pswarayi, 2012). The respondents elucidated that it is important that women who have that condition seek medical attention or have their blood pressure monitored at the health care centres. It was observed that most women who mentioned gestational hypertension are those who had children, which might be due to the fact that they were educated about it at the hospital. A study by Fadare, Akpor and Oziegbe (2016) revealed that there was a high level of awareness of gestational hypertension in their participants because they were taught about it during their antenatal visits.

Other conditions identified are a heart attack and heart failure. This is highlighted below;

"It can be a heart attack. Being fat can cause heart diseases. Basically, this is what I know about heart diseases." Respondent 2 (focus group)

Other respondents said;

"Okay, I know of BP. I also know of heart failure even though I am not sure if it is a disease." Respondent 11

"I only know of heart attacks and BP." Respondent 14

The respondents managed to mention heart attacks and congestive heart failure but they did not have an idea on how they manifest and what causes them. All these diseases or conditions mentioned by respondents affect women in their daily lives and have a great impact on their physical, psychological, social and economic status. It was noted that most women mentioned these conditions even though most had no idea how they affect them and what causes them.

5.3.2 Subtheme: Symptoms of CVD

When asked how they would know someone has CVD, some women managed to come up with various symptoms of CVD, especially for stroke and hypertension. They explained that hypertension is associated with palpitations, fatigue, unconsciousness and even death. They emphasised that it is a silent disease and it comes in a subtle way. Due to this, people become ignorant of the condition in them. This is shown by some of the following responses:

"BP, on the other hand, is when your heart starts beating fast and that makes you uncomfortable. Some people with BP collapse and can get hospitalised. It is a silent dangerous disease because anytime it can just attack you. I always see people with BP going to get medication at the hospital because they have to take pills every day like the ARVs for HIV." Respondent 1

Respondent 15 added that it is difficult to predict hypertension as it is very calm and fatal,

"It is not easy to identify that someone has BP, I can safely say it is a very silent disease. That makes it a very dangerous disease." Respondent 15

Other respondents further described some of the symptoms that they have observed;

"I sometimes hear some people saying my heart is pumping fast, some claim that their feet get swollen. Some say that at the hospital they are told that their heart has a problem they cannot even move because of their heart condition." Respondent 1(focus group)

"BP is a disease whereby one starts feeling hot and may lead to unconsciousness. Usually, people with BP say that their heart is beating fast especially when they are stressed." Respondent 3

Most of the participants seemed to agree on the graveness of this condition. They postulated that a hypertensive patient normally may have some parts of their body swollen, some might feel dizzy and also heavy sweating. Benton (2018) agrees with the above that symptoms of hypertensive crisis can include a headache, dizziness, blurred vision, chest pain, heart palpitations or shortness of breath. Even though a majority of the participants seemed to know that there is hypertension, they were not clear of its symptoms. However, in a study assessing the knowledge and perception of hypertension among hypertensive patients attending health care in rural India, it was revealed that 94% of its participants knew about the symptoms of hypertension and 96% knew about the accurate method of measurement of blood pressure (Kongarasan and Shah, 2018). This might be attributed to the fact that these participants were being taught about this condition during their visit to the health centre whereas in this study women who were approached were not in a hospital setting.

In addition to other characteristics, stroke was described as a condition that may become chronic and sometimes lead to death. Participants viewed it as a condition that paralyses the body and leads to many parts of the body to be dysfunctional. Some respondents claim that it is a condition

that can lead to disability and paralysis. Research has shown gender differences in stroke-related outcomes with women experiencing more post-stroke disability, which might be due to delays in seeking treatment (Petrea, Beiser, Seshadri, Kelly-Hayes, Kase and Wolf, 2009). The respondents below described how stroke manifests in people:

> *"I think stroke is due to hypertension because most people with it end up suffering from a stroke. Usually, it paralyses a part or parts of your body meaning that you won't be able to use your other hand as efficiently as you used to even in walking one might find difficulties. It means the other part of your body from head to toe will be affected some cases one can have their mouth affected meaning that you can't close your mouth properly and saliva will be drooling all the time." Respondent 7*

Another respondent denoted that*;*

> "*I think this refers to someone who is paralysed usually the left side of their body will not be working properly. Depending on the severity of the stroke some find difficulties in holding anything or walking on their two feet and some can even require wheelchairs. Such people are often depressed, stressed and emotionally hurt. Stroke is in most times associated with BP (high blood pressure) and such people easily get angry and are at risk of collapsing at any time." Respondent 6*

The respondents described the feelings encountered by stroke victims like depression, stress and emotions. They explained that such feelings might be due to that women would not be able to adapt to their new condition especially if they were used to being independent. In some studies, it was discovered that female stroke survivors had lower functional recovery and poor quality of life at three months after stroke onset (Gargano and Reeves, 2007). Similarly, a study by Lai, Duncan, Dew and Keighley (2005) found that women were less likely to achieve independence in

activities of daily living and instrumental activities of daily living. Respondent 6 (focus group) added that;

> *"These patients can no longer eat independently, hence they need assistance for that. Some also need assistance when visiting the toilet." Respondent 6 (focus group)*

Respondent 6 (focus group) explained how stroke deprives women autonomy to look after themselves. This explains Respondent 6's claims of stroke patients having various mental problems as this sudden change in their lives might be overwhelming for their psychological wellbeing. However, worthy of note is that some respondents seemed to have little knowledge of symptoms of stroke as they would give responses such as "I do not know" when a question about symptoms was posed.

Most symptoms in this study were identified even though some women could not point out which disease they were related to. Similarly, in a study by Muhamad, Yahya and Yusoff, (2012), regarding CVD symptoms, less than half of the participants did not realise CVD symptoms. The highest proportion of correct answers were shortness of breath, chest pain followed by palpitation and among the lowest were stroke symptoms include "jaw, left shoulder and neck pain" and "nausea and vomiting".

5.4 Theme 2: Causes of CVD in women

Various causes of CVD were identified and they included affordability and accessibility of healthy foods, high levels of stress, hypertension, lack of knowledge and obesity. An association among various causes of CVD was observed. Sedentariness was related to obesity and hypertension which were identified as causes of CVD. High levels of stress were revealed to cause hypertension. Other driving forces identified were lack of knowledge and biological causes of CVD. Affordability and accessibility of healthy foods were also revealed to be causes of obesity a risk factor of CVD. These subthemes were explained in detail below.

5.4.1 Subtheme: Affordability and accessibility of healthy food

The majority of respondents mentioned the issue of unbalanced diet. They stated that most households consume a lot of food that is mainly high in cholesterol. This was because fried foods or food high in cholesterol tasted better than other foods. Some women were claiming that if there is little oil in food it makes the food a bit dry and inedible. Some pointed out that they do not have good recipes for cooking without oil/less oil hence they end up doing what they know. This is shown below;

> *"I was referring to fatty foods. So, it is too much fat that we pour on our vegetables when cooking. It can also be a lot of isitshwala (mealie-porridge) that we eat on a daily basis that can make us unhealthy. We cannot afford better food like people in town." Respondent 15.*

Another respondent said:

> "*The food that I eat for example is influenced by affordability and the taste. Most junk food tastes delicious (laughs) it is very appealing to the taste buds. At work, I usually eat what is available at the moment." Respondent 12*

Availability and affordability of food is an important factor that contributes to the choice of food that one eats. There are some communities who cannot access fresh fruits and vegetables and this might put them at risk of getting infected by various diseases as their immune system might be compromised. Another factor is the affordability of the food as mentioned by some of the participants that "healthy food" tends to be very expensive compared to unhealthy food hence they end up opting for the latter. In a study by Williams, Abbott, Thornton, Worsley, Ball and Crawford (2014) that focused on improving perceptions of healthy food affordability between a control group and intervention group it was discovered that compared to mothers in the control group, mothers in the intervention group perceived healthy food as more affordable post-

intervention. This was because they had been taught about various healthy food choices which were affordable.

Lee, Mhurchu, Sacks, Swinburn, Snowdon, Vandevijvere, Hawkes, L'Abbé, Rayner, Sanders and Barquera (2013) assert that food prices and food affordability are important determinants of health in that the differences in pricing of 'healthy' and 'less healthy' foods and diets can contribute to obesity, CVD and many health inequalities. In the discussions, women mentioned that due to the economic hardships they end up opting for cheaper options;

> "*First and most importantly, it is the unbalanced diet that we follow. Eating food that is high in fat I mean that is what people can afford due to the economic hardships that we are facing as a nation." Respondent 10*

Respondent 5 reported that:

> *"The problem is that healthy foods are expensive sometimes and unhealthy food is cheap and usually easy to prepare as it takes less time to be ready. You know sometimes I choose things just because they are cheap and one can justify that choice in this economy and on the other hand you cannot trust the suppliers as most people are just after money in this country." Respondent 5*

The fact that women find unhealthy food cheaper and easier to make will influence them to continue preparing what they can afford. In addition, most women in the study were not working which means that they could not afford expensive options. However, it was noted that in these rural areas they were a lot of seasonal indigenous fruits that grew in the forest, so women could opt for those instead of buying expensive fruits from the market. Affordability is also attributed to a woman's socio-economic status. Literature has shown that poverty leads to deprivation of products that are required for a high-quality life. Hajduchova and Urban (2014) assert that the environment determines and controls the quality of health of an individual in that a large gap

between rich people and poor people leads to higher mortality through the breakdown of social cohesion. Abbot (2015) agrees that exposure to societal and environmental disadvantages influences poor health outcomes for low-socioeconomic groups. In countries like the United States, African Americans are the ones who are more disadvantaged hence their exposure to CVD. In Zimbabwe, people in the rural areas are mostly from low socio-economic backgrounds. Women are affected the most because the majority of them stay there whilst their men work in urban areas.

Women asserted that high-pressure jobs deprive people time to prepare their food because of the pressure they will be getting at work hence they end up just eating fast food which is usually greasy and unhealthy. Some women pointed out that they do not have the luxury of even going to the gym or for doing physical activity as they will be busy trying to make ends meet. Below are some of the comments they made in regards to that:

> *"High-pressure jobs can affect people like those in the; mining, farming, some highly demanding office jobs, who have no time to rest and probably time to prepare proper food. They end up relying on anything that is quick to prepare or any snacks that they can buy in the tuck-shops. You find that in some jobs you only have a 10 minutes break so they will not be anytime to be particular about what goes into your mouth." Respondent 15*

Another respondent added that;

> *"The society that we leave in and the pressure that we have at work puts us at risk as I want to make money as fast as I can and as much as I can. I cannot waste time cooking and playing sports whilst others are looking for money. We have this mindset that preparing healthy food is time-consuming, it is also too expensive and not nice. Therefore, I will rather go and buy ready-made food." Respondent 16*

The above findings are consistent with those of Devine, Farrell, Blake, Jastran, Wethington and Bisogni (2009) which discovered that women who had stressful jobs significantly ate more restaurant meals, missed breakfast, and use of convenience entrees. Furthermore, women who did not have access to healthy, reasonably priced food and good tasting food were less likely to report grabbing quick food at work instead of a meal that was quick to prepare. Job security, satisfaction and long-term stress like work pressure affect food consumption in various ways. According to Adam and Epel (2007), 30% of people eat less than normal when stressed by work-related stress, whereas the majority of individuals eat more under the same conditions. Oliver, Wardle and Gibson (2000) suggest that food choice usually changes under stress with the most favourable being sugary fatty foods. This is in line with what the respondents were stating that because of work pressure they end up opting for food that is easy to cook and sometimes fast foods which are usually prepared with a lot of unhealthy substances. Oliver *et al.* (2000) further elucidate that compared to men, women consume more calories and fat under stress and they also shift their food choices away from meal-type foods such as meat and vegetables to snack-type foods.

In addition, respondents revealed that one of the factors that put them at risk for CVDs are the inability to follow a proper or healthy balanced diet. They pointed out that mostly they ate a high-caloric diet that included fast foods, food high in cholesterol and sugar. One respondent mentioned that;

> *"Less physical activity and eating unhealthy food. I personally have a habit of eating food that has a lot of oil, instead of eating food that has nutrients. This kind of diet is usually expensive and tasteless which is why most people do not like following it. Here in the rural areas, we do have a lot of vegetables but sometimes you need these nice goodies from the big cities." Respondent 14*

Another respondent echoed that;

"Also eating foods that are rich in fats like hot-chips, deep fried chicken amongst other unhealthy foods can lead to blood pressure. I was taught about this at the clinic when I was pregnant because my BP was uncontrollable. The truth is that chips and fried chicken are delicious." Respondent 16

Food high in fat is regarded to be tastier and a bit cheaper than healthy food. This still corresponds with the earlier discussions that affordability highly influences the choice of food in most households. Findings in a study by De Oliveira Otto, Afshin, Micha, Khatibzadeh, Fahimi, Singh, Danaei, Sichieri, Monteiro, Louzada and Ezzati (2016) revealed that mean consumption of healthy foods in Brazil for adults was below optimal levels whereas consumption of unhealthy foods was higher than optimal. Among unhealthy dietary factors, mean trans-fat intake exceeded the optimal level by 200%, while sodium consumption was over 100% greater than the WHO recommendation of 2.0g/ day. According to Hghighatdoost *et al* (2013), from time immemorial, it has been established that nutritional habits and dietary intakes are strongly related to CVD events (Raza *et al.,* 2017).

Nutritional foods such as vegetables, fruits, fibrous foods and fish have a protective effect against CVD, diabetes and obesity, however, dietary items like sugar, fat and carbohydrates through excessive consumption of soft drinks, milk-based products, meat and rice can be detrimental to health. Excessive consumption of dairy products could lead to weight gain although recent evidence is showing that high-fat dairy product assists in reducing weight compared to low-fat dairy (Bonthuis *et al.,* 2010; Raza *et al*., 2017). The intake of low fibre refined grains and sweetened beverages increases the risk of diabetes and other CVD risk factors. In combination with an inactive lifestyle, diet has been proven to be one of the most imperative modifiable risk factors, giving effective means to achieve healthy and nutritious diet so as to prevent CVD (Htun *et al.,* 2017). These findings support the concept that the majority of people still consume diets that are detrimental to their health. In this study, it is, however, noted that most women seem to

be in agreement with the fact that unhealthy diets are a high risk of CVD and that the risk of CVD becomes higher if one does not partake in physical activity.

5.4.2 Subtheme: High levels of stress and hypertension

The women in this study reported that high levels of stress will lead to hypertension which is also risk factor for most CVDs like a heart attack. Mostly, stress was supposedly caused by life problems which might include financial problems, marital problems, loss of relatives and high demanding jobs amongst other things. One respondent explained that:

> *"I think mostly it can be thinking too much. Life problems can lead to stroke especially credits or many financial problems. Sometimes high-demanding jobs can lead to stroke or even BP. My neighbour collapsed at work due to stress and they said her BP was extremely high." Respondent 3*

Modern life is brimming with hassles, due dates, disappointments and demands (Bhelkar *et al.,* 2018) such mental or psychosocial stress can be a part of major risk factors for hypertension. Intense pressure due to daily frustrations can elevate blood pressure. Women face a lot of challenges in their everyday life. This is because they carry the burden of being an overseer of almost everything in their households due to social expectations. Such responsibilities will end up impacting in their health which may result in stress, depression and anxiety which are risk factors of CVD. According to Warin (2015), sociologists have reported that the understanding of sickness and disease is an outcome of the organisation of society. Unfavourable working and living conditions make people sicker and the vulnerable people die compared to the rich. Even though there might be better living conditions and health facilities but if inequalities are ignored the gap between the poor and the rich will widen. The respondents below mentioned some of the causes of stress:

"Thinking about a lot of painful things like the death of a loved one can cause stress that might lead to BP. Also, as a woman, there are many challenges that I might face in my marriage which might frustrate me and I might end up having BP." Respondent 4

"I think sometimes this is caused by a lot of stress, especially the married people. You put so much trust in your husband and unfortunately you find out he is cheating it becomes really difficult to handle such hence causing so much pain and resulting in stroke because of stress." Respondent 6

A study by Hu *et al.* (2015) discovered that women showed a greater risk of hypertension if they had either stress at work or at home. However, this increased risk for hypertension by stress was not found in men. Thus, psychological stress was associated with an increased risk for hypertension, although this increased risk was not consistent across gender. According to Tower (2017), studies have repeatedly shown that women experience higher rates of illness, stress, and other psychological problems. However, men have higher mortality and lower morbidity.

As stated above, an association between stroke and hypertension was established. Some respondents pointed out that hypertension can escalate to stroke if someone defaults treatment. Below are some of the comments they articulated:

"It is usually associated with high blood pressure if someone defaults on high blood pressure medication they risk getting a stroke. I am saying this because my mother suffered this ordeal." Respondent 8

"I would also want to think that stroke has to do with high blood pressure and it usually affects women especially during pregnancy." Respondent 9

According to Kieldesen (2017), hypertension is the strongest or one of the strongest risk factors for premature cardiovascular disease; it is more common than cigarette smoking, dyslipidemia, and diabetes, which are the other major risk factors. Hypertension accounts for an estimated 54

percent of all strokes and 47 percent of all ischemic heart disease events globally (Lawes, Vander Hoorn and Rodgers, 2008). If untreated, hypertension is a major cause of stroke, coronary heart disease and renal failure as well as other conditions. Easily diagnosed, and in most instances readily controlled, hypertension is often unsuspected or inadequately treated. That is why some respondents referred to it as a "silent disease". Respondents mostly made a connection between hypertension and stroke, however, just one managed to make a connection that elevation of blood pressure due to several reasons leads to rupture of blood vessels hence a stroke.

According to Chaddha, Robinson, Kline-Rogers, Alexandris-Souphis and Rubenfire (2016), stress may cause anxiety and depression. The relationship between depression, anxiety and CVD is bidirectional. Depression and stress can increase the risk of developing CVD, furthermore, CVD can increase the risk of developing depression and anxiety. Each may lead to a worse outcome. Even though psychosocial stress has been distinguished to have an effect on hypertension, a study in the Netherlands by Agyei, Nicolaou, Boateng, Dijkshoorn, van den Born and Agyemang (2014) did not find evidence for the association between psychosocial stress and hypertension among recent SSA migrants. The psychosocial stresses they assessed were not significantly associated with hypertension but other factors.

5.4.3 Subtheme: Physical inactivity and Weight Gain

According to the findings, some women identified weight gain as a cause for most CVDs. They highlighted that it is important for women to avoid gaining weight as this would attract many diseases. They highlighted that body weight can be managed through physical activity. Physical activity was identified as any form of labour that included gardening, ploughing in the fields, cleaning and many other house chores. Some respondents said;

> *"I think stroke is caused by BP as I have seen a lot of people with that disease also getting stroke. Also if someone has a gained a lot of weight. So yeah if one is chubby they have a higher chance of being affected by most heart diseases." Respondent 11*

"It is essential that one needs to be responsible for their diet and maintain good body weight. If you become overweight you risk getting affected by a stroke that's why you see most people who get these diseases are chubby and mostly old-aged." Respondent 5

Studies have reported that lack of exercise may actually lead to malfunctioning of the circulatory system. Urban and technological development has led to significant decreases in physical activity, both at work and at home. As a consequence, nearly 60% of the world population is now sedentary (Blumel, Fica, Chedraui, Mezones-Holguín, Zuñiga, Witis, Vallejo, Tserotas, Sánchez, Onatra and Ojeda 2016). It was however noted that in most rural communities, people are involved in a lot of physical labour unlike in urban areas where most people depend on machines to do their work.

Sedentariness is associated with limited physical activity, prolonged sitting at work, in cars, communities, worksites, schools, homes and public places have been restricted in ways that minimize human movement and muscular activities. People sit more and move less. This occurs more frequently in women and the older population (Blumel *et al.,* 2016). A sedentary lifestyle has a significant impact on health. It is an important risk factor for cardiovascular disease and cancer, both of which cause 6% of world deaths. Inyang and Okey-Orji (2015) concur that it is an issue of great concern because of its deleterious health implications in developed and developing countries. This shift from a physically demanding life to reduced physical activities have exposed people to the high risk of developing various health conditions such as obesity (Inyang and Okeji-Orji, 2015). Obesity increases the risk of diabetes, hypertension, and hyperlipidemia. During the last few years, evidence suggests that obesity independently increases the risk of CVD in women even in the absence of other metabolic abnormalities (Barnes, 2013; Blumel *et al.,* 2016). Similarly, the effects of physical activity are now also known to independently influence CVD risk in women. Thirty minutes of moderate physical activity is recommended on most days of the week; however, as few as 75 minutes of activity, each week which equates to about 11 minutes a day

for 7 days can reduce cardiovascular risk by 14%. Notably, there is evidence that this protective effect might be more pronounced in women than in men (Barnes, 2013).

In this study, women seemed to understand the importance of physical activity and its link to obesity, however, they still believed that it is more socially acceptable to be big-bodied as an African woman. Some also elicit that they cannot partake in sports as people around them will not understand. Below are some of the comments;

> *"For a person of my age to be seen running in sporting attires it's not acceptable. I have in-laws, grandchildren and* ***umkhwenyana*** *(son in law). In our culture and church we are encouraged to dress as modestly as possible. I would rather do other activities at home that keep me busy." Respondent 17.*

Another woman expressed that;

> *"As a black woman I think it's nice to be fully figured. Even when you are walking people can feel your presence. Furthermore, even your husband gets that satisfaction that he is taking care of you as you will be gaining weight (laughs)". Respondent 4 (focus group)*

The social construction of gender stipulates that women may be influenced by the society to indulge in unhealthy lifestyles so as to maintain a fuller figure which is more "African like". This in turn might become harmful to their health as it may breed deadly NCDs such as CVD. In some societies, women are mostly not encouraged to participate in sporting activities as these are viewed as man's activities and the woman's duty is to take care of her husband and family. Courtnay (2000) supports the above by articulating that from a constructionist perspective, women and men think and act in the ways that they do not because of their role identities or psychological traits, but because of concepts about femininity and masculinity that they adopt from their culture. Their behaviours are shaped according to the society's expectations of them.

Moreover, two respondents in this study believed that CVDs are caused by biological causes. Such causes are inescapable as they are due to factors like heredity, these are referred to as non-modifiable risk factors. The rest of the participants were unaware of how heredity could cause CVD. One participant said;

> *"However, some of these diseases can be passed from our parents. My grandmother had some CVDs and one of her daughters also was affected now this has affected her granddaughter. So, you can see that sometimes it's not necessarily that people don't take care of themselves rather they are exposed to these diseases because their ancestors or parents had them." Respondent 7*

Another respondent commented that;

> *"'ahhh! I didn't know that if my parents had a certain disease it means I might also get it as well." (focus group)*

The World Heart Federation (2017) state that chances of developing a CVD like a stroke are higher if one's first-degree relative (mother, sister, father or brother) have had a stroke. The probability tends to be even higher if these relatives would have had it at a younger age. Furthermore, they explain that risk increases if one is a woman and their mother has suffered a stroke. Worthy of note is that the respondents who mentioned "biological factors" are those that had gone to tertiary education. This might be due to that they may have learnt about this at school. The rest of the participants were unaware of how heredity could cause CVD.

5.4.4 Subtheme: Lack of knowledge

According to the participants in the study, CVD is also caused by lack of knowledge. Some respondents felt that as women, they were not equipped with enough knowledge of the causes, symptoms and even management of these diseases. They felt that this puts them at risk as most of CVD causes are modifiable. Education was mentioned as an important tool in informing women

about CVD. They all agree that sometimes their illnesses become worse as they are ignorant of how to deal with them. Furthermore, they expound that this ignorance leads to stigmatisation of people who find themselves suffering from these conditions. This might be because people will have their own different ideas on what causes the disease and if it is contagious or not. Respondent 16 expounded that;

> *"I think as women we need to be educated about these things. We really need to be taught how to prevent these diseases from affecting us. Less stress, especially about things that you cannot change, is important, however, I can really say ignorance is the main cause of people suffering from BP and stroke. I only know the few things that I was taught at the clinic when I was pregnant. So, I feel we need to be educated immensely on this subject because it is killing women a lot. I feel knowledge on how to prevent it and manage it is important especially to us women as we are caregivers and also at risk." Respondent 16*

Wiwanitkit (2014) asserts that in public health, knowledge is the essential requirement for the proper formulation of health-related attitudes and behaviours. Health education is thus required for the effective management of any diseases or risk behaviours. Studies have pointed out several factors that might contribute to a lack of knowledge. A study by Mosca, Jones, King, Ouyang, Redberg and Hill (2000) highlighted that age influenced knowledge to a greater extent than ethnicity. In this study the age variable was not tested however, the researcher noted that there was not much difference in terms of knowledge of CVD in younger and older women. However, those who attended tertiary education had better knowledge of CVD compared to those who only had secondary and primary education.

Some studies like that of Brega, Noe, Loudhawk-Hedgepeth, Jim, Morse, Moore and Manson (2011) that were investigating "cardiovascular knowledge among urban American Indians and Alaska Natives" found that recognition of health-related facts among the studied population was significantly lower than the levels of recognition reported in national studies using the same survey

items. Along the same lines, black women have also usually been reported to have lower levels of knowledge and recognition than white and Hispanic women. In black women, Lutfiyya, Cumba, McCullough, Barlow and Lipsky (2011) also established that knowledge of heart disease symptoms and risk factors was also dependent on socioeconomic variables. All these studies show marginalised groups in most societies have little knowledge of health issues in general. This might be attributed to that they are not allocated enough resources and funds for health education.

Some participants mentioned that the effects of ignorance of CVD lead to serious stigmatisation in the society where you find some women not getting married because of such issues. According to the American College of Cardiology (2017), insufficient emphasis is placed on cardiovascular disease in women by both women and physicians, and stigmatisation of the disease is a major barrier to women seeking treatment. Results in this study reveal that women were likely to face exclusion from the society due to ignorance of the disease. This might be attributed to that they do not get sufficient information from their health care centres. Below are some of their comments:

> *"I think the most difficult thing is that I would get ignored by the members of the community because most people don't have enough knowledge on what causes these diseases. People around me would most likely assume that this is a contagious disease and it would surely affect my personality in the community. Imagine if I have just started work and I get such a condition then I would know that my job is over because they would not allow me to be away from work for long periods of time." Respondent 9*

> *"As a poor society we are not friends with our health providers as we feel sometimes that what you do not know will not kill you hence, we do not see the need to go to the clinic when we feel that we are okay. I also believe that in our societies and even some families, we do not have any support system hence if we are diagnosed with BP or stroke especially at a young age no-one will take care of us. Furthermore, I might not even get married as I*

would be sickly. So, the stigmatisation from society also contributes to us being afraid to accept some diseases and using health care services." Respondent 15

It is noted that both respondents point out that ignorance results in the stigmatisation of the disease which results in social exclusion. Every human wants to belong to a certain social group be it a family, community, sports and other groups. Therefore, this lack of knowledge denies them of that privilege to associate or belong.

The results of this study agree with the concepts of the standpoint and intersectionality theory. The intersectionality theory indicates that social locations and structural forces interact to shape and influence human experience. Factors like lack of knowledge, race, social status, economic status and others represent social location which is a powerful tool of access to the social and material necessities of life (McGibbon and McPherson, 2011). The standpoint theory believes that women hold a particular standpoint based on their experiences as women (Kowalski-Braun, 2014). What one knows is solely dependent on the position they hold in life or society. What one knows of the world is in the way they experience it and the way they see it is on the location they are in (Appelrouth and Edles, 2010).

A lot of factors that put women at risk for CVD were discussed, however, other risk factors like smoking, alcohol abuse and menopause were not mentioned.

SECTION C: THEME FOR OBJECTIVE TWO

The second objective that was addressed was to explore women's views on prevention of CVD. The questions that were addressed were as follows;

- What do you think women should do to prevent CVD?

5.5 Theme: Prevention of CVDs

When women were asked about their perceptions on how to prevent CVD, seven subthemes emerged in the discussion. That is, advocacy and awareness programmes, following a proper

diet, adhering to religious pathways, having a positive mind to life challenges, regular exercise and rest, seeking medical attention and the use of traditional methods.

During analysis, relationships between subthemes were established. It was noted that there was an association between following a proper diet, regular exercise and rest, and positive mind to life challenges. Themes such as advocacy and awareness programmes, use of traditional methods and following religious are presented as ways to manage and prevent CVD. All these subthemes are a part of the management and prevention of CVD in women and they will be discussed below.

5.5.1 Subtheme: Advocacy and awareness programmes

Findings show that women were concerned about their lack of knowledge on causes, prevention and management of CVDs. They suggested that there should be advocacy and awareness campaigns that will be directed towards educating women about CVD. As highlighted in the previous themes, educating people on how CVDs affect women is essential as it will equip the community, family and caregivers with knowledge on how to assist them. Through these campaigns, consciousness is raised and tolerance can be achieved. Some women give examples of programmes that they have seen which have created awareness of various diseases. Respondent 14 said:

> "*Through educating them more about the disease which is a way of empowering them with knowledge. Furthermore, through the formation of organisations which deal with CVDs through counselling because the moment you are taught how to cope or accept that you are not well, it will be easy for one to recover quickly." Respondent 14*

Another respondent elucidated that;

> *"I actually know of an organisation called Grassroots which informs people about HIV, STI and other behavioural diseases. I also think it is important to also empower women by teaching them about CVD as they are more vulnerable to these diseases than men. By*

empowering them we can use health promotion strategies like giving out T-shirts that have health information written on them so as to raise awareness. In tertiary institutions and high schools, the management should appoint a day when students are taught on health issues like these heart diseases. This helps create awareness." Respondent 7

It is suggested that the government, non-governmental bodies and other stakeholders tackle issues of CVD awareness through campaign strategies such as writing messages on T-Shirts that are relaying messages of CVD. By so doing, people will sometimes remember what is on the T-Shirt and probably change their risky behaviours. She gave an example of organisations that go around teaching the youth about behavioural diseases and highlights the importance of having such programmes targeted at women of all ages. Respondent 15 agreed that there should be preventative programmes that are holistic in nature that will be targeting women who are not yet infected as well as those living with the conditions. She agreed that it is essential to initiate such programmes for the youth as they are the future. Below are her remarks;

"*First of all, they must be a preventative programme not aiming at women infected but also those who are affected as well. Those programmes should start with the young women because now in our societies people mature earlier than before looking at early motherhood. The service providers must be aware that it is not when you become sick that these programmes should be considered relevant but it should be made a daily reminder to everyone just like using a condom. I believe in the idea that prevention is way much better than cure and unfortunately, we are a people which more reactive when we get sick. That is when we will start watching what we eat, however, this should be a lifestyle that we practice every day. Even if it is my child cooking, they will adopt this lifestyle and know that too much salt or oil is not good for the heart. Hence they must be preventative measures that will enhance knowledge." Respondent 15*

According to the American College of Cardiology (2017), helping women overcome barriers to increasing physical activity and healthier eating habits may help to avoid the stigma of focusing on weight loss. Women are often the gate-keepers for family meals, activities and health care, and a focus on healthy lifestyle habits may also encourage early prevention in the family as a whole. This study shows that women believe that if CVDs are given attention like other behavioural diseases, mortality and morbidity will be reduced.

Systematic review studies like that of Walton-Moss, Samuel, Nguyen, Commodore-Mensah, Hayat and Szanton (2014) looking at community-focused cardiovascular interventions targeting vulnerable populations, discovered that blood pressure interventions seemed to be more effective while behaviour change interventions (such as those targeting increased physical activity or decreased smoking) were the most challenging. This might be because if people are tested positive for hypertension that is when they are willing to change so that they survive.

It was revealed that due to a lack of knowledge there is a lot of stereotyping of activities that promote health. Some people still believed that partaking in physical activities is not for the poor or for black women hence they would not see the reason for partaking in those activities. Below are their comments with regards to that:

> *"There is a need for authorities to create awareness in communities on heart diseases. I can assure that very few people know what heart diseases are let alone what causes them. There can be campaigns teaching people on how to live a healthy lifestyle, counsel people on stress. So many people think that things, like doing exercises or going for counselling, are for white people or high-class individuals. There is a need to create a positive thought about some of these things that I think people have turned a blind eye towards. Especially us here in rural areas, we have never seen the inside of a gym and we have no idea what it is all about." Respondent 8*

Another respondent suggested that;

> *"There is a need for the health sector or government to create programs that will create awareness in communities on what heart diseases are, how they can be prevented, what to do or not do, to reduce the risk of heart diseases and the best ways of managing the condition if you happen to have it. Like I mentioned before people in the community have some negative attitude towards these conditions and this is due to ignorance of this subject." (Focus group)*

These results confirm the standpoint theory's notion that people's consciousness of their life and situations reflect material conditions and power relations, hence inequality disables and oppresses marginalised groups (Yuill, 2012). These women believed that good health practices should only be done by rich people as they are believed to be better privileged than them. According to sociologists, the understanding of sickness and disease is an outcome of the organisation of society (Warin *et al.,* 2012). Unfavourable working and living conditions make people sicker and the vulnerable people die compared to the rich people on the top of the social system. Even though there might be better living conditions and health facilities but if inequalities are ignored, the gap between the poor and the rich will widen.

A research base exists providing evidence that community-level interventions can change community-wide behaviours. According to Fletcher, Himmelfarb, Lira, Meininger, Pradhan and Sikkema (2011), for more than three decades, community prevention trials in the United States and abroad have supported the notion that behaviours can be changed through concerted efforts to organize communities, educate them through mass messaging and direct education, provide screenings for risk factors, and change environments through local programs and policies. Screening tools must be sensitive to specific populations, for example as suggested by the youths, there should be gender-focused programmes that deal with women. Respondent 14

highlights the need for special programmes at tertiary level like health awareness days so as to promote health. She said;

> "*In tertiary institutions and high schools, the management should appoint a day when students are taught on health issues like these heart diseases. This helps create awareness." Respondent 14*

Fletcher *et al.* (2011) support this concept that schools, worksites, religious organizations, and health care facilities are important sites to facilitate community-wide behaviour change. Community-based prevention initiatives include a range of risk-reducing, disease prevention strategies to support healthy behaviours and must be easily accessible within a neighbourhood. Several large-scale community-based initiatives have proven to be successful and can serve as models for implementing targeted CVD risk reduction.

5.5.2 Subtheme: Following a proper diet

Diet is responsible for the causes of many chronic diseases especially NCDs. Individual change in dietary behaviour has the potential to decrease the burden of CVD. The respondents in this study are also of the opinion that another way of preventing CVDs is by following a proper diet. Below is one respondent's interpretation;

> *"One can also reduce the intake of too much oil by ensuring that they avoid food like "amabhanzi" (fried dough bread). The problem is that healthy foods are expensive sometimes and junk food is cheap and usually easy to prepare as it takes less time to be ready. There are some traditional foods that are very healthy for example ibhobola (pumpkin leaves) and sugar beans. I always see my grandmother who has B.P eating sorghum instead or maize meal, she says that at the hospital they informed her that it is good for her health." Respondent 5*

In combination with an inactive lifestyle, diet has been proven to be one of the most imperative modifiable risk factors, giving effective means to achieve healthy and nutritious diet so as to prevent CVD (Htun *et al.,* 2017). One study in Japan concurs with the above as it discovered a significant association between vegetable-rich diet pattern with favourable blood lipid profiles in women (Sadakane *et al.,* 2008). According to this study, it is important for women to avoid using oil in food. They suggested that people should follow a diet that constitutes of vegetables that they usually grow in that area. Nutritional epidemiology has established the relationship of specific foods and nutrients or overall dietary patterns with cancers, cardiovascular diseases, and diabetes, as well as with intermediate outcomes such as weight gain, increased blood pressure, and insulin resistance and hyperglycemia (Ezzati and Riboli, 2013). Therefore, Eilat-Adar, Sinai, Yosefy and Henkin (2013) recommend that a healthy diet should include a diversity of foods that will also maintain a healthy weight. They mention that it ought to contain a variety of vegetables and fruits, legumes, whole grains, whole wheat bread and high-fibre low-salt food items.

In this study, women assert that when someone has hypertension they should follow a healthy diet so as to avoid a rise in their blood pressure. One respondent said;

> *"If for example, you are suffering from BP (high blood pressure), you are advised not to eat sugary foods, reduce salt intake, and you are not supposed to think too much as it will elevate your blood pressure." Respondent 1*

Studies that have shown other dietary patterns that confer advantage in specific medical situations include, the Mediterranean diet which has been shown to reduce cardiovascular morbidity and mortality in both primary and secondary prevention; low-fat diet for individuals at high cardiovascular risk; DASH (Dietary Approaches to Stop Hypertension) diet for people with hypertension, and low-carbohydrate diets for overweight people and for the metabolic syndrome (Eilat-Adar *et al.,* 2013).

The respondents assert that it is essential for people to continue eating the Zimbabwean traditional dishes that are highly nutritious and are not processed. Below are their comments on that aspect:

> *"I am not sure exactly but I think that which has less cooking oil, less salt and less sugar. Including our local products like inkobe (different types of nuts cooked together), ibhobola (pumpkin leaves), umfushwa (dried leafy vegetables), amacimbi (Mopani worms), unyawuthi (sorghum) and many other indigenous foods." Respondent 8*

Other respondent added that*;*

> *"We should eat a balanced diet so that we do not get sick. Which has vegetables like spinach, "green veggie", sugar loaf, cabbage, carrots, beetroot, butternuts, watermelon and other things that we grow in the fields." Respondent 2 (focus group)*

> *"We should go back to our traditional ways, eat our traditional foods like umfushwa (dried leafy vegetables), umxhanxa, idobi (peanut butter), inkukhu makhaya (domestic chicken), indumba (beans). And avoid foods that have a lot of oil like vetkoek (dough fried in oil)." Respondent 5 (focus group)*

It is important to note that women are very much aware of the impact these "westernised diets" might have on their health; however, they claim that it is difficult for them to buy healthy foods as they are expensive. According to the researcher, such beliefs are unsubstantiated because most of the indigenous food they mentioned above can be grown in their gardens. Nevertheless, it was noted that sometimes these women feel that if they consume these local delicacies, they have a fear that other people might assume that they cannot afford to buy the "nice food". This was confirmed by the comments below:

> *"Yes, the Western lifestyle is viewed as a high-class lifestyle hence we adopt it so that our neighbours assume that we have money." Respondent 5 (focus group)*

Another respondent concurred that they were sometimes concerned about what the society would think when they eat their traditional food. They explained that;

> "*At the hospital they encourage us to eat those foods (traditional). However, as she highlighted (Respondent 5), it will seem as if I am poor and suffering." Respondent 4 (focus group)*

> *"My challenge is that my children work in South Africa, therefore, I usually depend on the food they send to me. This has changed our way of eating." Responding 16*

The above findings validate that dietary patterns are determined by lifestyle, socio-economic and environmental elements which include income, individual preferences, cultural beliefs and food prices (Htun *et al.,* 2017). Socio-economically challenged groups are closely related to CVD deaths therefore it is justified to presume that diet plays a role in the mortality of this group.

According to (Larriue *et al.,* 2004), studies have discovered that low socio-economic groups prefer unhealthy choices of food that include white bread, potatoes, pasta or rice and other refined foods. However, the high socio-economic groups prefer healthier choices like unrefined foods, whole meal foods, fruits and vegetables as they can afford them. However, in this study women believed that if they were to eat their traditional foods, they would be at a lower risk of CVD because such diets are nutritious. They claimed that all these diseases were not popular in the previous years and they only emerged due to the new adoption of the westernised diet. One respondent said;

> *"There is a need for us not to just eat everything, for example, one can eat healthy food which is good for their health. As Africans, we can go back to our roots and eat traditional foods which are very healthy and come cheap. You can find out long ago there were very few cases of stroke because those people used to eat well." Respondent 6*

Another respondent indicated that;

> *"I think we should go back to the basics in terms of diet like eating our indigenous foods that are very much healthy and inexpensive. Long ago there never used to be any strokes or BP, these are diseases which started now from rich people. So, to combat this I think women should start including what our ancestors used to eat in their family diets. The westernized diet might seem prestigious and some will think it is for the rich but in actual fact, it is detrimental to our health." Respondent 10*

According to the United States Agency International Development (USAID) (2014), food intake is influenced by poverty. Women often consume carbohydrates and fats which highly increases their risk of CVDs. This might be either due to their inability to access healthy food options because of poverty or because some cultures favour women with higher body weight, which is seen as a sign of wealth and prosperity (USAID, 2014). Some respondents, however, seem to be aware that weight gain is not good for their health as they mention that food that is high in cholesterol is not recommended for consumption as it will make them gain weight. One woman commented that;

> *"There is a need for people to eat properly cooked healthy meals, fast foods have lots of oil in them one needs to avoid them by all means if they are prepared to protect themselves from heart diseases. Too much oil in our food will make us gain a lot of weight. Women are more vulnerable to weight gain may be because of giving birth and also because we have a lot of household chores that we do such that we forget to take care for ourselves." Respondent 7*

In a study by Gil-Lacruz and Gil-Lacruz (2010), when asked how they could improve their health, men believed that sport and reducing consumption of harmful products are the most important factors for men. However, women prioritize a balanced diet, relaxation, and measures related to illness and its prevention. In this study, even though some women understood that diet is related to weight, they still expressed that westernised diets are tastier and they give them a better status in society.

5.5.3 Subtheme: Positive mind to life challenges

Findings highlight that regular exercise and a positive mind to life challenges can help to prevent CVDs. Based on the findings, a positive mindset has been depicted as a great tool for recovery. It is believed that if one accepts their condition it will motivate them to exercise and also take their medication as stated by their health care providers. One respondent indicated that;

> *"What they can do is to be emotionally strong and accept their condition. I would actually take time to research on this illness up until I understand its dynamics and know how to manage it." Respondent 10*

According to the Positive Psychology Programme (2016), optimism negatively correlates with the symptoms of depression which indicates that those who learn to embrace an optimistic mindset are less prone to depression, and are also likely to have a psychological buffer which is helpful in maintaining their physical health. Cardiovascular health can be greatly impacted by one's level of optimism and the degree of positive emotions experienced in general. Emotion is an essential psychological reaction to individual life events and an adaptation to environmental challenges. Previous research indicates that positive emotion is related to increased survival rate, enhanced immune ability, and low risk of diabetes and hypertension (Richman, Kubzansky, Maselko and Henkin, 2005) while negative emotions such as hostility, anxiety and depression are associated with a high risk of coronary heart disease.

In addition, stressful life problems like marital and financial challenges were identified as causes of stress leading to hypertension or stroke. Some respondents stated that women should accept their problems and deal with them without compromising their health. They explained that most people in Zimbabwe are going through a financial crisis due to the country's economic downturn hence a lot of people find themselves in debt or without any means to put food on the table. Such circumstances can be very frustrating and detrimental to cardiovascular health and they need to be approached with a positive outlook. Below are some of their comments;

"One needs to have a positive approach in anything in life, life has its ups and downs. There is a need to accept any situation as it comes this gives a person the power to easily overcome such diseases." Respondent 6

Another woman expressed that;

"As a woman whatever challenge that I face in my marriage, I should not allow it to stress me because that is how life is. It is not worth dying for." Respondent 4

One respondent shared the above sentiments by articulating the importance of keeping a positive outlook to life. They state the importance of planning so as to avoid debts that might consequently lead to stress then hypertension. They explained that;

"I think people should stop thinking a lot especially about things that one cannot change. Secondly, it is important for women to plan so as to avoid overspending. You must not envy someone else's lifestyle and try to be like that person because if you do not succeed you will be disappointed and get stressed which will eventually lead to stroke or death." Respondent 3

It is clear that women believe that whatever circumstance one faces should be dealt with a positive mindset as it is the only way to maintain good emotional health. It was suggested that for those women who are finding it hard to cope with life problems, they should see counselling experts or share their problems with others. This is because talking to an expert might assist them in finding better approaches to their situations. One woman illuminated that;

"It is also important for us women to have someone to talk to especially when you feel that you are getting frustrated by something so as to avoid hypertension. I know in our society people cannot afford to go to see a psychologist but I think if the government gives these services for free considering the everyday frustrations people have, there will be less stroke amongst women." Respondent 16

Ma *et al*. (2015) state that individual levels of emotional health associated with blood pressure, psychological or cognitive-behavioral interventions such as relaxation therapy or stress management are clinically effective in reducing or normalizing blood pressure.

5.5.4 Subtheme: Physical activity

Physical activity has been identified by women as another way of preventing CVDs. Findings reveal that physical activity combined with a positive mindset can enhance optimal health. One respondent said;

> *"I know that it is important to stay active and not just sleeping because it makes one sick. Secondly, I feel that we are not supposed to overthink. I also think that it is important for people to consult nurses so that they can guide us on what food is good for the body. I think also people should also read books that inform them of how to live a healthy lifestyle. Sometimes you find such books at the clinic" Respondent 14*

As revealed by literature, physical inactivity has been identified as an important risk factor in the development of CVD in epidemiological studies, in which physical activity includes any leisure interest that is associated with an increase in energy expenditure (Winzer, Woitek and Linke, 2018). According to Alves, Viana, Cavalcante, Oliveira, Duarte, Mota, Oliveira and Ribeiro (2016), a sedentary lifestyle leads to increased blood cholesterol levels and the buildup of visceral fat. This development of atherosclerosis leads to CAD, which can be seen when it causes blockages of arteries or heart attack.

Women explained that they spend most of their time working in their homes which keeps them active. They highlighted that physical activity is very important because it does prevent a lot of diseases. In most rural areas people usually do a lot of physical labour as they do not have access to machines such as washing machines, hoovers and other assistive devices.

"In order for one to protect themselves from heart diseases they need to do regular physical work. Here in the rural areas, we do a lot of physical labour through farming, gardening, going to fetch water and many other things. So, I believe that we are at a lesser risk of CVD." Respondent 8

Therefore, it is safe to assume that a majority of them meet the thirty minutes of moderate physical activity which are recommended (Barnes, 2013). Due to education, some women are aware that they should adopt better lifestyle choices. It is important though to note that the younger generation was suggesting the use of the internet and also nutritionists for health tips. However, it might not be easy to access such services because their settings are in rural areas which are still developing.

Research that examined intervention effects on body mass index (BMI) and physical activity appeared to be more efficacious for low-income or individuals living in socially disadvantaged communities again, regardless of race or ethnicity (Walton-Moss *et al.,* 2014). They discovered that studies including (BMI) as an outcome measure may be more effective for men whereas studies including physical activity may be more effective for women (Walton-Moss *et al.,* 2014). In addition, a community intervention study for a high-risk population of CHD, before the intervention, there was no significant difference in the cognitive levels regarding primary prevention knowledge, the self-management and the risk factors for CHD between the two groups (Huang, Chen, Zeng, Liu and He, 2014). After the intervention, the cognitive levels regarding primary prevention knowledge, the self-management and the risk factors for CHD between the two groups changed. In the intervention group, all the tested parameters significantly increased whereas there was no significant difference in the above-mentioned parameters between before and after intervention in the control group (Huang *et al.,* 2014).

5.5.5 Subtheme: Seeking medical attention

Another way of preventing CVDs that was discussed in this study was through seeking medical attention. The respondents stipulated that it is important for pregnant women to use antenatal care so as to establish if they have gestational hypertension. This meant that they would be closely monitored and will reduce the chances of them having complications at birth. Respondent one explicated that;

> *"If a woman is pregnant, they must go and see doctors who will search in their bodies (examine) to check if the mother and baby's heartbeat are working well using their machines. During the scan, if they notice that you are suffering from any form of heart disease, they will then give you medication. In addition, like pregnant women, we are encouraged to go for antenatal check-ups as a measure to monitor if we might be having BP or any other disease. I remember in my third and fourth pregnancy I had that problem and they gave me medication, it never recurred after birth. It is very important as a stroke or hypertension patient to follow whatever that the doctors tell you so that you can be able to manage the disease." Respondent 1*

The benefits of antenatal care are recognized and several studies suggested that antenatal care may protect mothers from complications due to pregnancy including gestational hypertension (Thein et al., 2012). Timely diagnosis and proper management prevent the complications of gestational hypertension.

The findings highlight that women strongly believe in the use of professional help as a method of detecting, managing and also preventing CVDs. It is their opinion that if one follows the instructions given by the physicians it will reduce their chances of being hospitalised or even death. One respondent suggested that;

> *"I think they can be assisted by the nurses at the hospital by encouraging them to regularly visit the hospital and also adhering to their review appointments with the doctors. This*

should be done up until they fully recover from their illness. I do not think that in the village or at home there is anyone who can assist you in this regard. It is paramount that people who are sick should attend the hospital because if you don't, the end result is death." Respondent 3 (focus group)

Another respondent added that;

"I think for women to recover, they should make sure they adhere to the instructions that they are given by the health care workers on how to take care of themselves. I think this disease is manageable as long as you stick to taking your medication and not skip, you can live for a very long time with it. If you are supposed to take them in the morning at nine you should do that (demonstrates with hand) if they say at 12 in the afternoon, you should follow that and must not change the time for taking your medication." Respondent 1

According to the women's narratives, adherence to medication is important because defaulting will only lead to more complications of the disease. If they choose to use alternative medicine or herbs, it should be recommended by their physician to make sure that it does not conflict with the prescribed medication from the hospital. Another point to note is that women complained that seeking medical attention can also be costly to them because in their area there are no specialists who can help them. Respondent 2 said;

"For instance, the nearest hospital around here is about 50kms away and I doubt if they have specialists there so sometimes you might be referred to Mpilo Hospital in Bulawayo imagine how much that would cost and I won't be travelling alone since I can barely do anything on my own." Respondent 2

As mentioned in the other subthemes, it is important for health care services to be accessible and available to women which helps in cutting costs. Summers (2015) states that government policies must be in line with the SDGs which stipulate that they should be widespread and timely access

to healthcare so as to relieve poor households in developing countries from the burden of diseases and other significant health expenses. Cummings et al. (2016) stipulate that access will be reduced if there are fewer resources for the poor.

Unavailability of services and expensive specialists may lead to some patients dying as they will not afford them. Most women in rural areas are unemployed hence they do not qualify for medical aid schemes which becomes a challenge when they get sick. Some women attest that at the provincial hospital (Gwanda Hospital) sometimes specialists visit and that is when they get to see them but that depends on whether they are aware of it or not. Literature has shown that they are a lot of gender barriers to women and girl's access to healthcare in rural areas. Some are due to gender dynamics which are as a result of inequalities that affect man and women uniquely in the society (WHO, 2010). Parajuli and Doneys (2017) attest that such obstacles prohibit women and girls from travelling to seek care and lessen their access to sources of income. Due to this, women end up facing financial problems which restrict them from finding the correct medical counsel. However, even though there are many challenges that affect access to health services, women still believe that it is essential for them to consult with the hospital as a prevention measure of CVD.

SECTION D: THEME FOR OBJECTIVE 3

The second objective was to describe the perceived effects of CVD on women's lives and to those of their families. The following are the interview questions that were addressed on this objective:

1. After discussing the types of cardiovascular disease tell me how heart disease/ would affect your life as woman.

2. From a woman's point of view, how would your suffering from heart diseases/ stroke affect your family?

5.6 Theme: Perceived effects of CVD on women

With regards to the perceived effects of CVD on women's lives, economic factors, social effects, psychological effects, personal effects and effects on the family were identified. It was discovered that some of the perceived effects of CVD on women were interlinked, where perceived economic effects are shown to be related to other themes like financial challenges. These can prevent the seeking of medical attention and thus lead to a prolonged period of recovering from CVD. If there are financial challenges it will be difficult for women to perform their motherly responsibilities to their children. Increased expenses can lead to a financial burden on the spouse and adjustment of lifestyle in the family.

5.6.1 Subtheme: Perceived economic effects

When asked on how CVD can affect or has affected their lives, women reported that they face financial challenges. Several women in this study were single, widowed or divorced which made them the main providers for their families. If they were to get bedridden or incapacitated in any way, it meant that they would have to stop going to work. By so doing, they might end up losing their source of income. CVDs cause serious complications and disabilities. Financial complications affects the health of women and girls as well as the health and life chances of their children. Being born to a malnourished mother increases the chances of the infant suffering under-nutrition, late physical and cognitive development, and CVDs in adulthood. One respondent outlined that;

> *"Since I will not be able to work it will be financially straining for my family because I will need someone who can care for my child especially preparing him to go to school, washing his clothes and other things. So, to achieve this I will need a maid/ helper who I might not afford because of being unemployed. Furthermore, the money for my medication and other supplies will deplete our savings." Respondent 11*

The intersectionality theory explains that dominations in the society do not work independently but they intersect in complex patterns. They are not additive but rather interlocking and cannot be separated (McGibbon and McPherson, 2011). Findings in this study agree with the above as they reveal that as women are already faced with the burden of disease, they also have to endure economic challenges and the burden of taking care of their families. This is even worse if the women are the breadwinners in their homes as they will not have other means of providing for their children.

Findings show that the respondents were worried that they will then need someone who can assist them in caring for their children. This would be a challenge if they themselves would not have any means of generating income. CVD has substantial indirect costs that are as a result of lost productivity and early retirement from the workforce (Leal *et al.,* 2006; Schofield *et al.,* 2012a). It also results in significant indirect costs for women in terms of lost income and lost savings. Schofield *et al.* (2012a) claim that the costs of reduced labour force participation and the reduction of the individual's financial assets are also affected at that time. Below were their remarks on how it would affect their lives;

> *"I think a stroke would affect my life a lot as I won't be able to do things on my own. My everyday chores as a woman will not be fulfilled, for instance, I won't be in a position to execute these duties anymore. I would be forced to find a helper to help with my children and not only that but also in taking care of me. However, this helper does not come for free I will need money to pay them for their services and since I won't be working this might prove to be difficult. It won't be easy for my husband to fend for the family and cater for my medical expenses at the same time afford a helper." Respondent 2*

Respondent 5 added that;

"I would want to think that this isn't an easy experience so obviously it is not easy to cope with this as some take a long time to recover regardless of the rehabilitation they get. Some people can go for over 6 months before they can recover fully it becomes difficult for them to live a normal life since they need help in doing literally everything. So how then does one manage to cope as they need money to pay the person who will take care of them and since you will be out of your job you won't have money to pay the helper?" Respondent 5

Women pointed out that some of these CVDs can lead to temporary or even permanent disability which meant that they would no longer be able to do their work independently hence the need for a helper. With the economic challenges in the rural areas, some people depend on menial jobs that need them to be physically capable of working hence it might be difficult for these women to get jobs to help them sustain their families. Money for medication and other supplies that might be needed will also impact on their budget or savings. According to Okediji, Ojo, Ojo, Ojo, Ojo, and Abioye-Kuteyi. (2017), chronic illnesses can have significant economic implications on the individuals and their families as they deny individuals of their productivity and health potentials. They further posit that chronic illnesses impact the income and savings of the patient and their family. CVD on its own has a huge negative impact on economic growth and development of every nation. According to Gheorghe, Griffiths, Murphy, Legido-Quigley, Lamptey and Perel (2018), CVD affects mostly the working age in low- and medium-income countries (LMICs) like in Sub-Saharan Africa, half of the CVD deaths occur in the 30-69 years age group at least ten years earlier than in high-income countries (Bainghana and Bos, 2006).

Even if these women are married, they still feel that it is important for them to be hands-on when it comes to household chores because their spouses will not be able to do them as efficiently as they do. That is why they feel it will be a real misfortune if they are to be diagnosed with any CVD or if the CVD leads them to bed riddance, disability or hospitalisation. According to Gil-Lacruz and

Gi-Lacruz (2010), normally women or mothers are the ones who take care of others when they are sick, however, when they become patients, responsibility for their work is unlikely to be accepted by other family members or the community.

Respondent 12 stressed that since she is a student, if she is to get sick this will strain the family budget as she also has other siblings who still need to be taken care of. Grant and Brito (2010) agree that poor health may be a negative factor in educational achievement, usually, students from low socio-economic backgrounds are at risk of worse health status. There are various diverse and inter-related factors which affect a student's opportunity for successful learning and academic performance, chronic disease is one of them. This is how respondent 12 described her view on that;

> *"As a student, CVD will really impact on my studying as sometimes it is hard to focus when you are not feeling well. It will also affect my family's income. They will end up in a serious financial crisis and I will not be able to help them. I think some of the money that can be used for my younger siblings will be diverted to buying my medication hence the family budget will be strained. My family will have to start selling livestock to sustain themselves. Moreover, if my mother is to get sick it will be financially traumatic as she is the sole breadwinner." Respondent 12*

Lindholm, Burstrom and Diderichsen (2001) postulate that illness may have socio-economic consequences and these may vary with social position and are often severe for people in lower social positions. Due to this, participants expressed the financial impact CVD might directly have on them and their family members. The direct economic impacts on the household may emerge as hospital bills, caregiver allowances, nursing home bills, and other aspects of care (Suhrcke, Nugent, Stuckler and Rocco, 2006).

Moreover, women believe that they might be expected to have their own special diet which might not favour other family members. This will imply that when buying groceries, they will need to consider their special needs. Some of the things they mentioned are highly priced compared to the normal groceries that they buy. The respondents below expounded that;

> *"I think my family will suffer a lot of money issues as I will need a lot of money to manage my condition. I always see it with my grandmother because she has a special diet that she follows and we cannot really afford to cook different meals in one house. I mean we have to buy a special sugar, special cooking oil, we have to cook lean meat and vegetables. Some of these are not even nice to eat (laughs). So, I will really burden my family." Respondent 5*

> *"The other thing that would affect my life is the fact that such a life is very expensive especially for someone who doesn't work anymore. You now dependent on what your husband earns and if he isn't working then you are only looking for handouts from people. The medication is so expensive and most of us come from poor families and it becomes difficult for the affected woman to get proper medication at the same time live a decent life in terms of putting food on the table." Respondent 6*

Most of these women put much emphasis on lack of financial independence which would force them to be dependent on their spouses. As a result, this might place a burden on their spouses as they will be carrying all financial responsibilities on their own unlike when they are assisting each other. According to Golics *et al.* (2013), in their review study, found that some family members of patients increase their working hours so as to assist them financially. With this, a lot of things would have to be compromised and might impact on the welfare of children especially their education and health. When mothers are unable to care for their children, it also impacts on their psychological well-being as they will be overthinking and this might impact on their recovery as well.

"Such diseases require a lot of care, the affected would need money all the time for one to get the best health care. This is very costly as medication and consultancy fees don't just come cheap especially in Zimbabwe. The money that will be meant to take care of my two boys will now be channeled towards my health care and that would be a strain to the family. Since I will be out of my job because of the sickness my children would suffer a great because this would mean that I change them from their current school to a lower school and it would take them a long time to adjust to the standard of education there." Respondent 7

"In this country, most people struggle financially and we lie on a very slim budget to survive through the month. So, the addition that is made by the requirements to care for me would affect my family a lot. The family would be forced to cut down on some items in the budget so as to accommodate my needs and sometimes they can even go to an extent of selling a cow at home or some property just to raise more money." Respondent 9

WHO (2012) asserts that CVD is no longer only associated with the rich but also the poor are equally affected and has a greater impact on them due to lack of proper access to healthcare. CVD is usually characterised by a long term of healthcare and high expenditure on treatment and care. This burden of out of pocket expenditure is greatest for the poor which might lead them to poverty (Gheorghe *et al.,* 2018). According to Pankaj and Kanchan (2016), CVD can reduce productivity potential leading to straining of the household financially as they would be trying to meet the high out of pocket expenditure for treatment. Such expenditure might be financed through savings, loans, selling assets, insurance or others. Although these financial coping mechanisms help smooth over the health shocks, they decrease household consumption on non-health goods including food, in the present and in the future (WHO, 2009; Gheorge *et al.,* 2018).

Literature review has shown that indeed CVD results in high health care costs, lost productivity, and catastrophic expenses in the lives of the rural women. The majority of the world's poor are

women, who are least able to allocate/source funds for CVD treatment. Women also may have unequal say in decisions pertaining to health expenditures. In Colombia, for example, husbands independently make 20% of large expenditure decisions, including those that affect their wives (Population Reference Bureau, 2011).

5.6.2 Subtheme: Perceived effects on family

According to women's narratives in this study, CVD can have an impact on the family as a whole. Whether it is the nucleus family or the extended family, members find themselves facing various challenges. One of these is an adjustment of lifestyle. If patients are not hospitalised, it will be the duty of the family to find means of caring for their sick relative. This certainly means that they have to compromise most of their time or schedule so that they can attend to them. Golics *et al.* (2013) posit that living with, or caring for, a relative with a disease can have a large impact on the education and careers of family members. This could include disruption of school work in siblings or children of the patients or the employment of adults being affected and the burden of care placed upon them. Women stated that it would be unfair for their family members to adjust their lifestyle as they also have a life of their own and they need their independence. Below are their comments;

> *"Sometimes they will be restricted to live in one place as they cannot visit or attend any functions as they have to look after me. If they do, they cannot attend with me as it might be uncomfortable for both of us. It is only natural for people to feel like that and as a mother, it will pain me to see my family disunited because of my condition." Respondent 4*

> *"This condition requires one to change their diet like eat a lot of vegetables and cut down on meat so it wouldn't be practical to cook two portions of meals all the time hence you are now forced to eat what they are eating so imagine having to stay away from meat as if you also have that condition." Respondent 8*

"My family wouldn't only be affected financially, but also emotionally. Imagine the strain that this condition, for example, the stroke would bring to them (sulks). This would mean that everyday every minute someone needs to be around me as they fear that I won't cope when I am alone. My only daughter will have limited play time with her peers as she will be challenged to show care to her disabled mom. My husband might not afford to have his own time with his friends at the beerhall instead he will be stuck with me. I will be regarded as some house property really (laughs)." Respondent 2

Women being main carers at home it might be challenging for them to perform their duties effectively as they might be confined to bed most of the times when sick. In that study, participants who had a sick family member claimed that they found it difficult to sleep because of worry and also having to wake up the patient for medication and some to check if the patient was still alive (Golics *et al.,* 2013). It is sometimes uncomfortable for people who have certain conditions to be seen in public or to attend functions because they will be in pain. This might also be because they will not want to be pitied by people.

Respondents also articulated that it if they are to get paralysed due to stroke, they will sometimes need assistance to even use the toilet. This would be very uncomfortable for them hence they will feel like they are a burden to those caring for them.

"*It will be even tough to ask someone to do things for me since I had previously been used to doing things on my own this would feel like I am bothering people around me. Think of it this way, having to ask someone to help you to go to the toilet which is something one should do on their own." Respondent 6*

Women stated that sometimes it is very much disheartening for them to be seen by their children suffering. They end up feeling like a burden to their family instead of being the one to care and protect them. This is how they explained it;

"It is so difficult to even imagine if you know, I can use my grandmother as an example she is suffering from BP (high blood pressure) and you can tell that she is in pain sometimes. She sometimes would tell us that she wishes to die as she thinks that she will be bothering her children with her condition. You can tell that she is never happy at all and this is because of the way she thinks her sickness affects people around her." Respondent 5

"Since I will be incapacitated that means I won't be able to work for my family or perform my day to day chores anymore. My children will be disadvantaged a lot looking at the fact that I won't be able to cook or wash for them this will affect me emotionally." Respondent 6

As expressed by the respondents, that feeling of being a burden might be due to the lack of autonomy. This might impact on their psychological well-being thereby delaying their recovery because as stated by Respondent 5 some people end up wishing to die. This might be because every mother wants to watch their children grow and they want to contribute to that. It is understandable when these women have feelings of helplessness. Some of the pregnant respondents even explained that if they were to get sick there would not be able to raise their babies because they will also need caring for themselves. Below are some of their views on that;

"As a single mother, I think my son will be greatly affected as I am the one who takes care of him so there will not be anyone to care for him. Due to illness especially if I am bedridden, I will have to stop working and, in that way, I will not be able to provide for my family especially my son." Respondent 5 (focus group)

"If I am to get stroke right now my household will be in disarray. As you know ***"umuzi ngumuzi ngomama"*** *(the woman is the one who makes a house a home) and the men are always out there working and searching for money, the woman is the one who*

manages the home while the husband is away. So, my being sick will mean that the daily running of the home will be disrupted. If I am to get a stroke, I doubt even if my children will manage to take care of the livestock the way I do it so it will really be a mess. And that alone will kill me (laughs). Imagining who will take care of my chickens and cows whilst my husband is away. It also means that I will not be able to raise my children the way I want especially in disciplining them." Respondent 16

The respondents explained how their role will be affected as a mother and it might end up affecting the daily running of the household. Some women had spouses who were away on work duties, hence the women were the ones who were left with the duty to make sure that everything runs smoothly. Respondent 16 highlights that "the woman is the one who makes the house a home", this explains what the society expects a woman to do. If a household does not have a female figure, the society believes that it will fail and the children will be uncontrollable.

Moreover, women are often sole caregivers for those with CVD. This unpaid caregiving, among other types of informal work in which women are overrepresented, increases women's impoverishment because they are unable to participate in the formal economy and access social benefits. A woman's health status also relates to the health and vulnerability of her children. Being born to a malnourished mother increases an infant's risk of under-nutrition, low birth weight, and increased vulnerability to CVDs in adulthood. Women's health is, therefore, critically important to the health of future generations.

Moreover, some respondents were of the opinion that their family members would be ashamed of them because of their condition. They believed that even the community would discriminate them because they would be having a sick person at home. This might be attributed to the lack of knowledge that was explained on the other themes. People tend to be worried about how other people view them hence it will also be a challenge to accept their situation. Sometimes if it's children, they might get bullied because of that. Their views on that are presented below;

"It will also affect the children schooling as they might get picked on at school for having a sick mother or a disabled mother. It will really affect their welfare especially emotionally and this will, in turn, affect me as I will always want the best for my children." Respondent 4 (focus group)

Respondent 15 adds that;

"They would not even want to go out because I am just wondering how the community will start looking at them. But it will also depend on the level of disability. As a stroke patient, I will stigmatise myself as I will be feeling like I am already a burden to my family. This is due to our society which is not inclusive to things like disability or most chronic illnesses. So, my family will not be able to probably disclose to every one of my condition as people might start speculating on the reasons I got that stroke. This is due to ignorance of risk factors of getting a stroke because in our societies we believe that those who get it have issues. Some will assume that you were probably diagnosed with HIV or you have serious debt that has led to you having HBP or stroke. Now they will want to dig on what stressed you and this will not sit well with the family as they will also want to protect you." Respondent 15

Most of our societies are not inclusive especially when it comes to conditions they do not understand like disability or those that lead to bed-riddance. That is why sometimes women believe that it is their duty to protect their families from such by keeping their health status a secret from members of the community. Social stigma also has been shown to impede women from adhering to their doctor's appointments. Merz, Andersen, Sprague, Burns, Keida, M., Walsh, Greenberger, Campbell, Pollin, McCullough and Brown (2017) reported that twenty-six per cent of women in their study agreed that CVD was embarrassing to them as people might assume that they were not eating right or exercising. In that study, forty-five per cent of women cancelled or postponed a physician's appointment until losing a few kilograms. Social stigma might also

include cultural barriers such as the stigma of taking long-term medication which leads to treatment gaps in CVD (Kreatsoulas and Anan, 2010).

Women in this study also highlighted the impact CVD might have on their marriage. They claimed that if they become sickly for a long time, their husband might end up finding love elsewhere. Some women actually blamed it on members of the extended family who might ill-advice their husband to leave them as they will no longer be fit to be wives. They said;

> *"As a woman, in a patriarchal society like ours, I may be at risk of losing my marriage because if I am not well, I might not be able to perform some wifely duties and he might end up marrying someone else. Even his family might interfere and encourage him to leave me as I am no longer a normal wife or I am disabled. It is even worse if I do not have children because they will not be anything binding us together. I have seen a lot of women going through this painful experience." Respondent 14*

> *"Some of us even our husbands would run away from us, on a serious note though I won't be able to fulfil my wishes as a wife like any other fit woman would do. And you know how our black communities are, the next thing his family will start looking for a new wife before I even die…hahaha! Women usually are more burdened by any form of serious illnesses as they are the pillars of the home." Respondent 2*

> *"This might actually destroy my marriage because my husband is a human being as well, he cannot wait for my recovery forever. You know how these men are, we women can be patient but it is not in their nature to be like that." Respondent 1 (focus group)*

This study revealed that women assumed that they would no longer be fit enough to fulfil their wifely duties hence it would drive their spouses to divorce them or have extra-marital affairs. They expressed that it is in a "man's nature" to do so as they are not as patient as women. This reveals how societal expectations and stereotypes influence people's thoughts and behaviour. Women

are meant to believe that men do not have the patience to wait for their wives to heal when they get sick or disabled, they can marry other women whereas if it is the men in the same situation, the woman is expected to wait. Studies have reported a higher probability of divorce when women become ill compared to men (Karraker and Latham, 2015). England (2005) articulates that "this variation by gender is consistent with the increasing advantage enjoyed by men in (re)marriage markets over the life course due to an ever-expanding pool of potential partners, and with findings that husbands may find caring for an ill spouse more stressful than do wives" (Karraker and Latham, 2015: 422).

However, on the other hand, women also felt that it would be quite unfair to their husbands to continue taking care of them. They felt that it will rob them of their time to relax with their friends. One respondent said;

> *"My husband might not afford to have his own time with his friends at the beerhall instead he will be stuck with me." Respondent 2*

When one is caring for a sick person, their time has to be sacrificed, sometimes it can be frustrating and strenuous. It needs someone who has patience and love hence it should be expected that their husbands should be willing to show love and sacrifice so as to make their wives as comfortable as possible. Even though the women were worried about their husbands, some younger women felt that if they are to have a sick relative it would also rob them of their time to enjoy with their friends.

5.6.3 Subtheme: Perceived personal effects of CVD on women

In the first two subthemes it was revealed how CVD affects women and people around them, now, this subtheme discusses how CVD would also affect them at a personal level. In the discussion, women mentioned that if their condition is serious, there are chances that they might be excluded

from various community activities which could assist them financially. The following are some of the comments by the women regarding this;

> *"Since I might be paralysed I won't be able to work so that I can feed my family. This would also mean that I will be excluded from any community projects that are usually financially beneficial. For example, in my area there are cooperatives projects that are sponsored by NGOs (Non-governmental organisations) so, if I am ill there is no way I can partake in those even members of the community will not agree to engage me in these. It can never be the same you know, as a fit woman I do all the house chores I clean, cook and even wash clothes for the family. Imagine when I fall ill and I become weakened that will mean I'm not in a position to do those duties anymore. Our chores are different his role is to fend for the family." Respondent* 2

In addition another respondent said;

> *"Imagine let's say I am a single parent and I have a good job then suddenly I get a stroke that would mean my life is over. The first that will happen is that I will be relegated to my bed hence I can no longer go to work or even to do house chores. I'm a breadwinner my children will suffer a lot as everyone at home depends on me to provide." Respondent 5*

Due to stigmatisation that is common because of ignorance of CVD, some people might not be comfortable employing someone who is not well. They might believe that their illness will retard their work hence some people end up getting unpaid leave because of that. According to WHO (2011), regardless of CVDs being the biggest killers worldwide, a lack of awareness and misinformation can provoke CVD-related stigma in many countries, preventing people with CVDs from playing an active role in society. Women may suffer discrimination in employment, insurance, education and many other areas of life.

Another respondent pointed out that because they were self-employed it meant that they will not be able to continue selling their products. Another respondent who is a student stated that if she was to get a condition like a stroke it meant that she might have to stop studying up until she recovers as she will be uncomfortable going to school or might just be unable to study. She believed that as a student her school work would suffer because she would not be able to concentrate or do her work to her best potential. As such, it is important to note how any form of sickness can really affect someone mentally so if one has not accepted their condition they are bound to be depressed.

Findings show how women perceived stroke as a death sentence due to the fact that some people lack total independence when they have this condition. Therefore, women might end up harbouring ill-feelings towards themselves as well as having suicidal thoughts. Below is how one respondent described that ordeal;

> *"I can safely say for someone with a stroke they are as good as dead because they are not able to do anything for themselves without being assisted. Some even find difficulties in feeding themselves and also going to the bathroom they need assistance and, in most cases, diapers become the answer. So, you can imagine how much they will be suffering both physically and emotionally. Especially that feeling of being a burden to the family and also to the community it really impacts on one's emotions." Respondent 1 (focus group)*

When such conditions happen in people's lives, there are a lot of adjustments that need to be done. As described earlier, for one to manage CVD they have to change their diet, partake in physical activities and reduce stress. To some people, these life adjustments can be overwhelming and may make it harder for them to cope with the disease. According to Newsom, Huguet, McCarthy, Ramage-Morin, Kaplan, Bernier, McFarland and Oderkirk (2012), conditions like CVD are considered avoidable as they are substantively predisposed by modifiable behaviours. When these conditions are detected it represents a potential "wake-up call," where

one has a chance to make serious lifestyle changes that have been referred to as secondary prevention. Healthy behaviours following the inception of disease are critical since they can lessen the risk of reappearance and severity of illness, upsurge functioning, and prolong longevity. One woman believed that;

> *"This condition if I am to have it would surely alter my life in a big way. Possibly I will have to watch what I eat. You can no longer eat the way you used to rather you need to eat food that is healthy especially lots of vegetables. I would have to cut down on some activities, this means that they are things that I used to do which I won't be in a position to do them anymore. If I get affected it would mean that I cannot have children in this condition as pregnancy might affect your heart. People around you will be treating you as if you are dying, yes, it is a good thing to sympathise with you but at the same this eats into your freedom even a simple thing like getting yourself a glass of water they would want to discourage you that you are not supposed to touch anything because of your condition. You get written off in so many things." Respondent 7*

Another asserted that;

> *"I would want to think that this isn't an easy experience so obviously it is not easy to cope with this as some take a long time to recover regardless of the rehabilitation they get. Some people can go for over 6 months before they can recover fully it becomes difficult for them to live a normal life since they need help in doing literally everything." Respondent* 5

As a result, these women will be affected mentally and their period for recovering will be slow as healing starts from the mind. The moment one starts being conscious of their disability, life changes a lot for them. Everyone wants to feel that they have a normal life and that feeling of autonomy makes them feel like they still have power over everything. However, in this study

women expressed that this freedom that one needs will be gone when their sickness is prolonged. Respondent D (focus group) concurred that it will be difficult for them to recover quickly due to stress and overthinking from the circumstances they will be facing.

5.6.4 Subtheme: Perceived psychological effects of CVD in women

Results from this study revealed that women perceived that CVD may lead to some psychological effects on sick women. Loss of confidence may come as a result of being disabled, bedridden or due to a lack of autonomy. Women elucidate that due to the stereotyping of CVD, they end up hiding from the community as they feel uncomfortable around them. This also might be because you find some people losing weight due to sickness and most people associate such with HIV/ AIDS which is still facing stigma in our modern society. Some women expressed that they become ashamed of how they look hence they isolate themselves from other community members. However, it is essential for them to have people around them who will be showing moral support. They insist that;

> *"I think in most cases people who suffer from stroke feel ashamed about their condition maybe it is because of the way they are stereotyped. They usually hide behind closed doors and that makes them fail to do a basic exercise like daily walking around to try and recover quickly. This is really bad as it makes individuals give up on their life effortlessly, this condition is controllable having stroke doesn't mean the end of the world. There is a need for the affected people to always have people around them who will encourage them to fight their condition and accept what they are." Respondent 5*

Respondents 6 adds that;

> *"You become very uncomfortable about yourself in the community as a woman you always want to walk with your head held up high and have your presence felt and now you can't*

even wear high heeled shoes. I become anti-social because of the way I am, I would prefer to be always alone." Respondent 6

When an individual loses confidence in themselves it becomes challenging for them to have a positive mindset to life. As stated above it is of paramount importance that one has a positive mindset when sick as it facilitates their recovery.

One of the perceived psychological effects of CVD identified are stress and depression. Findings show that women were of the opinion that suffering from CVD will impact their mental state thereby leading to depression. This might be attributed to ignorance, some people have no idea that some CVDs can be managed. However, they believed that life has ended if it becomes chronic. They state that;

"Moreover, I think I would be emotionally affected as my mental state will be disturbed by the thought that I might just die at any time. This also affects the rate of my recovery as I believe that one's attitude towards their condition is the engine to their recovery. If I tell myself that I am not physically fit I can't do anything or be seen out there that would have a big effect on my recovery." Respondent 9

"To be honest if I am in that situation I would wish to die because in my opinion, I think it will be over for me." Respondent 11

Dekker and de Groot (2018) in their study summarised various models so as to explain psychological adjustments to diseases. They explain that disease leads to acute and ongoing illness stressors. These stressors induce loosely attached cognitive, emotional and behavioural responses. These responses then determine health, with the personal background, social and environmental background moderating the adjustment process (Dekker and de Groot, 2018).

5.6.5 Subtheme: Perceived social effects of CVD in women

Every human wants to have a sense of belonging hence it is important for them to be a part of a certain social group. Findings in this study showed that women had a belief that when they get sick from serious conditions like stroke, they would most likely be socially isolated because their communities are not very inclusive when it comes to illnesses. They mentioned that they would not be able to attend social gatherings as they would not want to be viewed as special persons but as an equal part of society through inclusion and not pity.

Respondent 15 raised a point that they would use social media as a tool to disguise their health status as they would not want the whole world to be aware of their condition. Below is how they describe it;

> *"Firstly, it will take me a long time to disclose my status to a close friend because we usually disclose such things when we are feeling better. The advantage now is that our lives are now on social media so I might portray myself as healthy and lead a normal life there. The only thing I will avoid is moving around but then I will continue posting throwback pictures on social media so that people believe that all is well. I will not post current pictures up until I heal then disclose later." Respondent 15*

> *"In the African community, we usually keep these things to ourselves so the family will try and cosset you to make you feel comfortable with the condition that you have. This might also in a way alienate you from others in the community during the process of taking care of me or when they are second guessing how I feel." Respondent 7*

This is a sign of how these women are concerned about how others would perceive them on their condition. This shows that it is important for every individual to feel a sense of belonging. However, sometimes as the family tries to protect an ill person from the speculating community, they are in a way isolating them from the world. Some respondents mention that as a result of ignorance,

they find some people still believe very much in witchcraft so much that they associate CVD with it if, for example, one is suffering from paralysis due to CVD. Below are the remarks on that;

> *"Socially I think some people might find it challenging to accept your new condition more especially if it has led to a disability. Some people will actually discriminate you as they will start referring to you as just a sick person or a disabled person. One might even suffer social exclusion whereby if there are events in the community, they will not include you as it might be difficult for them to be looking after you instead of them having fun. In the community, you as an individual might also get discriminated because people will start judging that you are caring for someone who is disabled. In our communities, there are still small-minded people who mock illness. Some might think that it is contagious or a form of witchcraft that might be passed on to them or end up affecting their families." Respondent 14*

> *"Moreover, in the society, you are stereotyped as useless you can no longer attend some social gatherings like weddings. When part of your body is paralysed people will say you have been bewitched. Even when you walk in public you will feel like everyone is looking at you and whispering all sorts of bad things you, know the gossip topic. Your family encounters the same emotional effects as they will be outcasts in the community for keeping an inhuman thing at home. You become very uncomfortable about yourself in the community as a woman you always want to walk with your head held up high and have your presence felt and now you can't even wear high heeled shoes. I become anti-social because of the way I am, I would prefer to be always alone." Respondent 6*

Nanjunda (2014) indicates the three domains of illness, which are illness as a sanction (punishment for doing wrong), illness as deviance (a form of social control) and illness as an indicator of social system performance (indicative of the performance of an existing social

system). These are different perspectives from which society can view illness and it is highly likely that such might lead to discrimination of individuals especially if the illness is viewed as a sanction.

If someone does not get proper counselling and a good support system, they end up having such toxic thoughts. This kind of social exclusion also extends to one's family such that instead of them being supported, they are harshly judged. Due to such beliefs, sometimes these women find themselves being excluded from social activities that can be beneficial to them. Respondent 2 purported that if she was to get ill from CVD, it meant that she would not be a part of some projects like co-operatives that could help her financially. Some of these co-operatives could be for growing vegetables, sewing, moulding clay and many more. This is how she described it;

> *"Since I will be paralysed I won't be able to work so that I can feed my family. This would also mean that I will be excluded from any community projects that are usually financially beneficial. For example, in my area there are cooperatives projects that are sponsored by NGOs (Non-governmental organisations) so, if I am ill there is no way I can partake in those even members of the community will not agree to engage me in these." Respondent 2*

Stigmatisation has also been shown as a factor that affects the management of CVD. This study revealed that women believed if someone is excluded from the society because of a disease or disability, it becomes difficult for them to recover or to accept their condition. This shows that it is important for people to feel included in their community moreover if they have an ailment. Such inclusion makes them feel like a part of the society and gives them a positive attitude towards their condition and probably the urge to continue to fight till recovery. However, according to Hatzenbuehler, Phelan and Link (2013), even though theories have asserted that stigma would inevitably lead to low self-worth, there are some studies that reveal some stigmatised groups showing similar levels of self-esteem as high as those of majority groups. This might be as a result of active efforts to challenge and resist stigma (Thoits, 2011). However, research has also

stipulated that particular individuals internalise the pessimistic views toward them resulting in detrimental health outcomes.

Furthermore, due to the lack of support systems, the younger women believed that they might not find people to care for them. They also believed that chances of them getting married might be reduced as no-one would want to marry a wife with a chronic illness (if it's chronic). Such stigma results in women being unable to accept their conditions. Every young woman looks forward to a bright future therefore if they fall sick, they might feel that their dreams have been shattered, therefore they need social-support. This respondent said;

> *"We also believe that we do not have any support system hence if we are diagnosed with HBP especially at a young age no-one will take care of us. Furthermore, we might not even get married as we would be sickly. So, the stigmatization from society also contributes to us being afraid to accept some diseases and using health care services." Respondent 15*

Girls and women with CVDs particularly in rural areas can be discriminated against especially when they are about to get married. This may discourage families in some societies from revealing the health status of their daughters and discourage them from seeking diagnosis and treatment. Women with CVD are more likely to be divorced, separated or abandoned by their husbands, leaving them financially vulnerable (WHO, 2011).

The social construction theory proclaims that culture determines the stigmatisation of illnesses, it also chooses what should be considered a disability or not. Social stigmas prohibit people from being integrated into society. It is also the society that determines which illness is more intense than the other which results in discriminatory patterns especially if it is believed that the illness is as a result of punishment. Nanjunda (2015) agrees that some diseases are stigmatised in societies based on the type, duration and severity- it may be different as well in urban and rural

areas. The thoughts of illness and health are socially constructed. Culture plays a huge role in a person's perceptions of diseases.

SECTION E: THEMES FOR OBJECTIVE 4

The fourth objective was to explore women's perceived coping strategies. The following are the interview questions that were addressed on this objective:

1. In your opinion, what do you think would be the experiences of women suffering from stroke and how would they cope with these challenges?
2. Do you think their experience of heart disease would be different if they were a man? Why?

5.7 Theme: Assistance of women with CVD

With regards to the assistance of women with CVD, two subthemes emerged which were social support and initiatives to combat CVD. These will be discussed in detail below.

5.7.1 Subtheme: Initiatives to combat CVD

This study revealed that women felt it is important for the government, non-governmental organisations and other stakeholders to come up with initiatives that are directed at women to raise awareness thereby combating CVD. They suggested that this could be done for example through CVD education. This could be done by organising awareness campaigns or workshops that teach women about CVD. One respondent mentions an organisation called Grassroots which focuses on HIV/AIDS and other behavioural diseases to the youth. She describes this as a way of empowering women with knowledge that would assist them in changing their lifestyle. CVD relies mainly on opting for a healthier lifestyle, therefore, CVD education can play a pivotal role in ensuring that women are equipped with enough information. Respondents revealed that;

"I actually know of an organisation called Grassroots which informs people about HIV, STI and other behavioural diseases. I also think it is important to also empower women by

teaching them about CVD as they are more vulnerable to these diseases than men. By empowering them we can use health promotion strategies like giving out T-shirts that have health information written on them so as to raise awareness. In tertiary institutions and high schools, the management should appoint a day when students are taught on health issues like these heart diseases. This helps create awareness." Respondent 14

Another respondent added that;

"There is an NGO (non-governmental organisation) that teaches women especially pregnant women. The program is called Amalima, they teach us on this subject. They emphasise a lot on what kind of food we have to eat that is good for our bodies with low fats especially during pregnancy. These programs (Amalima) have been really helpful a lot. I now know how to cook healthy food and what kind of healthy things I can eat. This program spreads in most parts of the wards around us. They also teach us how to take care of our newborn babies. This donor (USAID) also donates some foodstuffs to those who attend these lessons. Most women in our community attend these lessons though it's not really by force to attend rather one can make a choice and come if they want to. The lessons are done once every week, once in a while, they get to ask questions to ensure understanding in participants. However, this program only focuses on women I haven't heard of any that teaches men in our area." Respondent 2

It was discovered that there are some programs aimed at teaching pregnant women on a healthy lifestyle. As mentioned in the previous themes, it is important for women to have knowledge on how to prepare healthy foods for their families as they are the main carers in most households. Evidence shows that investing in women through education achieves a range of health and socio-economic development goals, thereby improving the prospects and health of the whole family (World Heart Federation, 2013). Women and girls are key agents of prevention: Women, as mothers, educators, healthcare providers and gatekeepers of household nutrition and lifestyle

patterns, need to be at the forefront of the fight against CVD (World Heart Federation, 2013). Some women explained that if one takes the initiative to educate themselves on the disease, it will be easier for them to explain it to others so that they understand their condition.

Some women suggested that it is essential for the government or any related stakeholders to ensure that those affected severely by CVD are given the support they need. This support could be in the form of providing them with wheelchairs, food and other items that they might need. They can also make sure that they are included in programs that empower them financially so that they can be able to care for their families especially if they are breadwinners. In addition, some women suggested that the hospitals should deploy their health workers to villages who can make a follow-up on sick people to check on their progress and ensuring that they are taking their medication as advised. One respondent suggested that there is a need for a rehabilitation centre for people who have been affected by CVD. These will assist especially women with disabilities or even psychological problems as a result of CVD. There are no such services in rural Gwanda hence women have to travel far to find them, below are some comments on that;

> *"I think there can be a special hospital whereby the affected can go there for regular checkups and also for some teachings on how they can take care of themselves. I think the government should consider having a Heart Disease Institution just like that of TB because at least there they will be trained nurses who know how to care for people in such a condition. Moreover, I think it is important for relatives to also assist financially so that the sick person can get medication." Respondent 8*

Literature has shown that due to power relations in societies, women have less access and control over their health hence the need for gender mainstreaming. Gender mainstreaming has been shown to promote equity and equality amongst both genders throughout the life course (WHO, 2002). It is essential to include programmes that are inclusive and friendly to both genders so as to promote optimal health even to the most marginalised groups.

5.7.2 Subtheme: Social support

Women were shown to need a lot of support from their families, friends and other members of the community. They suggested that it is essential for patients to get support groups like in the case of HIV/AIDS patients or drug addicts. These support groups would help women interact with people who have the same condition and they can then share ideas on how to cope with these conditions. Below are some of the comments on that;

> *"Secondly, I think support groups are also needed because someone may get diagnosed then after that they do not get any form of support. Imagine a situation whereby a relative gets diagnosed with BP or stroke and then after that, we do not make a follow up on their progress or we start gossiping about their condition. People need to assist them in making sure that they live in an environment that is conducive for their progress. When we are not well, we need a support system for stress management no matter the severity of the sickness." Respondent 15*

> *"I think they should get involved in support groups that will help them meet people who have the same condition and share coping mechanisms. Sometimes when you are with people who understand your struggles your healing process is hastened. However, I have never heard of any support groups in our communities which is very worrying because they are an essential part of our lives." Respondent 14*

In the findings, having a good support system was further emphasised that even spouses also had a mandate to make sure that their partners are well taken care of and given all the emotional support they needed. Findings also highlight that family support combined together with counselling can play an important role in the recovery of patients. Women believe that if someone confides their feelings in other people, they start feeling better. As shown in the findings, women have a lot of emotional problems during this time hence counselling services would assist them and it should also involve those who are caring for them.

These findings are in agreement with what the literature has stated. Studies have reported that social support is associated with the reduction of CVD development due to the fact that when an individual perceived that support is there, it motivates individuals to assume that they have more coping resources at their disposal (Howard *et al.,* 2017). Therefore, the kind of support that one gets will influence their recovery during times of ailment. According to Liu *et al.* (2017), functional support is essential as it moderates relations between depression and CVD in that if functional support is high, chances of women's health improving becomes high. Petrova *et al.* (2015) implicate that social support reduces the likelihood of individuals developing or even dying from CVD if they develop it.

It was also discovered that there are some programs like the Home-Based Care Programme where there is a trained community nurse who regularly checks on people who are not well. These nurses assist women in taking their medication, sometimes they help in bathing them and making sure that their children are also assisted. Below are respondents' comments on the matter;

> *"In my community, we have women who work under the Home-Based Care program. In most cases, they usually visit people who are in such situations (stroke patients) to assist them here and there. For example, as you know people who have had a stroke are disabled, so what the HBC nurses do is to assist them by cleaning their homes, doing their laundry, cooking for them and even bathing them. If they have young children, they can also help with the kids especially if the husband is away. If they notice that there is a serious stroke case, they go there at least three times a week to check on the patient's progress. Also, the village health worker is also involved in the care of the patient and the monitoring of their progress." Respondent 16*

As a way of reinforcing that support, women explain that members of the community must also get involved and help where they can. If they realise that these women are unable to do physical work they should extend a helping hand to them. This would reduce the burden on these women

especially if they do not have anyone to assist them and also it would make them feel loved. One respondent suggested that;

> *"In the community, if there is anyone suffering from a stroke there is a need for us as neighbours to take care of them. The least I can do is check on them every morning and ensure that they get something to eat and water to drink since they are disabled from stroke (giggles). In our area, we fetch water from the well and it is some bit of distance to get there. I would fetch them water since they cannot do that on their own neither will they be in a position to pay someone to fetch them water. I would even cook for them and make sure that they take their medication on time. It is also important for us as neighbours to make sure that the sick person lives in a clean environment hence daily clean their homes." Respondent 2*

It was discovered that religion plays a pivotal role in women's lives hence it is essential that church communities visit their sick brethren for spiritual and emotional support. Women rely on religion to get on with their daily lives and they believe that God is the one who heals them, therefore, it is important for them to incorporate religion in the management of CVD.

5.7.3 Subtheme: Tradition and religion

Religion and tradition seemed to play a fundamental role in the lives of these women. They believed that through prayer or practicing traditional rituals, one would get healed or live better with CVDs. Klocker *et al.* (2011) discovered that most of the literature they reviewed show that the effects of religious belief on mental health are generally positive, with the strongest association being the link between religious belief and decreased depression. This supports the notion articulated by the respondents which stipulated how spirituality would assist them in recovering from CVDs. They state that their faith combined with medication from the hospital will help them cope with CVDs. Women expressed the importance of prayer and having a relationship with God

if one is to recover quickly. They strongly have faith in that if they are faithful with prayer they shall be healed. Below are some of the comments explaining their feelings on that matter;

> *"As a woman, it is important to submit all your cares and burdens to the mighty Lord as he has all the answers. No disease is too big for the Lord and he can solve all the problems. So, if one is facing challenges in their lives, they should get close to being people who can counsel them or pray for them." Respondent 2*

Another woman echoed that;

> *"I think everyone has some sort of belief, as a woman who is a Christian, I know God looks after me and prayer is a very important tool that keeps me strong. You can follow the doctor's instructions and take medication as you are told but if your faith in healing isn't strong enough recovery may be difficult. Our pastor would pray for water, just plain water, and you will be instructed to drink the water and that is a powerful drug from God." Respondent 3*

Respondent 2 mentioned that they use "holy water" for healing, this might become a risk if it leads to defaulting of medication. However, if there is a balance between religion and medication then it might assist women to be better. Religion has a significant role in women's daily lives, this means that health care providers should be mindful of that when they are formulating awareness programs. This is how some respondents commented on that;

> *"I think they will need strong prayers from their church elders as I believe that as a woman prayer should be a weapon against every sickness or ailment. So, these women should never at any point feel like God has forsaken them or forgotten them. At our church, the Prophet usually gives us holy water that helps fight against evils and when it gets into the bloodstream it purifies any foreign substance that makes us sick." Respondent 4*

"We should try by all means to stop worrying and thinking too much. We should invite God to enter into our hearts and comfort us when we have problems. When you start having sad thoughts, I think you should take your bible and read it, when God becomes a part of it then your problems or situation will be taken care of." Respondent 14

Findings show that women place a great emphasis on the essence of faith and how prayer together with meditation might enhance women's healing. In a review study by Klocker *et al.* (2011), findings revealed that in relation to religion/belief, hypertension and blood pressure appeared to be positive, none of the reviewed papers suggested that religion/belief increases the likelihood of high blood pressure or hypertension and some associated religiousness, religious attendance and intrinsic religiosity with decreased risk. However, a number of review papers supported a relationship between religion/belief and improved cardiovascular health. Whilst there was minimal evidence suggesting that religion/belief can worsen cardiovascular health, a number of studies reported no association.

Furthermore, the outcomes of this study revealed that women also believed in indigenous methods of healing. Several herbs were mentioned that can be used alternatively if someone is suffering from CVDs. It was believed that in a way they relieve the symptoms of diseases like stroke or hypertension and some speculated that they might even heal CVDs. Hughes et al. (2015) discovered that more than 90% of respondents in their study reported being Christians, and this applied to both users and nonusers of traditional herbal medicine alike. This perhaps shows that respondents still adhere to their socio-cultural heritage and do not see it as opposing to their spiritual views. Indeed, spirituality has been documented as a strong predictor of traditional or complementary and alternative medicine use. One respondent eluded to that;

"I had an aunt who was suffering from stroke and she sometimes used traditional medicines given by the traditional doctors. People do believe in these things and they trust them. I'm not really sure if they trust so much in these medicines because they are proven

remedies for a quick and full recovery or it is the easy availability of the herbs that come cheap. You know sometimes people choose things just because they are cheap and one can justify that choice in this economy and on the other hand you cannot trust the suppliers as most people are just after money in this country." Respondent 5

Most of the women had an idea of some of the herbs that are used for CVDs. The majority of women, however, did not seem to recommend these herbs as they believed that the only way that someone can manage CVD is through using medication prescribed at the health care centres by professionals. Studies have shown that more than a third of adults with hypertension in sub-Saharan Africa use traditional herbal medicine and half of these patients use it concurrently with allopathic medicine. According to a systematic review study by Liwa, Smart, Frumkin, Epstein, Fitzgerald and Peck (2014), the most key aspects associated with the use of traditional herbal medicine among adults with CVD are ignorance, traditional beliefs and health systems deficiencies. In the reviewed studies (Liwa *et al.,* 2014) the most shared reason reported for use of traditional herbal medicine was their perceived failure (Olisa and Oyelola, 2009) and belief that hypertension is both unpreventable and has a supernatural cause, were factors associated with hypertension in another study (Osamor and Owumi , 2010).

The respondent below explains this:

"eh! These herbs that you claim to lower BP I disagree with you, I believe only pills are the most effective. As for me, I cannot walk properly because of BP, I tried every traditional remedy on this planet but still, it would go extremely high up until I went to the hospital and was given a bed. They started giving me two types of pills, the other one is brown and the other one is yellow. The brown ones are for lowering the BP and the yellow ones also are for BP. Therefore, after that experience, I started feeling better and I believe that hospital medicine is the best. Of course, I have heard some saying you can use "mutswiri or ichithamuzi" ashes, I tried those but it did not help in any way. I have a fatal BP condition

that can even kill me, my feet are swollen and very cold. I have tried everything and it never worked except for the pills. The hospital is the best." Respondent 3 (focus group).

Women explained that they will do everything they can to find something that can treat or at least minimise the symptoms of CVDs.

"I will definitely try to search for solutions from prophets or "sangomas" (traditional healers) who might help me know the reason for the stroke. I will take the patient with stroke to churches so that they can pray for them or I look for herbs for her drinking to drink for her body to be cleansed." Respondent 1 (focus group)

These herbs are also believed to be for cleansing the whole system including the circulatory system. They believed that when the blood is cleansed and purified then there is a higher chance of them getting healed.

5.8 THEME: DIFFERENCES OF CVD IN MEN AND WOMEN

Three topics emerged while discussing issues of differences of CVD in men and in women, those are; social roles, differences in accepting the condition and differences in effects.

Findings in this study show that women believed that for a household to be in order, there should be a woman to make sure things are running smoothly. Therefore, they believe that if a woman is to fall sick the house would be in disarray. It is their ideology that men should be there to provide for the family whilst they manage the day to day activities like, taking care of children, making sure the house is clean, cooking, doing laundry, planning, caring for livestock and many other chores. Below are some of their remarks on that;

"As you know "umuzi ngumuzi ngomama" (the woman is the one who makes a house a home) and the men are always out there working and searching for money, the woman is the one who manages the home while the husband is away. If I get sick it will mean that the daily running of the home will be disrupted. If I am to get a stroke, I doubt even if my

children will manage to take care of the livestock the way I do it so it will really be a mess. And that alone will kill me (laughs). Imagining who will take care of my chickens and cows whilst my husband is away. It also means that I will not be able to raise my children the way I want especially in disciplining them." Respondent 16

It is very much different because a man is a financial provider in the home, therefore, it means that they will be a shortage of money in the family. Then the mother is the one who makes sure that everything at home is running smoothly. Even when we are considering intimacy if the husband has stroked it means that he cannot be able to perform his manly duties and it will create tension with the wife since they cannot have sexual intercourse. Respondent 2

It is the opinion of these women that there is some difference as they have different social roles in the community and at home. They revealed as mothers, they would not be able to show their children love. Most of their spouses are away from home because of work, therefore, there will not be an adult figure to supervise the children at home. Women express that men are not usually as attentive to them when they are sick compared to how they treat them if they were in the same condition. Sometimes they would expect them to cook for them even when they are not well because they believed it is the wife's duty to do so. One respondent stated that;

"Men have a tendency of not taking care of us women the way that we do when they are sick. It is easier when you have children, he will instruct them to take care of you but when he is the one who is sick, he wants me closer to him hahaha!" Respondent 6 (focus group)

Another respondent supported that;

"I think it would be different because men are a bit carefree than women. The family responsibilities usually lie on the women, she is the one who decides the day to day meals. It will be difficult for the man to wash and cook for the family and take care of his sick wife.

However, when these roles are reversed and the man is the one who is weakened the woman can easily do all house chores and take care of her sick husband it's something that comes naturally really." Respondent 7

All these social roles influence how men and women perceive illness. Additionally, they believe that men are naturally stronger than women and this makes women's bodies to be more susceptible to disease compared to men. Furthermore, when women get sick, they will start worrying more about the welfare of their children which might end up delaying their recovery. Men are viewed as a stronger species and even if they are sick, they still have to maintain that as expected by the society, however, women are viewed as weaker and they frequently get sick. That might be why women believe that there is a difference between men and women. Some respondents agreed with the above by stating that;

"I don't think the experiences would be the same. From my own point of view, I think men are generally stronger than women both physically and emotionally. I believe most heart diseases attack more women than men you would find out that disease like high blood pressure affects elderly women or pregnant women in most cases, you rarely find a man with these conditions. I believe that men recover quickly than women would from these conditions. I think this is influenced by one's mind towards their condition as women tend to stress a lot about who will take care of their children since they will be incapacitated." Respondent 8

Another respondent added that;

"Yes, they will have different experiences because we women are very vulnerable whereas men can cope and recover faster. We are physical and physiologically different hence our recovery time will be different as well. Even psychologically men do not really

care much about a lot of stuff whereas we women will start thinking of our homes and our children's future." Respondent 10

Another respondent also alluded to the above, she said;

"I think it will be different because men tend to be stronger than women as they say in our culture that "a man has to be strong". It becomes easier for them to cope with the disease because even when they are not well, they can still be strong and go to work." Respondent 14

However, on the other hand, some women believed that there was no difference in CVD between men and women. They believed that both their societal roles would be affected equally especially in this era where both men and women are employed. It is their opinion that things have since changed because some men are now more involved in the running of the household hence, they will also be affected in a similar way. They argued that;

"I think the experiences would be the same, looking at the fact that nowadays roles in homes are shared equally. Some fathers are stay-home daddies so basically the effects of this sickness would strike both genders in the same manner. Even though it looks like most women are the ones who do all the chores at home and their emotional attachment to their children we cannot rule out the same effect it would have on the man, especially fathers. For this reason, I don't think women would be affected any different to men." Respondent 5

Respondent 6 agrees that;

"I don't think there is much difference either on men or women. This is so because whether you are a man or woman you will always have the desire to provide and take care of your family. Even though people think that a woman's heart is closer to their children the same is true about fathers. If the man is affected the woman would obviously take the roles

played by the father and the opposite is true. The effects are not gender-biased rather equally affect both either male or female in the same manner." Respondent 6

According to the findings, it is important to note that in the olden days, men were not emotionally attached to their children, however, this newer generation has a lot of involved fathers who are willing to care for their offspring including doing all the house chores. Chores were now equally shared because some women were working whilst their husbands were unemployed.

5.9 Summary

This chapter presented and discussed the findings of this study. Literature and conceptual theories were incorporated into the discussion so as to compare other findings with what the researcher discovered. The next chapter presents the conclusion, recommendations and summary of the findings.

CHAPTER 6

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

Chapter five presented and analysed data. This chapter presents a summary of the major findings, recommendations and conclusions in relation to the findings of the study.

6.2 Summary of the study

The aim of this study was to elicit rural women's perspectives of cardiovascular diseases (referred to as CVDs) in Gwanda South Rural District of Zimbabwe (GSRD). Literature reviewed include concepts on policies and initiatives that influence positions and narratives on gender and health, CVD in women and its impact, social determinants of health and risk factors of CVD. An interpretive paradigm was used to understand the studied phenomena in relation to the environment of the participants being studied. The study was underpinned by three feminist epistemologies, that is, social construction feminist theory, intersectionality theory and standpoint feminist theory. These were integrated into the study to understand rural women's struggles in the society which would largely influence how they perceive health issues. Data were collected in Gwanda South Rural District (referred to as GSRD) located in Matabeleland South Province in Zimbabwe. Three locations were used and these were Manama Mission Hospital (district), Ntepe business centre and Manama business centre. The population used included rural women who resided in GSRD who are between the ages of 20-60 years.

Sampling was done through purposeful sampling and 16 participants were chosen as well as a focus group of six participants. Data were collected through semi-structured interviews and a focus group discussion. Qualitative data were analysed using computer aided thematic analysis with Atlas t.i 7.5.7. Data were presented and discussed as themes and subthemes. Table **6.1** below presents the summary of results discovered. As a way of ensuring trustworthiness, the

concepts credibility, transferability, dependability and confirmability were used to describe various aspects of trustworthiness. Ethical considerations like informed consent, confidentiality and anonymity and no harm to participants were ensured.

Table 6.1 Overview of the study findings

Research Questions	Themes	Subthemes
1. What are the different types of CVDs and their modifiable risk factors?	❖ Women's Knowledge of CVD ❖ Causes of CVD in women	• Types of CVD • Symptoms of CVD • Affordability and availability of healthy foods • High levels of stress and hypertension • Sedentariness and obesity • Lack of knowledge
2. What are the measures that can be done to prevent CVD?	• Prevention of CVD	• Following a proper diet • Regular exercise and positive emotion • Tradition and religion • Seeking medical attention
3. What are women's perceived effects of CVD on their lives and those of their families?	• Perceived effects of CVD in women	• Perceived economic effects • Perceived social effects • Perceived psychological effects • Perceived personal effects • Perceived effects on family
4. What are women's perceived strategies of managing CVD?	• Experiences of CVD Management of CVD in women • Assistance of women with CVD	• Perceived differences experiences of CVD in men and women. • Advocacy and awareness programmes • Initiatives to combat CVD in women/Social support

6.3 Conclusions per objective

The study aimed at eliciting rural women's perspectives of CVD in Gwanda South Rural District, Zimbabwe.

This research was guided by the following objectives:

Objective 1: The first objective sought to evaluate women's knowledge of CVD. The main findings are presented in the discussion that follows.

This study concluded that women had little knowledge of CVD which confirms the assumption given by most studies. However, they noted that hypertension and stroke are the most common diseases they were familiar with. Some women also went on to mention other CVDs like pericardial effusion, congestive heart failure, heart attack and pre-eclampsia. Amongst the types of CVDs that affect women, the respondents mentioned conditions like pericardial effusion, heart attack, pre-eclampsia, stroke, heart failure and hypertension. Even though they mentioned all these conditions the most discussed were stroke and hypertension throughout the interviews. All these diseases mentioned by respondents were said to affect women. Women managed to discuss the characteristics of most CVDs and they mainly focused on hypertension and stroke. They mentioned that people with hypertension usually have palpitations, swollen body parts, dizziness and sweating amongst other symptoms. For stroke, they mainly identified paralysis which they believed led to one side of the body being dysfunctional.

The results also revealed women's perceptions of what they believed were the risk factors of CVD. Affordability and accessibility of healthy foods were identified as factors that impact on women's food choices. Factors like time and money contributed to the types of food that these women ate. Some pointed out that due to work commitments, it was likely that they might not find time to prepare healthy meals. That is why they relied on fast foods which are not healthy and are linked to obesity, which was also identified as a risk factor for CVD and also associated with

hypertension and stroke. Respondents believed that due to unhealthy lifestyles like sedentariness, high levels of stress and unhealthy diets, people end up getting hypertension and obesity which they identified as a risk factor for most CVDs like heart attack and stroke. Lack of knowledge was also viewed as a factor that contributed to women getting such conditions as they would not know how to prevent them.

Objective 2: To explore women's views on prevention of CVD.

In order to prevent CVD, women stated that there should be advocacy and awareness programmes aimed at empowering women with knowledge to combat the scourge of CVD and also to teach about caring or living with CVD. They stated the importance of following a proper diet combined with regular exercise as a way of reducing obesity which was identified as a risk factor for CVD. Positive emotion was also identified as a tool to boost psychological well-being. Participants believed that if someone is thinking positively about their health condition, this will reduce their stress levels and also make them improve their conditions. Some also acknowledged that tradition and religion play a fundamental role in the process of healing as it appeals to women's spiritual well-being. Such well-being was discovered as a great tool to recovery as women purported that there are supernatural powers that would facilitate their healing process. Furthermore, they were of the opinion that it is important to also regularly seek medical attention in health care centres or with the physician. These were said to guide them on how to care for themselves at home and also to give them proper medication that would help in their healing process.

Women in this study felt that it is essential for the government, non-governmental organisations and other stakeholders to come up with initiatives that are directed at raising awareness thereby combating CVD's. Some women suggested that it is essential for the government or any related stakeholders to ensure that those affected severely by CVD are given the support they need. This support could be in the form of providing them with wheelchairs, food and other items that they

might need. They can also make sure that they are included in programs that empower them financially so that they can be able to care for their families especially if they are breadwinners. Women who suffer from CVD's need a lot of support from their families, friends and other members of the community. Participants indicated that it is essential for patients to get support groups like in the case of HIV/AIDS patients or drug addicts. These support groups would help women interact with people who have the same condition and they can then share ideas on how to cope with these conditions.

Objective 3: To examine the perceived effects of CVD on women's lives and their families

The respondents indicated that CVD would negatively affect their lives (both socially and economically) in that some of the conditions might leave them with high hospital bills, deprive them of financial independence, put a strain on the family budget and also leave them incapacitated. This means that they will not be able to fend for their families. In addition, it also affect them socially as they might not be able to partake in a lot of social activities for fear of being discriminated. Women were of the opinion that CVD affect their psychological well-being as it brings feelings of melancholy especially if they are to have a disability. Also, it was established that women who suffer from CVD's run the risk being excluded from various community activities that may help them to be financially stable. This study revealed that CVD's may lead to some psychological effects on the affected women. These include loss of confidence which may come as a result of disability, or lack of autonomy. Most of the female participants indicated that due to the stereotyping of CVD, they end up hiding from the community as they feel uncomfortable around people. Some women expressed that they become ashamed of how they look. That is why they isolate themselves from other community members. However, it is essential for them to have people around them for moral support.

Objective 4: To assess women's perceived experiences and strategies of coping with CVD.

Findings in this study show that women believed that for a household to be in order, there should be a woman to make sure things are running smoothly. It is their belief that men should be there to provide for the family whilst they manage the day to day activities like taking care of children, making sure the house is clean, cooking, doing laundry, planning, looking after livestock and many others. Most of their spouses work far away from home and such they leave their offspring vulnerable and without a father figure. Women also showed dissatisfaction in how men are not as attentive to them when they are sick compared to how they treat them if they were in the same condition. Sometimes they would expect them to cook for them even when they are not well because they believed it is the wife's duty to do so. Additionally, they believe that men are naturally stronger than women and this makes women's bodies more susceptible to disease compared to men.

6.4 Summarised Conclusion

This study was underpinned by the standpoint feminist theory, however, the intersectionality and social construction theories also complimented other aspects of the study that the standpoint theory could not address in isolation. The standpoint theory favours situated, the local and communal constitution of knowledge. In this study, women across cultures articulated diversified perspectives of what they believe would affect them as women if they are to be affected by CVD. Standpoint analysis is committed to situational knowledge thesis; what an individual understands is shaped by their location in a hierarchically structured system of power relations. The standpoint depicts women as the principals and definers of their experiences, consequently, inquiry and practice should begin from them. In the discussion, it was eminent that rural women's perspectives differed depending on their level of education, economic status, age and marital status. Healthcare professionals need to listen to the everyday experiences of women to understand the root of the cause of illness. In the study, women stipulated the challenges they might face within their families, personal effects and social problems, emotional and psychological

complications that might emanate as a result of CVD. Feminism is aimed at transforming structural power relations in societies which might hinder women from getting the right treatment due to hierarchical relationships with providers. The results from this study noted that most women are prevented from using healthcare services and accessing medicines due to economic challenges that are aggravated by unemployment which is rife in rural Zimbabwe (Zimstats, 2018). According to Andrist (1997), several studies have suggested that women have objectified their bodies hence they have eating disorders; these disorders might lead to binge eating as women would want to appear appealing to men. This is evident in some of the responses which demonstrate that women conform to societal expectations in terms of physical appearance. Intersectionality theory views sources of oppression as multi-variate hence the need to include women's standpoint in the intersections of gender with other significant social identities where in this study variables such as the health of an individual, class, age, level of education economic status were considered (Shields, 2008; Bauer, 2014).

6.5 Recommendations of the study

The recommendations are based on the findings of the study. This study recommends a plethora of intervention measures for preventing and managing the scourge of CVD in rural Zimbabwe.

6.5.1 Recommendations to the health sector, NGOs, and other stakeholders

The findings of the study indicate a need for more comprehensive measures towards education for individuals in the existing (with condition), pre-condition, and non-diseased populations. Health education earlier in life may help more rural women to see the importance of taking the necessary preventative action to reduce future risks of acquiring cardiovascular disease (or complications). A gender oriented health education programme on CVD should be implemented. It will be important for the programme to target women as well as men so that everyone benefits from information that will be disseminated therein. To implement and evaluate the effectiveness of this programme, it is recommended that the stakeholders use the PRECEDE-PROCEED Model

(PPM). PPM has been used in many organisations to guide state health department projects, in the planning of public health education programs and also as an organizational framework for developing health promotion. The PPM is a basis for the process of creating a framework that guides construction of an intervention and evaluation of health education programs (Binkley and Johnson, 2013). PRECEDE (Predisposing, Reinforcing, and Enabling Constructs in Educational Diagnosis) outlines a diagnostic planning process to assist in the development of targeted and focused public health programs that are intended to change behaviour in preventing CVD. PROCEED (Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development) highlights the implementation and evaluation of the intervention designed in the PRECEDE component (Crosby and Noar, 2011).

Respondents felt that it was essential that academic institutions like schools and colleges include CVD awareness programmes in their curricular where physical activity is promoted. This can be in the form of introducing sport days every midweek for both teachers and students. This would help in infusing a culture of partaking in physical activity from a young age. Furthermore, CVD health promotional banners, t-shirts, stickers with messages that raise awareness can also be used so as to remind women of the importance of following healthy life choices.

Government and non-governmental organizations should launch projects that are targeted at growing foods that are healthy and affordable to poor rural communities. Women should be workshopped on nutritional health and guided on which type of food they should grow and how it can benefit their families. This is because in the study women were the ones reported to be responsible for the planning and preparation of meals in most of the families. Furthermore, women should be taught how to interpret food labels so that they can be able to interpret the nutritional information therein.

By revealing the gaps in cardiovascular health education, this thesis accentuates the requirement for cardiovascular health advancement at the community level especially in rural settings. Rather

than a one-size fits-all procedure, health promotional activities should target diverse subgroups of the community with appropriate strategies. Taking into account the socio-economic and psychological circumstances of these rural women might contribute significantly to reduce their CVD mortality and morbidity.

It is also recommended that organisations formulate support groups of people living or who have lived with CVDs. The support groups can be facilitated by counsellors. Routine check-ups or visitations should be done for outpatients so as to check their living conditions and also to meet their families.

6.5.2 Recommendations to the women

Women should join or form teams for various sporting activities like netball, soccer, athletics and other codes that do not require expensive equipment. Monthly or fortnight tournaments can be organised where they will be competing against each other. This can be used as a way of promoting physical activity. These teams can be established even in rural areas and impoverished villages.

Furthermore, it is recommended that women should be very particular with the kind of diet they follow. This diet should consist of a balanced diet. It is recommended that they maintain the traditional diet which has been proven to be good for heart health instead of adopting the westernised diet. Most of these foods are locally grown and are accessible to them.

Women can also have cooking clubs in their communities where they meet and teach each other how to prepare healthy meals for their families. These clubs should also be inclusive to men as a way of maintaining gender balance. Competitions can also be held as a way to motivate them.

6.5.3 Recommendations to families

CVD patients should be provided with counsellors who will attend to them and their families. This will help in guiding them through possible challenges they might face. It is also suggested that

there be support groups for members of families with a CVD patient. This can help them understand and share stories of how others are managing with chronically ill relatives.

6.6 Indications for further studies

Further research is needed in assessing the prevalence of risk factors for CVDs amongst rural women. It is also important that a study on experiences of rural women who are chronically ill be done so as to understand their challenges together with those of their families. Future examinations ought to investigate cardiovascular medical problems in other specific groups like the elderly, adolescents, college students and many more.

6.7 Study limitations

Various limitations were encountered whilst carrying out this study. It was challenging to convince participants to partake in interviews as they thought it might be political. However, the nature of the research and its purpose were explained to them in detail. Some also would cancel appointments while some would arrive late to the interview setting. However, the researcher was very patient and accommodated these predicted circumstances. Some participants at first thought that the researcher was from a non-governmental organization and expected some form of emoluments or presents after the interviews. The researcher stated clearly that this was a student research meant for academic purposes and nothing more.

At first some participants were more vocal than others in the focus group .This made others feel inferior, but the researcher made sure to accommodate everyone by directing some questions to the less vocal participants.

6.8 Summary

This chapter served as a summary of this study in relation to the aims and objectives achieved, limitations of the study, and recommendations for further research were also provided.

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APPENDIX A: INTERVIEW GUIDE

Introduction and Instructions

I would like to thank you for accepting to partake in this interview. The views expressed here are only going to be used for this study and there are no wrong answers. Also, you do not have to say your name because only the ideas are important.

Thank you (Leoba Nyathi)

Section A: Biography information

1. How old are you?
2. Are you working?
3. Are you married?
4. What is your level of education?
5. How many children do you have?
6. What are your hobbies?

Section B: Women's knowledge regarding heart diseases.

4. In your opinion which diseases are classified as cardiovascular diseases? Explain
5. What do you understand by the term "stroke or hypertension"?
6. In your opinion, what are the things that people do in life that puts them at risk of CVDs?

Section C: Prevention of CVD

1. What do you think people should do to prevent CVDs?

Objective D: Effects of CVD on women's lives and their families.

3. After discussing the types of cardiovascular disease tell me how heart disease/ would affect your life as woman.

4. From a woman's point of view, how would your suffering from heart diseases/ stroke affect your family?

Section E: To explore women's perceived experiences of CVD and their coping strategies.

3. In your opinion, what do you think would be the experiences of women suffering from stroke and how would they cope with these challenges?

4. Do you think their experience of heart disease would be different if they were a man? Why?

APPENDIX B: RESEARCH ETHICS CONSENT FORM

RESEARCH ETHICS COMMITTEE

UNIVEN Informed Consent

Appendix B

LETTER OF INFORMATION

Title of the Research Study:

Principal Investigator/s/ researcher : Leoba Nyathi (Masters)

Co-Investigator/s/supervisor/s : Prof TD Thobejane, Dr T Tshitangano)

Brief Introduction and Purpose of the Study: **Gender-based perspectives of cardiovascular diseases: A case study of Gwanda South Rural District, Zimbabwe**

Outline of the Procedures : The participant is urged to fully participate in the discussions and give as much information as they can. The discussion will last between 30-45 minutes. The researcher will use a voice recorder to capture information.

Risks or Discomforts to the Participant: The researcher will ensure that no physical, psychological or emotional harm is inflicted on the participants. The researcher will construct questions in an appropriate manner; she will not be judgmental to avoid inflicting anxiety and psychological discomfort during the process of responding to the questions in the interviews. Other possible dangers will be looked at and the research shall guard against them.

Benefits : This study will be published in peer-reviewed articles and also will help inform health care providers on what could be done to improve livelihood amongst women

Reason/s why the Participant May Be Withdrawn from the Study: At any time when the participant feels uncomfortable they can withdraw.

Remuneration : No

Costs of the Study : No

Confidentiality : The researcher will refrain from sharing the information without the authorisation of the participants. No one will have access to the study data without authorization. Only the researcher and the supervisors would have access to the data. Tapes will be kept in a safe place where no one can reach them. The use of pseudo names would help to ensure anonymity.

Research-related Injury : N/A

Persons to Contact in the Event of Any Problems or Queries:

Please contact the researcher (0780877263), my Promoter (0824886357) or the University Research Ethics Committee Secretariat on 015 962 9058. Complaints can be reported to the Director: Research and Innovation, Prof GE Ekosse on 015 962 8313 or Georges Ivo.Ekosse@univen.ac.za

General:

Potential participants must be assured that participation is voluntary and the approximate number of participants to be included should be disclosed. A copy of the information letter should be issued to participants. The information letter and consent form must be translated and provided in the primary spoken language of the research population

CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, (*Nyathi Leoba*), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _,
- I have also received, read and understood the above written information (*Participant Letter of Information*) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerized system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant Date Time Signature

I, …….. …… …… ……..

(*Nyathi Leoba*) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Full Name of Researcher

…… Date…… Signature……

Name of Witness (If applicable)

…… Date …… Signature……..

Full Name of Legal Guardian (If applicable)

…… Date…… Signature……..

Please note the following:

Research details must be provided in a clear, simple and culturally appropriate manner and prospective participants should be helped to arrive at an informed decision by use of appropriate language (grade 10 level- use Flesch Reading Ease Scores on Microsoft Word), selecting of a non-threatening environment for interaction and the availability of peer counseling (Department of Health, 2004)

If the potential participant is unable to read/illiterate, then a right thumb print is required and an impartial witness, who is literate and knows the participant e.g. parent, sibling, friend, pastor, etc. should verify in writing, duly signed that informed verbal consent was obtained (Department of Health, 2004).

If anyone makes a mistake completing this document e.g. a wrong date or spelling mistake, a new document has to be completed. The incomplete original document has to be kept in the participant's file and not thrown away, and copies thereof must be issued to the participant.

References:

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http://www.doh.gov.za/docs/factsheets/guidelines/ethnics/

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http://www.nhrec.org.za/?page_id=14

APPENDIX C: LETTER TO THE DISTRICT ADMINISTRATOR

University of Venda

P. Bag X5050

Thohoyandou 0950

South Africa

04/06/2018

District Administrator

Gwanda South Rural District

Gwanda

Dear Sir/ Madam

Ref: Request to Conduct a Research Project Entitled *"*Gender-based perspectives of cardiovascular diseases: A case study of Gwanda South Rural District, Zimbabwe*".*

I Leoba Nyathi, a Doctoral Candidate at the Department of Gender and Youth Studies of the University of Venda hereby request for permission to conduct a research project at Manama and Ntepe shopping centres. This is a requirement for the partial fulfilment of my degree of Doctor of Philosophy in Gender Studies. The study is entitled: ***"*Gender-based perspectives of cardiovascular diseases: A case study of Gwanda South Rural District, Zimbabwe*".*** This study has been prompted by the increase in cardiovascular diseases that has been noted amongst women in the recent years. This study strives to probe women's perspectives on the subject of CVDs, its risk factors and prevention as well. I would like to conduct this study at the above mentioned shopping centres which are under your jurisdiction. I chose these places as I feel they are convenient in terms of accessibility to women. The data collection process will involve

the following: Identifying the participants through sampling, giving of information to them about the aim of the study and eventually interviewing them individually and also through a focused group discussion. All information gathered in this study will be kept strictly confidential, and no information will be used for the purposes other than those it is intended for. A respondent's decision to participate in this research will be voluntary and withdrawal from the study at any time will be allowed. The university standard consent form will be used for the participants to validate their agreement to be a part of the study. Anonymity will be assured through the use of pseudo names. My institution has cleared it for ethics and the certificate number is **SHSS/18/GYS/04/1505.** I was born in Gwanda South Province hence I found it important that I conduct this study in my home area and I hope at some point the results of this study will benefit my community. My findings will be made available to you on your request.

I trust my request will meet with your approval. Your assistance in facilitating the research will be highly appreciated. If there is any information that you need from me, kindly contact me on the contact details provided below. Thanking you in advance for your cooperation.

Yours sincerely

Leoba Nyathi (contact details 0027780877263/00263775100692, leobanyathi@gmail.com)

APPENDIX D: LETTER TO THE HEALTH ADMINISTRATOR (EVANGELICAL LUTHERAN CHURCH IN ZIMBABWE)

University of Venda

P. Bag X5050

Thohoyandou 0950

South Africa

04/06/2018

Health Coordinator

Evangelical Lutheran Church in Zimbabwe

Box 2175

Bulawayo

Dear Sir

Ref: Request to Conduct a Research Project Entitled *"Gender-based perspectives of cardiovascular diseases: A case study of Gwanda South Rural District, Zimbabwe".*

I Leoba Nyathi, a Doctoral Candidate at the Department of Gender and Youth Studies of the University of Venda hereby request for permission to conduct a research project at Manama Mission Hospital. This is a requirement for the partial fulfilment of my degree of Doctor of Philosophy in Gender Studies. The study is entitled: **"Gender-based perspectives of cardiovascular diseases: A case study of Gwanda South Rural District, Zimbabwe*".*** This study has been prompted by the increase in cardiovascular diseases that has been noted amongst women in the recent years. This study strives to probe women's perspectives on the subject of CVDs, its risk factors and prevention as well. I would like to conduct this study at

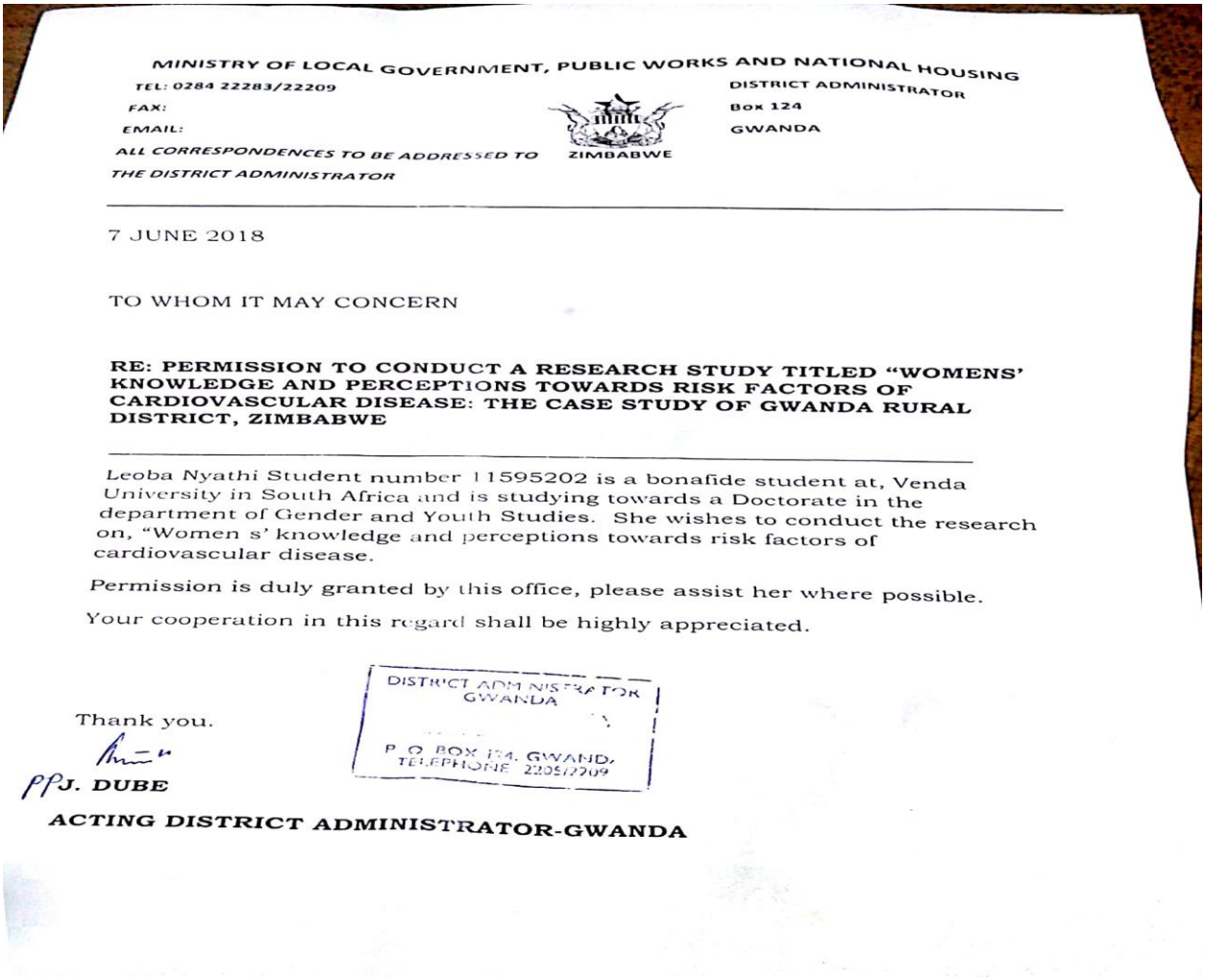
Manama Mission Hospital which is under your jurisdiction. I chose this place as I feel it is convenient in terms of accessibility to women. The process will involve the following: Identifying the participants through sampling, giving of information to them about the aim of the study and eventually interviewing them individually and also through a focused group discussion. All information gathered in this study will be kept strictly confidential, and no information will be used for the purposes other than those it is intended for. A respondent's decision to participate in this research will be voluntary and withdrawal from the study at any time will be allowed. Anonymity will be assured through the use of pseudo names. My institution has cleared it for ethics and the certificate number is **SHSS/18/GYS/04/1505.** I was born in Gwanda South Province hence I found it important that I conduct this study in my home area and I hope at some point the results of this study will be benefit my community. My findings will be made available to you on your request.

I trust my request will meet with your approval. Your assistance in facilitating the research will be highly appreciated. If there is any information that you need from me, kindly contact me on the contact details provided below. Thanking you in advance for your cooperation.

Yours sincerely

Leoba Nyathi (contact details 0027780877263/00263775100692, leobanyathi@gmail.com

APPENDIX E: PERMISSION TO CONDUCT STUDY FROM DISTRICT ADMINISTRATOR



MINISTRY OF LOCAL GOVERNMENT, PUBLIC WORKS AND NATIONAL HOUSING

TEL: 0284 22283/22209
FAX:
EMAIL:
ALL CORRESPONDENCES TO BE ADDRESSED TO THE DISTRICT ADMINISTRATOR

ZIMBABWE

DISTRICT ADMINISTRATOR
Box 124
GWANDA

7 JUNE 2018

TO WHOM IT MAY CONCERN

RE: PERMISSION TO CONDUCT A RESEARCH STUDY TITLED "WOMENS' KNOWLEDGE AND PERCEPTIONS TOWARDS RISK FACTORS OF CARDIOVASCULAR DISEASE: THE CASE STUDY OF GWANDA RURAL DISTRICT, ZIMBABWE

Leoba Nyathi Student number 11595202 is a bonafide student at, Venda University in South Africa and is studying towards a Doctorate in the department of Gender and Youth Studies. She wishes to conduct the research on, "Women s' knowledge and perceptions towards risk factors of cardiovascular disease.

Permission is duly granted by this office, please assist her where possible.

Your cooperation in this regard shall be highly appreciated.

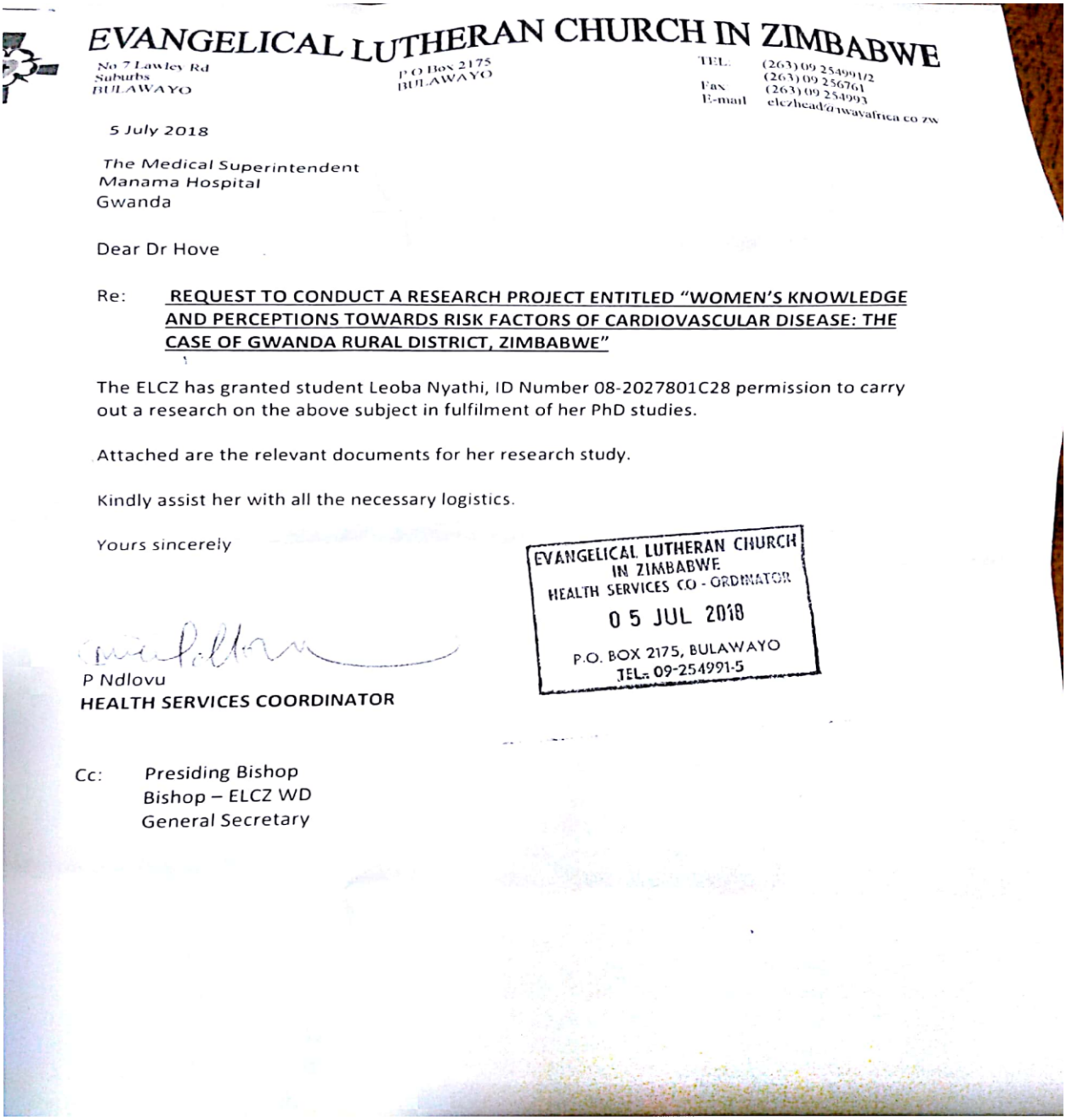
DISTRICT ADMINISTRATOR
GWANDA
P. O. BOX 124, GWANDA
TELEPHONE: 2205/7709

Thank you.

pp J. DUBE

ACTING DISTRICT ADMINISTRATOR-GWANDA

APPENDIX: PERMISSION TO CONDUCT STUDY FROM EVANGELICAL LUTHERAN CHURCH



EVANGELICAL LUTHERAN CHURCH IN ZIMBABWE

No 7 Lawley Rd
Suburbs
BULAWAYO

P O Box 2175
BULAWAYO

TEL: (263) 09 254991/2
Fax (263) 09 256761
E-mail (263) 09 254993
elczhead@iwayafrica co zw

5 July 2018

The Medical Superintendent
Manama Hospital
Gwanda

Dear Dr Hove

Re: REQUEST TO CONDUCT A RESEARCH PROJECT ENTITLED "WOMEN'S KNOWLEDGE AND PERCEPTIONS TOWARDS RISK FACTORS OF CARDIOVASCULAR DISEASE: THE CASE OF GWANDA RURAL DISTRICT, ZIMBABWE"

The ELCZ has granted student Leoba Nyathi, ID Number 08-2027801C28 permission to carry out a research on the above subject in fulfilment of her PhD studies.

Attached are the relevant documents for her research study.

Kindly assist her with all the necessary logistics.

Yours sincerely

EVANGELICAL LUTHERAN CHURCH
IN ZIMBABWE
HEALTH SERVICES CO - ORDINATOR
05 JUL 2018
P.O. BOX 2175, BULAWAYO
TEL: 09-254991-5

P Ndlovu
HEALTH SERVICES COORDINATOR

Cc: Presiding Bishop
Bishop – ELCZ WD
General Secretary

APPENDIX G: ELIGIBILITY CHECKLIST

ELIGIBILITY

Age……

Gender……

Place of Residence……

Language

Do you have any idea what CVD is?

Have you ever been diagnosed with any type of CVD?

Have you ever had relative/ spouse/ child who stays with you, get diagnosed with CVD?

APPENDIX H: ETHICAL CLEARANCE

RESEARCH AND INNOVATION
OFFICE OF THE DIRECTOR

NAME OF RESEARCHER/INVESTIGATOR:
Ms L Nyathi

Student No:
11595202

PROJECT TITLE: **Women's knowledge and perceptions towards risk factors of cardiovascular disease: The case of Gwanda rural district, Zimbabwe.**

PROJECT NO: SHSS/18/GYS/04/1505

SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS

NAME	INSTITUTION & DEPARTMENT	ROLE
Prof DT Thobejane	University of Venda	Promoter
Dr TG Tshitangano	University of Venda	Co - Promoter
Ms L Nyathi	University of Venda	Investigator – Student

ISSUED BY:
UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE

Date Considered: May 2018
Decision by Ethical Clearance Committee Granted
Signature of Chairperson of the Committee: .....
Name of the Chairperson of the Committee: Senior Prof. G.E. Ekosse

UNIVERSITY OF VENDA
DIRECTOR
RESEARCH AND INNOVATION
2018 -05- 15
Private Bag X5050
Thohoyandou 0950

University of Venda
PRIVATE BAG X5050, THOHOYANDOU, 0950λ LIMPOPO PROVINCEλ SOUTH AFRICA
TELEPHONE (015) 962 8504/8313 FAX (015) 962 9060
"A quality driven financially sustainable, rural-based Comprehensive University"

APPENDIX I: FOCUS GROUP INTERVIEW GUIDE

Introduction and Instructions

I would like to thank you for accepting to partake in this interview. The views expressed here are only going to be used for this study and there are no wrong answers. Also, you do not have to say your name because only the ideas are important.

Thank You

Leoba Nyathi

- Tell me what you know about CVD in general.
- Tell me some risk factors you are familiar with for CVD.
- After discussing these risk factors for heart disease tell me how CVD affects or would affect your life as women.
- How would your sickness affect your family?
  - Financially
  - Socially
- According to your understanding or observation how do women with CVD cope in their day to day lives?
- Do you think their experience of CVD would have been different if they were man? Why?