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# Coping Strategies in Chronic Heart Failure Patients Aged 40 to 95 Years Old at Out-Patient Department of Parirenyatwa Group of Hospitals

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## ABSTRACT

**Coping strategies are ways of adapting to a stressful situation in which one is unable to compensate or control. Ineffective use of coping strategies is associated with non-adherence which in turn fuel readmissions due to worsening symptoms of heart failure. This study sought to determine the coping strategies used in chronic heart failure patients aged 40 to 95 years at Parirenyatwa Group of Hospitals. The research question was 'what are the coping strategies used in chronic heart failure patients aged 40 to 95 years at Parirenyatwa Group of Hospitals. The study utilized a simple, descriptive, quantitative design and 35 participants who met the inclusion criteria were determined through simple random sampling to determine their ways of coping. Descriptive statistics were used to analyse data. The outcome of the study revealed that the older adults living with chronic heart failure used more emotion-focused coping than problem focused coping strategies. Mental disengagement was the prevailing coping strategy acknowledged to being used by many, 88.58% of the study participants. Problem-focused coping is associated with adherence to treatment whereas emotion-focused coping may precipitate non-compliance.**

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# CHAPTER ONE
# BACKGROUND AND ORGANIZATIONAL FRAMEWORK

- *Introduction and Background*

Heart failure is a chronic disease caused by cardiac dysfunction, it is termed chronic heart failure, meaning there is persistent alteration in cardiac functionality (Shahrbabaki, Nouhi, Kazemi, & Ahmadi, 2016). The heart is unable to cater for the metabolic demands of the body tissues which can be due to decreased cardiac output (Mangolian Shahrbabaki, Nouhi, Kazemi, & Ahmadi, 2017). The primary goal of management includes improvements in ejection fraction, which is also associated with better prognosis (Iyngkaran et al., 2018). Hypertension, cardiomyopathy, rheumatic heart disease, chronic lung disease and pericardial disease are common etiologic factors of heart failure in sub-Saharan Africa, accounting for over 90% of cases (Ntusi & Mayosi, 2009). The body will put in place compensatory mechanisms to counteract diminished tissue perfusion. This explains the symptomatic shortness of breath, rapid heart rate, fatigue and peripheral edema in chronic heart failure (Nahlen Bose, Bjorling, Elfstrom, Persson, & Saboonchi, 2015). These are some of the physical manifestations of chronic heart failure but they also have psychological impacts on patients' lives. Psychological distress is common in patients with chronic heart failure and quality of life is significantly impaired (Sherwood et al., 2017). Ineffective coping with the disease and the feeling of apprehension that most patients with chronic heart failure experience culminate to psychological distress, anxiety, depression, and fear (Mangolian Shahrbabaki et al., 2017). Low quality of life and more defined depressive symptoms are associated with an adverse chronic heart failure disease trajectory and poor prognosis (Sherwood et al., 2017). Therefore, chronic heart failure can also be stated as a complex and unpredictable condition which substantially affects the quality of life of over 26 million patients and their families worldwide (Greaves et al., 2016). It is most prevalent in old aged population. Lifetime risk, 40 to 80 years old is 40% (Iyngkaran et al., 2018). Around 5.7 million American adults are living with chronic heart failure and it is the most common cause for hospitalization in patients over the age of 65 years (Sherwood et al., 2017). Cardiovascular diseases account for 7-10% of all medical admissions in Africa, with chronic heart failure accounting for 3.3% of these admissions and presents at a lower mean age of 51.1years (Ancia, Gladys, & Alforde, 2013) . In Zimbabwe, the prevalence of chronic heart failure hospitalization was 1.54% for the year 2015 (Matowa, 2015a), yet this is just for hospitalizations, while looking at the whole country at large this is just a proportion of the total number of people living with heart failure who afford medical facilities. Considering the economic crisis in Zimbabwe, majority cannot afford medical facilities hence they resort to traditional herbs and religious faith. In the USA, prevalence of heart failure among African Americans between the ages of 45 to 65 was found to be about 70% (Kofi Owusu, 2013a). Patients with chronic heart failure often lose self-esteem and self-confidence hence there is need for supportive education and effective coping strategies to reduce deterioration of the quality of life (Nilsson, Carlsson, Lindqvist, & Kristofferzon, 2017).

- *Problem Statement*

There is ineffective implementation of coping strategies in chronic heart failure patients living in Zimbabwe as well as globally. This is deemed so by the rate of increasing readmissions. In Zimbabwe, a study on sixty five heart failure patients at Parirenyatwa Group of Hospitals has the mean age for heart failure patients at 56 years in the year 2013 and the mean number of readmissions for the period 2011 to 2012 was 1.25 and only 32, 3% had not been readmitted whilst 67, 7% had either been readmitted once or more for the latter period (Ancia et al., 2013). The prevalence of cardiac failure hospitalization for the year 2011 was 1.54% and; in 2015 the mean age of heart failure patients was 41.9 years , the mean hospitalization time was 8.3 days and the most affected age group was found to be 30 - 49 years (Matowa, 2015b). This portrays that heart failure pose a significant burden in Zimbabwe since it extends to affect the working population. Moreover, considering the economy in Zimbabwe, majority cannot afford health care facilities rather they turn to traditional herbs and religious faith.

In Africa, heart failure has been identified as one of the leading causes of hospital admission (Kofi Owusu, 2013a). A sub-Saharan Africa survey of heart failure which is a multicenter prospective cohort study of 1,006 acute heart failure patients, and regression models to relate baseline echocardiogram(ECG) findings to all-cause mortality and readmission during a 6-month follow-up period was done ("Prognostic Significance of ECG Abnormalities for Mortality Risk in Acute Heart Failure," 2014). Of the 814 ECGs available, 523 (49.0% male) were obtained within 15 days of admission, among which 97.7% showed abnormalities. Mean age was 52.0 years and median follow-up was 180 days, with 77 deaths (Kaplan-Meier 17.5%) through day 180 and 63 patients with death or readmission to day 60. Hypertension is the dominant precipitating factor of heart failure in Africa and according to several studies its prevalence is approximated at 30% to 60% (Kofi Owusu, 2013a). This shows that heart failure is a public health problem in Africa.

In the United States following a chronic heart failure admission, one forth are readmitted within a one month and half within six months, where 80% present in emergency room (Iyngkaran et al., 2018). Readmitting a quarter of patients after chronic heart failure hospitalization within 30 days does not represent optimal care for patients and implicate that there is clear opportunity for improvement that might be achieved through health education to the patients and families on coping strategies(Ross et al., 2010). Matching funding to readmission strategies such as pay for performance, specifically those which are client focused are associated with undesired outcomes in relation to the traditional model of care, more also, presentations, readmissions, and costs for chronic heart failure are projected to increase by 50% by 2035 (Iyngkaran et al., 2018).

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Looking into a study by Tsuyuki et al, 2003; data was collected on the Canadian Institute for Health Information were a total of 106,130 discharges for 85,679 chronic heart failure patients in the year 2000 to 2001. Total in-hospital mortality was 15.8% and in terms of total discharges for chronic heart failure, 32.7% were readmissions. Narrowing to individual patient basis, 19.9% of patients were readmitted either once or more during the year 2000. The burden of chronic illness compared with other major illnesses goes far beyond. Chronic illness, in particular, heart failure is associated with the second highest total number of hospital days and third highest number of patients affected(Tsuyuki, Shibata, Nilsson, & Hervas-Malo, 2003). However, the information available statistically on the rate of readmission in the rest of Europe is limited.

Globally, more than 50% of heart failure readmissions and disease exacerbations are due to poor heart failure self-care which includes coping as a major component (Li & Shun, 2016). Many of these individuals undergo treatment as outpatients, with approximately 26.8 million individuals residing in outpatient settings (L. J. Graven, Grant, Vance, Pryor, & Grubbs, n.d.). The lack of investment and attention given to HF in comparison with other diseases and conditions has led to low awareness and understanding of this chronic condition among the general public, healthcare professionals, patients and caregivers (The Patient Perspective on Heart Failure, 2017 ).

Heart failure is the leading cause of morbidity and mortality in older patients. Consequences of heart failure include a high rate of hospitalization and increased mortality; more than 40% of patients die within a year of initial hospitalization (Mangolian Shahrbabaki et al., 2017). More also, 11% to 36% of patients with heart failure suffer from depression (Klein, Turvey, & Pies, 2007). The symptoms of heart failure are often painful and difficult to manage. Chronic heart failure causes functional limitations due to fatigue and edema(Park, Malone, Suresh, Bliss, & Rosen, 2008). Symptomatic management and medication adherence are a necessity. Family members and significant others can influence coping of heart failure patients, therefore, the demands of the caregiving role can be exhaustive physically and mentally; and this may affect their ability to offer support (Greaves et al., 2016). Long-term symptoms are common in heart failure patients. Chronic physical symptoms include shortness of breath, chest pain, fatigue, lack of energy and sleep disorders (Mangolian Shahrbabaki et al., 2017). This alone advocates for the need of awareness of positive coping mechanisms to enhance health related quality of life.

- *Significance of the Study*

The study will promote knowledge in literate heart failure patients on coping strategies ideal for their personality. The focus of the research reinforces the importance of high health related quality of life in alleviating frequent hospital readmission. The health care providers are empowered to prepare their heart failure patients for lifelong treatment. Based on implementation of the coping strategies the study targets to eliminate unnecessary readmissions and decrease healthcare expenses. Healthcare facility's resources will not be exhausted in caring for chronic heart failure rather they will be utilized in other health related problems which are acute. The study also provide recommendations for the continuation of nursing education, the people are enlightened on the risk factors of heart failure hence create a healthy population to work towards developing our economy. In addition, the study also gives policy makers the basis for formulating policies regarding management of heart failure, in particular, weekly follow up visits to assess implementation of coping strategies which would eradicate multiple readmissions and lessen financial burden on families. Policies would be established against public smoking thereby reducing risk factors of heart failure as outlined in this study.

- *Research Objective*

To determine the coping strategies in chronic heart failure patients aged 40 to 95 years old at the Outpatient Department of Parirenyatwa Group of Hospitals in Zimbabwe.

- *Research Question*

What are the coping strategies used in chronic heart failure patients aged 40 to 95 years old at the Outpatient Department at Parirenyatwa Group of Hospitals in Zimbabwe?

- *Definition of Terms*

- **Heart failure** – is a clinical syndrome of effort intolerance characterized by breathlessness and fatigue, due to structural and functional abnormalities of the myocardium, resulting in salt and water retention that is associated with neuro-hormonal adaptations, mainly in the renin angiotensin- aldosterone system (Kraus, Ogunbanjo, Sliwa, & Ntusi, 2015). In this study, all forms of heart failure which are chronic and affect the population age group 40 to 95 years old both males and females regardless of the type whether its decompensated, ischemic or congestive heart failure are referred to as heart failure.
- **Mortality** – mortality data indicate numbers of deaths by place, time and cause. WHO's mortality data reflect deaths registered by national civil registration systems of deaths, with the underlying cause of death coded by the national authority (WHO, Mortality).
- **Gender** – being male or female as attached by society.
- **Chronic** – lifelong illness, in this context refer to lifelong heart failure.
- **Coping** – a way of adapting to different situations in life. In this study it's a way of adapting to the lifelong illness of heart failure.

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- **Coping Strategy** – mechanism through which one adapt to the situation particularly, heart as in the context of this study.
- **Quality of life** – all things being at equilibrium in one's life and living at peace with your body, associates(family, workmates, friends and community) and environment.

➢ *Conceptual Framework*

A conceptual framework can be defined as the integration of the main concepts involved in a research study (Adom, Hussein, & Joe, 2018). It portrays a picture of how the ideas in a research are interlinked. A conceptual framework is most useful when existing theories are inadequate in providing a firm structure for the research study (Adom et al., 2018).

In this study, **Roy's model of adaptation** (Roy, 2009) is ideal in exploring the research problem. According to Roy's model the person is viewed as the adaptive system that is in constant interaction with the environment which represents the stimuli. The person is a bio-psycho-social being hence uses innate and acquired mechanisms to adapt to ever changing environment. Adaptation is the goal of nursing. It can be defined as the process and outcome whereby thinking and feeling persons as individuals or in groups use conscious awareness and choice to create human and environmental integration. Health is the outcome of adaptation. Nursing then is composed of all activities promoting adaptation. Roy's model comprises of four adaptive modes which are physiological, self-concept, role function and interdependence.

In physiological mode behavior is determined by the manifestation of the physiological activity of all the cells, tissues, organs, & systems of the body. Oxygenation, nutrition, elimination, activity and rest, and protection are keys to physiological well-being. The processes which help attain this includes senses, fluid and electrolytes, neurological, and endocrine function. Self-concept mode focuses on beliefs and feelings about oneself, that is, how one sees his/her physical being and his/her worthiness. Role function mode thrusts on the position one attains and the behaviors associated with one's role in society. The basic underlying need is assuming social integrity. Primary role is based on age, sex or developmental state; secondary role includes roles a person accumulate to fulfill tasks in line with developmental stage then tertiary is a role freely chosen and is associated with accomplishments of goals. The interdependence mode involves one's societal interactions with others; the giving or receiving of love, respect, and value. The basic underlying need is nurturance and affection.

Roy's perspective, is that behavior is an action or a reaction to a stimulus. A behavior may be observable or non-observable. An example of an observable behavior is blood pressure; a non-observable behavior is a feeling of apprehension. Examining behaviors in situ with the four adaptive modes enables the nurse to have basic foundation of the current adaptation level and appropriate interventions towards adaptation (Themes, 2017).

➢ *Theory Concept and Application*

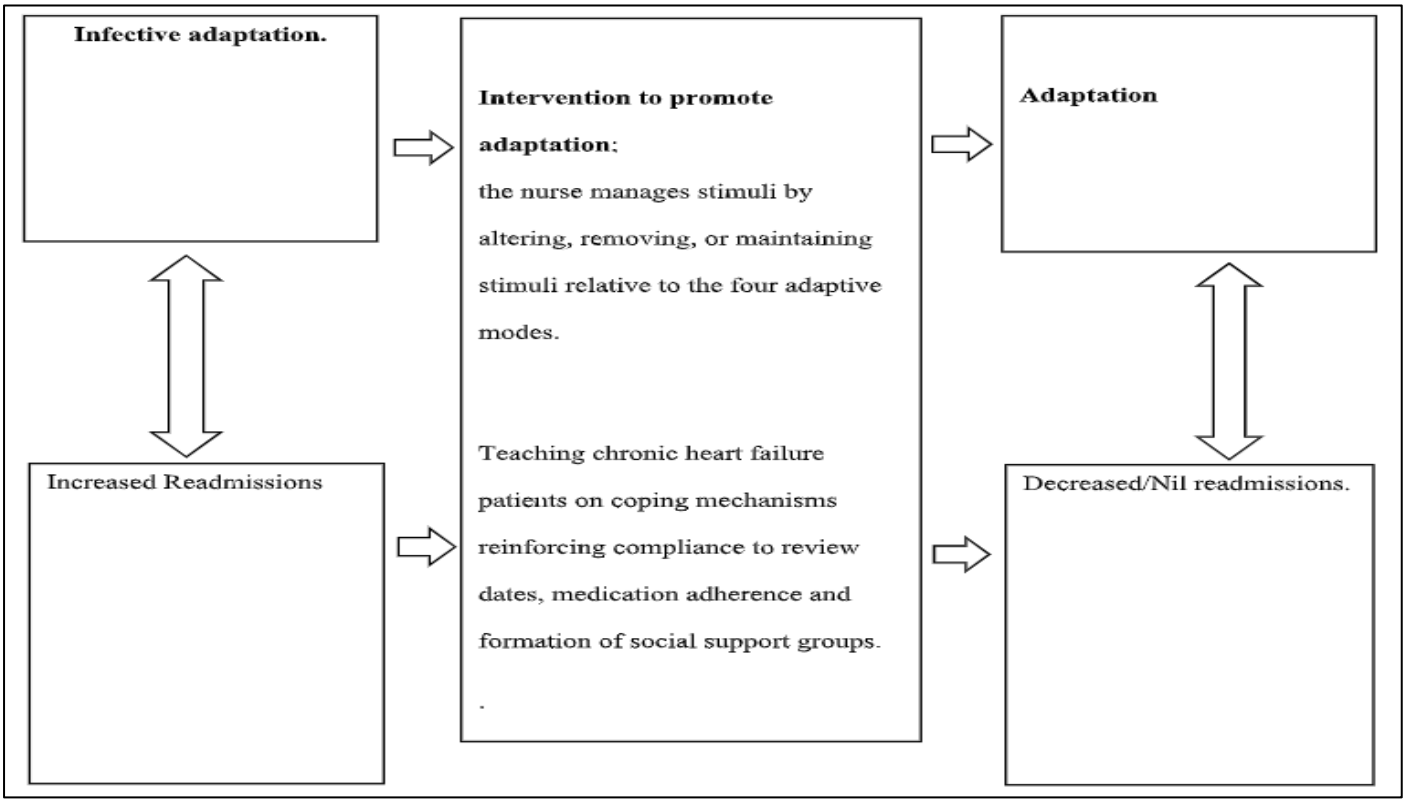


Fig 1 Theory Concept and Application

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# CHAPTER TWO
# LITERATURE REVIEW

- *Introduction*

This section looks into other research studies conducted on similar interest. It reveals information on the nature of the problem and extend of its burden locally, regionally and globally. It compiles research findings by different scholarly articles and determines the knowledge gap between what is known and what is unknown for the purpose of research objective.

- *Heart Failure*

Heart failure is a progressive disorder that succumbs to the inability of the heart to facilitate blood circulation (L. Graven et al., 2014). Structural and functional irregularities of the myocardium result in salt and water retention coupled to neuro-hormonal adaptations, mainly in the renin angiotensin- aldosterone system (Kraus et al., 2015). The depressive effect of heart failure in patients precedes due to the persistent nature of physical symptoms which includes fatigue, peripheral edema, and breathlessness on exertion or during rest (Nilsson et al., 2017). Multiple medications, fluid and dietary restrictions, and daily weight monitoring involved in the process can present a very complex situation to different individuals in adhering to heart failure management (L. Graven et al., 2014).

Patients living with heart failure often experience low self-esteem and their functionality in social networks deteriorate (Nilsson et al., 2017). Psychological implications of heart failure manifests in forms of depressive symptoms which includes; anxiety, decreased functional ability and isolation.

- *Causes of Heart Failure*

In Low and Middle Income Countries (LMICs), ischemic heart disease and hypertension are the common causes of heart failure (Callender et al., 2014). In Zimbabwe, an analytic cross sectional study at three hospitals in Mazowe District involving a total of 201 out of 222 patients from out patients departments was done. The results showed hypertension prevalence of 69, 7% and the most presenting complication was cardiac failure, with the complication rate at 20, 7%( Factors affecting diagnosis and management of hypertension in Mazowe District of Mashonaland Central Province in Zimbabwe, 2012). Hypertension is one of the major contributors of cardiac failure in Zimbabwe(Matowa, 2015).

In Sub-Saharan Africa non-ischemic etiologies are prevalent, with hypertension, rheumatic heart disease and cardiomyopathy contributing to two-thirds of hospitalized heart failure patients in the region (Kraus et al., 2015). Hypertension is the main cause of heart failure in Africa and America, whereas ischemic heart disease is the leading cause in all other regions like Europe (Callender et al., 2014). More also, Human Immunodeficiency Virus is an important cause of heart failure in the majority of African countries, in particular, cardiac related pathology, that is, dilated cardiomyopathy and TB pericarditis are increasing thereby worsening the burden on the healthcare systems (Matowa, 2015).

- *Risk factors*

These are precipitating factors that fuel the development of heart failure. Dominant risk factors include; smoking, hypertension, diabetes mellitus, obesity, and coronary heart disease (Dunlay, Weston, Jacobsen, & Roger, 2009). Globally, most of heart failure patients are females relative to their longer life expectancy(Jeon, Kraus, Jowsey, & Glasgow, 2010). This means according to gender, being a female is also a risk factor. According to a study done at Parirenyatwa in Zimbabwe, heart failure is dominant in females than males as indicated by the percentage ratio resulting from simple random sampling which had 64,6% females and 35,4% males (Ancia et al., 2013).

- *Management of Heart Failure*

Heart failure is incurable and in its most severe form it has over 50% mortality per year(Jeon et al., 2010). Therapeutic interventions are directed mainly at correcting a low cardiac output and those providing symptomatic relief, does not necessarily reduce mortality hence prevention of the progression of heart failure is enhanced by reversing the remodeling process through medical therapy (Matowa, 2015). Medical therapy consists of two components; disease-modifying drugs which includes angiotensin-converting enzyme (ACE) or angiotensin receptor (AR) blockers, beta-blockers, and mineralocorticoid receptor antagonists that effectively modify the course of disease, and enhance survival. The second component is focused on symptomatic therapy, such as diuretics and digoxin that relieve congestion, reduce hospitalization and improve quality of life (Kraus et al., 2015). ACE inhibitors or ARBs have mortality benefit although they can affect renal function (Gheorghiade, Vaduganathan, Fonarow, & Bonow, 2013). Digoxin greatly relieve symptoms and reduce hospitalizations, however, it is associated with an increase in mortality in heart failure patients.(Kraus et al., 2015). Implementation of non-pharmacological management is also an essential component in heart failure management and it includes a low sodium diet, guided amount of fluid intake, weighing themselves daily, imploring recommendations on exercise, and consulting a healthcare provider in cases of worsening symptoms (van der Wal, van Veldhuisen, Veeger, Rutten, & Jaarsma, 2010).

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- *The burden of Heart Failure*

Heart failure cause a significant burden on individuals, families, communities, nations and the world at large. Hypertension is a significant risk factor for cardiovascular disease, in particular, heart failure, and according to WHO cardiovascular diseases account for 9% of the total deaths in Zimbabwe (National Health Strategy for Zimbabwe 2016-2020.) In a study on large urban referral hospital in Zimbabwe, the prevalence of heart failure hospitalization was 1.54% (Matowa, 2015). Analyzing these statistics, heart failure hospitalization is lower in Zimbabwe as compared to other parts of sub-Saharan Africa where heart failure has been found to account to 5% to 10% of hospital admissions (Kofi Owusu, 2013). This can be attributed to the financial crisis in Zimbabwe hence majority with this condition cannot afford hospital facilities, more also, the statistics are just for the prevalence of hospitalization not incidence of heart failure. Other people turn to traditional healers and religious faiths for serious illnesses like heart failure. Heart failure was the seventh out of the twenty leading causes of mortality according to Ministry Of Health and Child Care, 2014.

In a study at a teaching hospital in Ghana the prevalence of heart failure was 76% (Kofi Owusu, 2013). This shows that heart failure is a public health problem in African countries. Hypertension is the dominant most common cause of heart failure in Africa, accounting for up to 46% of cases of heart failure in hospitalized patients (Kraus et al., 2015). Cardiovascular diseases account for 7-10% of all adult medical admissions to hospitals in Africa, with heart failure taking 3-7%, moreover, cardiovascular diseases are the leading cause of death in the population aged over 45 (Monti, Ruggieri, Vincentelli, Capuano, & Pugliese, 2015). This is a major burden since most African countries are still developing, and heart failure tend to affect the working population.

In the United States alone, the prevalence is 5.7 million (Ambrosy et al., 2014). Incidence of heart failure continues to elevate in the United States, with approximately 660,000 new cases diagnosed each year(L. Graven et al., 2014). Analysis by the American Heart Association predicted the prevalence of heart failure to increase by 46% from 2012–2030 (Nilsson et al., 2017). Annual Medicare expenditure in the United States exceeds US $17 billion, hence this present a strain on economic resources of a country (Iyngkaran et al., 2018).

In the European population heart failure is estimated to vary between 2 and 3%, and it increases with age, and 50% of those heart failure patients die within 4 years of diagnosis (Nahlén & Saboonchi, 2010). In its most severe form heart failure has over 50% one-year mortality (Jeon et al., 2010). The prevalence rate of heart failure is around 5%–10% in the United States of America,1 0.4%–2% in the European Union, and approximately 5.5% in Taiwan (Li & Shun, 2016).

Of the global deaths in 2005 about 30%, that is, 17.5 million were related to cardiovascular diseases(CVDs), and heart failure dominates a larger proportion of these CVDs being the leading cause of all hospitalizations and readmissions in the elderly population, answering to a large ratio of national health care expenditure in developed countries(Jeon et al., 2010). CVDs are the leading cause of death globally, an estimated 17.7 million people died from CVDs in 2015 representing 31% of all global deaths (WHO, 2019). The highest contribution to global heart failure expenditure was the USA ($30.7 billion), accounting for 28.4% of global costs (Cook, Cole, Asaria, Jabbour, & Francis, 2014). This shows that heart failure is a public health problem internationally.

Heart failure presents as a burden on families due to hospital expenses on the readmissions and care of the heart failure patient. Therefore, having a heart failure syndrome is actually expensive.

- *Stress, Coping and Appraisal*

Stress arise from an imbalance between environmental demands and resources available to meet those demands (Folkman & Nathan, 2011). Individuals appraise that a stressor outweighs the resources available for them to cope with these demands. Stressors pose an imbalance, affecting their physical and psychological well-being, and interventions are needed to restore equilibrium (Lazarus & Folkman, 1984).

Cognitive appraisal is the process used by individuals to evaluate the significance of the stressful situation and comprise of two types, that is, primary appraisal and secondary appraisal. In primary appraisal individuals view situation as stressful, challenging or irrelevant and in secondary appraisal one looks into their capability/resources to counteract the stressor (Lazarus, 1982). Therefore, coping incorporates cognitive and behavioral actions to deal with stressors. The main goal of coping strategies is to protect individuals from the negative effects of stressors.

Coping has proven very useful in adapting to psychological effects associated with heart failure by decreasing mortality rates, hospital readmission rates and, enhancing psychological well-being and self-care behaviors(L. Graven et al., 2014). There are two types of coping strategies which are problem-focused coping and emotion-focused coping (Scheier, Weintraub, & Carver, 1986).

Problem-focused coping strategies are used when a person believes the stressing situation can change in response to their efforts, whereas, emotion-focused strategies are used when one feels the stressor is permanent regardless of his/her effort (Stein, Leventhal, & Trabasso, 2013). Problem focused coping include active awareness, acceptance, cognitive analysis, plan problem-solving, seeking social support and active coping, these strategies are either directed at environment or self (Folkman, Lazarus, Dunkel-schetter, Delongis, & Gruen, 1986). Heart failure patient may seek support from family as a way of coping with their heart

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failure treatment regimen, this portrays environment directed problem-focused coping and in another instance, heart failure patient may use problem solving strategies to determine whether or not to seek treatment for increased symptoms of heart failure thereby directing the problem at themselves (L. Graven et al., 2014)

Contrary to problem-focused coping which can be directed to self or environment, emotion-focused coping is often directed to self only (Hodgkinson & Starbuck, 2008). Emotion-focused coping strategies include, denial, minimizing, avoidance, mental/behavioral disengagement, venting, positive reappraisal and distancing (Folkman et al., 1986).

➢ *Factors Influencing Coping Strategies*

- *Comorbid Conditions*

These are diseases that occur in situ with heart failure and they worsen the psychological status of the patient thereby, influencing the choice of coping strategies.(Farcaş & Năstasă, 2011) Common comorbidities in heart failure includes diabetes mellitus, chronic renal impairment, chronic obstructive pulmonary disease, sleep-disordered breathing and obesity(Iyngkaran et al., 2018). These comorbidities increase the frequency of readmissions.

- *Personality*

Optimism, extraversion, conscientiousness, and openness are associated with more engagement coping, whereas, neuroticism, introversion correlate with more disengagement coping (Carver & Connor-Smith, 2010). Therefore, personality plays a significant role in determining how heart failure patients cope with disease-related stressors (L. Graven et al., 2014).

- *Sense of Coherence*

Coping strategies can be influenced by a person's sense of coherence, that is, a view that recognizes the world as meaningful and predictable. Females tend to overestimate the effect of the disease, thus they implement denial as a coping strategy(Farcaş & Năstasă, 2011) In a study of eighty individuals with heart failure, the use of emotion-focused coping strategies, such as denial, behavioral disengagement, and self-blame was associated with a lower sense of coherence. Contrarily, a high sense of coherence was associated with use of problem-focused coping strategies, particularly acceptance(L. Graven et al., 2014).

- *Age*

Incidence of heart failure increase with aging population (Klein et al., 2007). The choice of coping strategy can be affected by age. Acceptance and religion are mostly used in older patients(Farcaş & Năstasă, 2011). Studies on the correlation of age and coping strategy in heart failure patients are missing.

However, information on how gender, illness knowledge, beliefs, educational background and financial income influence the choice of coping strategy in heart failure patients is scarcely available.

➢ *Outcomes of Coping Strategies in Heart Failure*

Problem-focused coping strategies are associated with improved psychological well-being, improved health related quality of living and enhanced self-care whereas emotion-focused coping is associated with increased risk of heart failure related mortality, psychological distress and decreased health related quality of living(L. Graven et al., 2014).

Research was done to determine the outcomes of different coping strategies on mortality risk among heart failure patients. A sample of 119 clinically stable patients, 71.4% men, mean age 65.7 ± 9.6 years, were recruited from an outpatient cardiology practice. Twenty deaths were recorded during the 24-month period of data collection. Results reviewed that behavioral disengagement was a significant predictor of mortality, whereas acceptance of the heart failure condition showed a marginal association with mortality(Murberg & Bru, 2001).

A comparative correlational study of coping strategies and quality of life in patients with chronic heart failure and the general Swedish population was done. The findings included that women used more problem-focused as well as emotion-focused coping strategies than men did. In addition, women in the patient group used coping the most. Compared with the Swedish general population, patients with CHF rated lower quality of living. To deal with the psychological consequences of daily life, men with CHF and persons in the general Swedish population reported using both problem-and emotion-focused coping(Nilsson et al., 2017).

An assessment of coping strategies and their associations with health related quality of life in patients with chronic heart failure was carried out. One hundred and eighty-three patients diagnosed with chronic heart failure were recruited at a heart failure outpatient clinic. Self-reported questionnaires were filled in to measure coping strategies and health related quality of living. A four factorial structure of brief COPE comprising of problem focused coping, avoidant coping, socially supported coping and emotion focused coping was used to explore the findings. Avoidant coping was found to be associated with worse health related quality of living in chronic heart failure. The findings suggest that avoidant coping strategy effect depressive symptoms, anxiety, fatigue and predict increased mortality. More also, the maladaptive nature of avoidant coping in chronic heart failure was revealed by the results(Nahlen Bose et al., 2015).

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Effective coping is of greater significance in the management of heart failure. Individuals' cognitive appraisal and other factors such as co-morbid conditions, personality, and illness knowledge may affect coping strategy. The findings of a study by Graven et al, in 2014 suggest that problem-focused coping strategies are associated with positive heart failure outcomes, such as psychological well-being, self-care, and health related quality of living as compared to emotion-focused coping strategies. The results indicate that emotion-focused strategies such as denial and behavioral, and mental disengagement relate to negative heart failure outcomes, such as psychological distress, decreased health related quality of living, and heart failure related(L. Graven et al., 2014).

Coping styles in heart failure patients with depressive symptoms were explored in a study by Trivedi et al, 2009. The type of coping strategy determine the occurrence of depressive symptoms, the latter succumbs to avoidant coping, lower perceived social support, and pessimism. According to the findings there is perceived possibility that interventions inclined to coping strategies may decrease depressive symptoms.

The randomized, parallel, controlled clinical trial of 2005 with 43 patients which had 21 intervention and 22 control patients was the first study to use Roy's Adaptation Model (RAM) in heart failure patients. The intervention group was given a booklet for patient training. Results reviewed that patients in the intervention group adapted well to their condition and the four adaptive modes of Roy's Adaptation Model were interlinked. The patients' quality of life was enhanced, their functional capacities increased and social support within the interdependence dimension improved in patients in the intervention group (Bakan & Akyol, 2008).

A study on the influence of self-concept on compliance to prescribed regimens in heart failure patients was done. The self-concept of Roy's Adaptation Model was used to examine the relationships between components of self-concept to recommended health regimens in heart failure patients. According to Roy's Self- Concept model any stimulus is perceived as either a threat or a challenge to one's self-concept of body image, body sensation, self-esteem and ethical self. Stimuli perceived as a threat are generally reacted to with defense mechanisms and a lack of adherence, whereas, those perceived as challenge effect problem-solving behaviors and accepted with adherence (Naghi, Philip, Phan, Cleenewerck, & Schwarz, 2012). A sample of 97 adult heart failure patients was used and the findings showed that subjects were more challenged than threatened by health regimens and reported high compliance to medications and diet. Positive relationships were found between compliance and challenge to self-concept (Thomas, 2007).

- *Summary*

As outlined in the literature review heart failure causes a greater burden on the individual and the community at large. It has a very complex management which explains why there is a narrow margin between health related quality of living and death. In Zimbabwe there is inadequate statistical information on the prevalence of heart failure and its burden as revealed by the literature. Coping strategies enhance high health related quality of life and reduce frequency of readmission. Roy's model is an effective guide for nursing practice when caring for patients with heart failure (Bakan & Akyol, 2008).

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# CHAPTER THREE
# METHODOLOGY

- *Introduction*

The previous chapter revealed data on other studies in the issues related to heart failure. The study's main focus was on determining the coping strategies implemented by heart failure patients between the ages 40 to 95years old. Contained in this chapter is the methodology that was used to carry out my research.

- *Research Design*

This is the framework of techniques a researcher use to bring together the components of a research in a logical manner to enhance adequate handling of the research problem. The research design gives the idea on how to carry out research using a specified methodology (Bhat., 2018). In this study a cross sectional quantitative descriptive research design was utilized. A descriptive research design is referred to as a theory based design made by collecting, analyzing and presenting the information (Bhat. 2018). These designs are more ideal for describing the desired traits of the sample that is being studied, for example, frequency of presentation of a disease in a case report. There is room for generalization of the findings from a representative sample on a large target population as in a cross-sectional survey (Omair, 2015).

- *Study Setting*

A study setting is where the study will be conducted (IGI, 2018). The setting for this particular study was the Out-Patients Department at Parirenyatwa Group of Hospitals. Parirenyatwa Group of Hospital is the focal point of health care facilities in Zimbabwe hence more referees, giving much greater coverage of both rural and urban population in the whole country. It is located 2.4 kilometers on the northern side of the Harare central business district and the OPD department is on the ground floor, with the entrance facing towards the east. The OPD cardiac clinic is accessible only on Wednesdays since the OPD also includes Ear Nasal and Throat clinic, Eye clinic and other health care facilities hence there is allocation of dates. The choice of this setting was motivated by its accessibility and greater area of influence.

- *Target Population*

Target population is the entire group to which the researcher wish to generalize findings of a study (Stack Exchange, 2018). In particular to this study, the target population included all diagnosed heart failure patients within the age limits mentioned in the objective at OPD cardiac clinic at PGH.

- *Sampling Plan*

A sampling plan consists of different sample units on which the researcher is going to collect the research data. Sampling unit is a representative of the total population, although, it might be a proportion of the total population (Bhasin, 2017).

- *Sampling Method*

I used non-probability sampling which is a sampling technique whereby a sample is organized in a process that does not give all the individuals an equal chance of being selected. Recruitment of participants was done using convenience sampling, also known as accidental sampling whereby, the researcher makes use of the participants available at that particular time as long as they meet the criteria for selection (Polit and Beck, 2014). This sampling method is more economical, convenient and time saving.

- *Sample Size*

This refers to the total number of participants needed to make the study results generalizable (Gilchrist & Wright, 2014). An appropriate sample size tells us more about the relationship and enable us to find out effect of treatment, as well as describing phenomena (Grove, Burns & Gray, 2013). Thirty participants were used in this study.

- *Sampling Criteria*

A sampling criteria is a set of population characteristics against which the members of a target population can be reviewed for credibility to participate in the study (Moule and Goodman, 2009).

- *Inclusion Criteria*

This specifies the characteristics that are expected on the aspiring participants for them to be participants in the study (Polit and Beck, 2014). The characteristics depend on researcher's preference. The inclusion criteria for this study included all diagnosed heart failure patients from 40 to 95 years of age, male or female present for review at the OPD cardiac clinic, English or Shona speakers and willing participants.

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➢ *Exclusion Criteria*

Exclusion criteria refers to the undesired characteristics which the aspiring participants must not possess and it provides a guideline on the selection of appropriate participants (Polit and Beck, 2014). Particularly to this study, all diagnosed heart failure patients outside the given age parameters, non-English/Shona speakers and unwilling patients will be exempted. Mentally ill patients and the participants in the pilot study were excluded.

➢ *Variables*

A variable is a characteristic, number or quantity that alternates in different circumstances (WebFinance. 2018). In this study, the variable under study was the coping strategies among heart failure patients.

- *Conceptual Definition of Variables*

A conceptual definition describes the abstract or theoretical meaning of concepts being studied (Polit and Beck, 2014).

- *Operational Definition of Variable*

An operational definition specifies how the variables are measured in the research. It also includes how the variable is calculated and recorded as a numerical value. Furthermore, the range of possible values and the variable's level of measurement should not be left out (Statistics solutions. 2018).

- *Awareness of Coping Strategies*

Conceptually this refers to the state of being enlightened particularly on the specific ways of adapting to a given situation. Level of awareness will be operationalized by the coping questionnaire.

- *Demographic Variables*

These are conceptually defined as independent variables which cannot be altered by the researcher, for example, age, gender and HIV status, and varies in the population under study. The population must have quantifiable statistics that will provide information pertaining the research participants (Houser, 2011). In this study, the demographic variable was operationalized by a demographic data questionnaire.

➢ *Research Instrument*

A tool that is used to collect, measure and analyze data related to a subject is known as a research instrument. It can be in the form of a test, survey, questionnaire or even checklist (Miller, 2018). A questionnaire was used as an instrument for collecting data in this study and was administered in English and Shona. It was more preferable as it allows the researcher to generate data specific to a particular research and gives insights that might otherwise be unavailable (Quad, 2016). There was control in the order of questions in such a way that participants would not deliberately skip questions and that had a potential of inducing bias (Moule and Goodman, 2009). Clarity was ensured in the questions to prevent inappropriate responses which could lead to wrong findings. The questionnaire was based on extensive literature search on coping strategies and stated objective.

The questionnaire was sub-divided into 2 sections. Section A, addressed demographic data of the participant which include age, residential place, marital status, religion, level of education, occupation, monthly income, number of children and duration being a cardiac patient. Section B addressed the coping strategies. The questionnaire comprised of close ended questions which enabled the participant to choose from the available options. The participant was expected to choose and tick the options that best described their disposition on the issue.

➢ *Validity*

Validity is defined as the extent to which a concept is accurately measured (Heale & Twycross, 2015). The instrument comprised of items which reflected essential aspects of the variable in the study. Greater validity means the instrument answered what it was intended to answer. The supervisor and other health care experts evaluated each item in the instrument with regard to the extent to which the dependent variable of interest was represented.

➢ *Reliability*

Reliability is the extent to which a measuring procedure yields the same results on repeated trials (Merriam-Webster., 2018). Each item was carefully and accurately phrased so as to guard against ambiguity and guarantee maximum reliability of the tool. The researcher pretested the instrument so as to improve its reliability. Same results should be obtained each time the same variable will be used on new study subjects (Polit and Beck, 2014).

➢ *Pilot Study*

Pretesting involves simulating the data collection process on a small scale to identify practical problems with regard to data collection instruments, sessions and methodology. It detects errors in cross-cultural language relevance and word ambiguity as well as discovering possible flaws in survey measurement variables (Hurst et al., 2015). The instrument was assessed for anomalies, time requirements and necessary adjustments. It ensured maximum validity and reliability. Clarity and sensitivity of questions were also

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assessed during the process. The pretest was conducted at Parirenyatwa on 5 participants. The obtained information was not included in the final analysis.

➢ *Ethical Considerations*

An informed consent is an ethical and legal requirement for research involving human participants (Nijhawan et al., 2013). In this study, human rights will be greatly considered. Before the study was carried out, permission was sought from the Joint Research Ethics (JREC), the sisters in charge, head of departments, consultants and the Medical Research Council of Zimbabwe (MRCZ). The researcher ensured anonymity by having no names on the questionnaires, the names were substituted by a code. The data collected was locked in a safe cupboard where only the researcher had access to and was collected when the whole process of data collection was over.

➢ *Data Collection Plan*

Data collection plan is a crucial key to developing a sound study. The plan indicates how the researcher will access and gather information from the participants (Goddard & Melville, 2004). Data was collected on Wednesdays from 8am to 1pm. The researcher introduced himself in-order and established rapport, explained research purpose and how study participants were going to be selected. The consent form was explained and willing participants signed the form. Each study participant was given a full explanation of the time frame that he or she spent with the researcher and each interview session took about 15-20 minutes whilst in privacy. Participants were allowed to ask questions regarding the study.

- *Data Collection Procedure*

The researcher explained the study purpose, what was involved in the study as well as the inclusion criteria. Heart failure patients who were willing to participate and who met the inclusion criteria were asked to meet with the researcher in an identified data collection room in the ward. In the room for data collection, heart failure patients who met the inclusion criteria were given more clarity on the study and the researcher attended to questions from these patients to ensure that they fully understand how they would participate. The researcher gave the subjects a questionnaire to complete, which they returned after completion to the researcher. The researcher thanked the participants afterwards.

➢ *Data Analysis*

Data analysis plan is a detailed document outlining procedures for conducting an analysis on data (Jablonski and Guargliardo, 2016). Data was cleaned and entered into the computer. Descriptive statistics were used to analyze the data. Computerized Statistical Microsoft Excel was used to analyze numerical data to obtain percentages, mean, modes, averages and frequencies. Data was presented in tables and graphs.

➢ *Summary*

This chapter focused on the research design and methodology that underpinned the study. Information regarding the methodology and its relevance to the study was outlined in this chapter. The chapters which follow were extracted from the methodological propositions made in this chapter utilizing the proposed data collection plan and analysis method to analyze the quantitative data.

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# CHAPTER FOUR
# DATA PRESENTATION

➢ *Introduction*

The main objective of this study was to determine the coping strategies implemented by chronic heart failure patients presenting at the Out-Patient Department of Parirenyatwa Group of Hospital. The results of the study addressed the coping strategies used by chronic heart failure patients at Parirenyatwa Group of Hospitals.

Data was obtained from thirty-five patients who met the inclusion criteria with a 100% response rate using convenience sampling technique. In data analysis phase, descriptive statistics used provided frequencies and percentages.

➢ *Demographic Analysis*

Variables under demographic traits which encompassed age, gender, marital status, parity, children's age, religion, employment status, monthly income, education level, residence, HIV status and comorbidities were analysed.

- *Age*

There was a total number of 35 participants. Figure 4.1 reveal that 11(31.43%) of the participants were aged between 40-58years, 20(57.14%) were aged between 59-76years and 4(11.43%) were from 77-95years. The oldest age noted from participants was 81 years and the youngest obtained was 48 years.

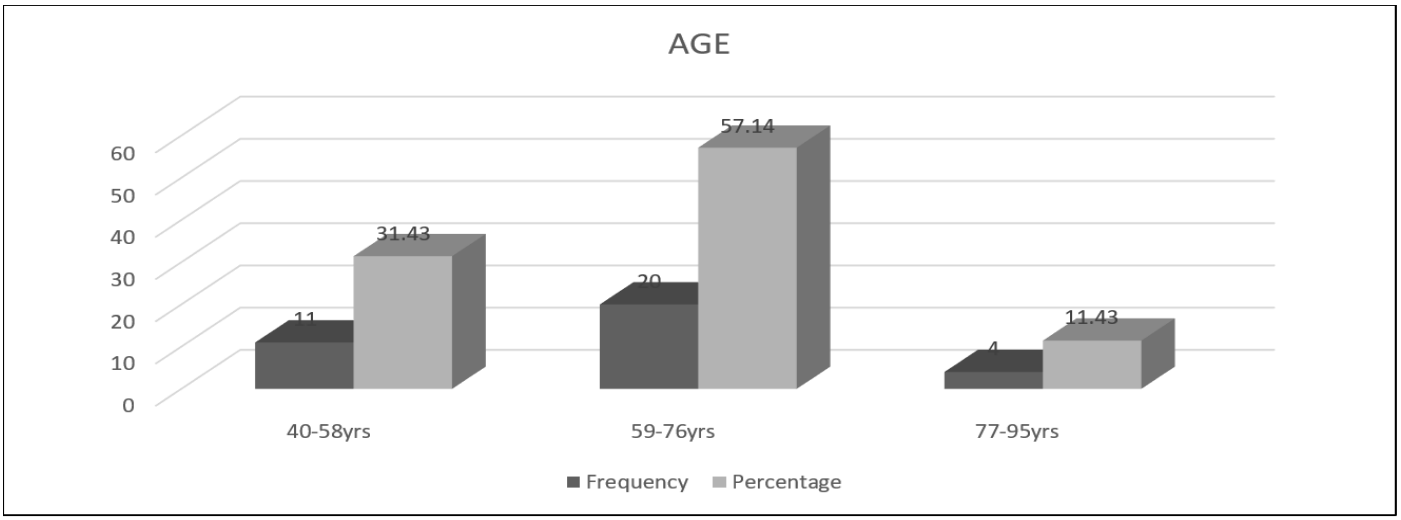


Fig 2 Age

- *Gender*

Males constituted 24(68.57%) and females were only 11(31.43%) as indicated by the pie chart below;

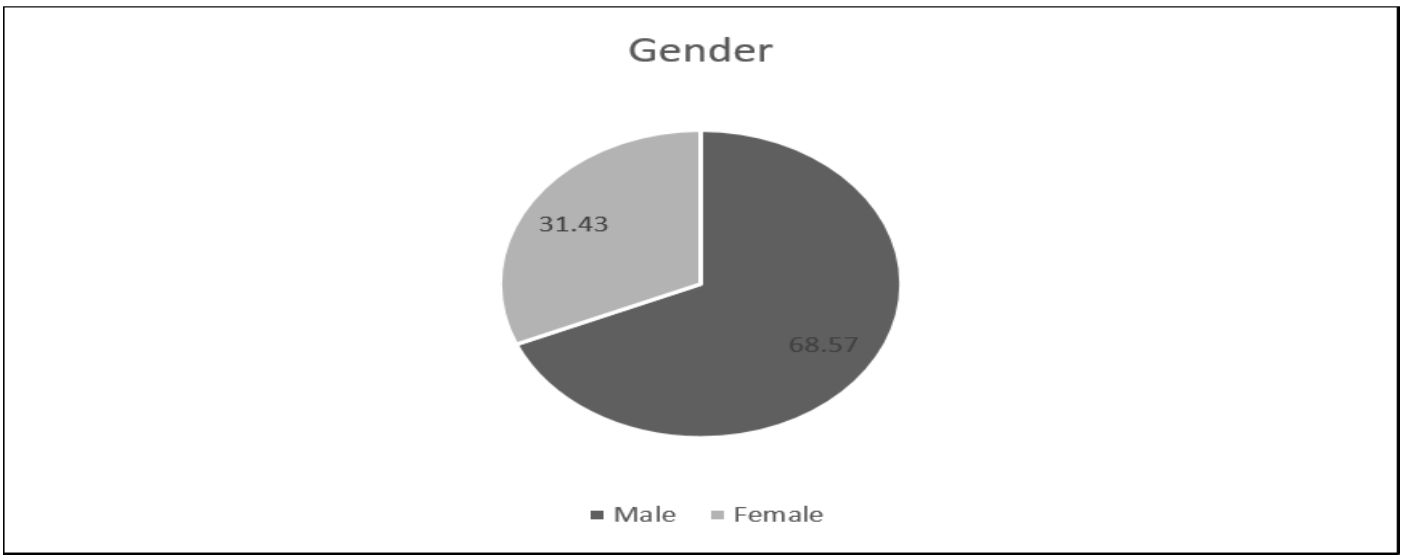


Fig 3 Gender

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- *Marital Status*

21(60%) of the study participants were married, 6(17.14%) widowed and 8(22.86%) were divorced. This is represented in bar chart below.

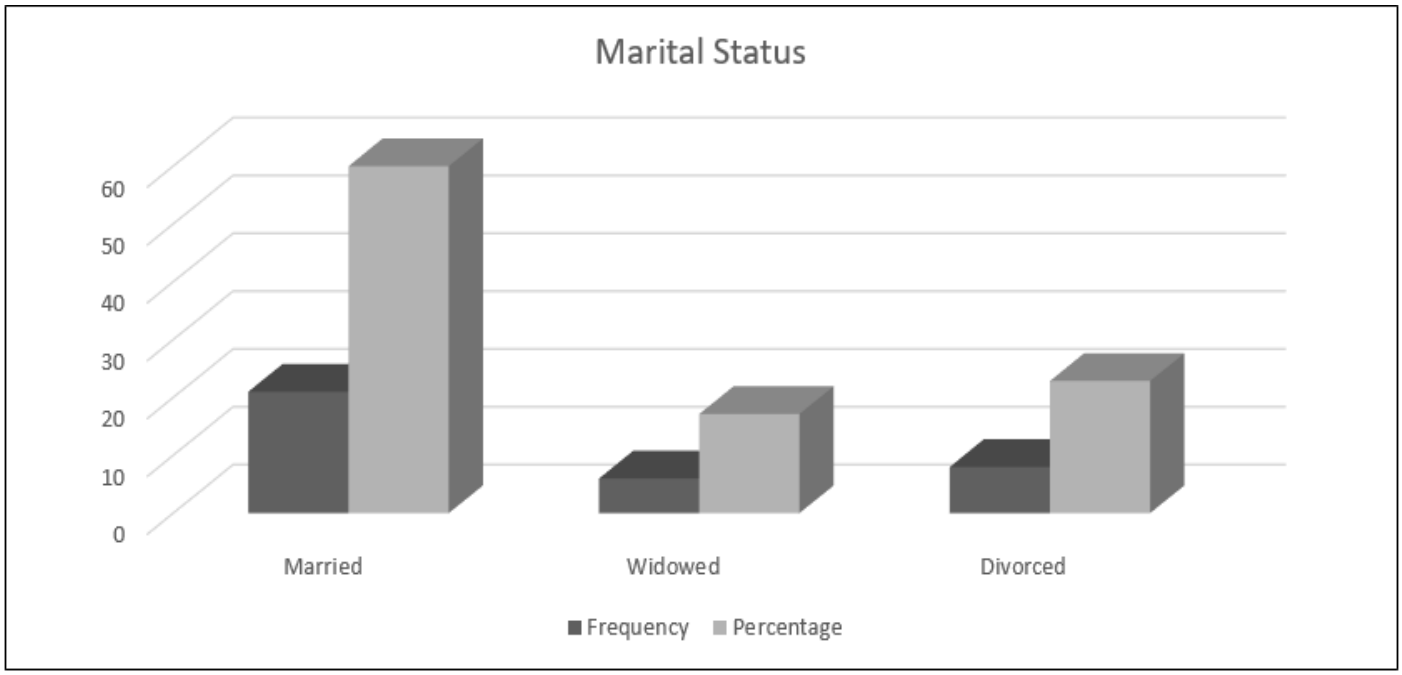


Fig 4 Marital Status

Table 1 Parity, Children's Age, Place of Residence and Religion Distribution

| | FREQUENCY | PERCENTAGE |
|---|---|---|
| **PARITY** | | |
| None | 2 | 5.71 |
| 1-4 | 3 | 8.57 |
| Above 4 | 30 | 85.72 |
| **CHIDREN'S AGE** | | |
| 0-21 | 3 | 8.57 |
| Above 21 | 29 | 82.86 |
| Both ages | 3 | 8.57 |
| **RESIDENCE** | | |
| Urban | 24 | 68.57 |
| Rural | 9 | 25.72 |
| Peri-urban | 2 | 5.71 |
| **EDUCATION LEVEL** | | |
| Primary | 2 | 5.71 |
| Secondary | 26 | 74.29 |
| Advanced level | 5 | 14.29 |
| Tertiary level | 2 | 5.71 |
| **RELIGION** | | |
| Christianity | 34 | 97.14 |
| African Traditional | 1 | 2.86 |

On parity, 2(5.71%) had no children, 3(8.57%) had 4 or less children and 30(85.72%) had more than 4 children. The children's age categorized into 0-21years, above 21years and both age groups were 3(8.57%), 29(82.86% ) and 3(8.57%) respectively. The places f stay grouped into urban, rural and peri-urban residence had 24(68.57%), 9(25.72%) and 2(5.71%) in their respective order. The level of education attained was demarcated into primary, secondary, Advanced level and tertiary level and, constituted 2(5.71%), 26(74.29%), 5(14.29%) and 2(5.71%) respectively, of the study participants. Religion comprised of 34(97.14%) Christians and 1(2.86%) African traditional believers.

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- *Employment Status*

The study participants involved 17(48.57%) unemployed, 6(17.14%) self-employed, 4(11.43%) employed and 8(22.86%) retired.

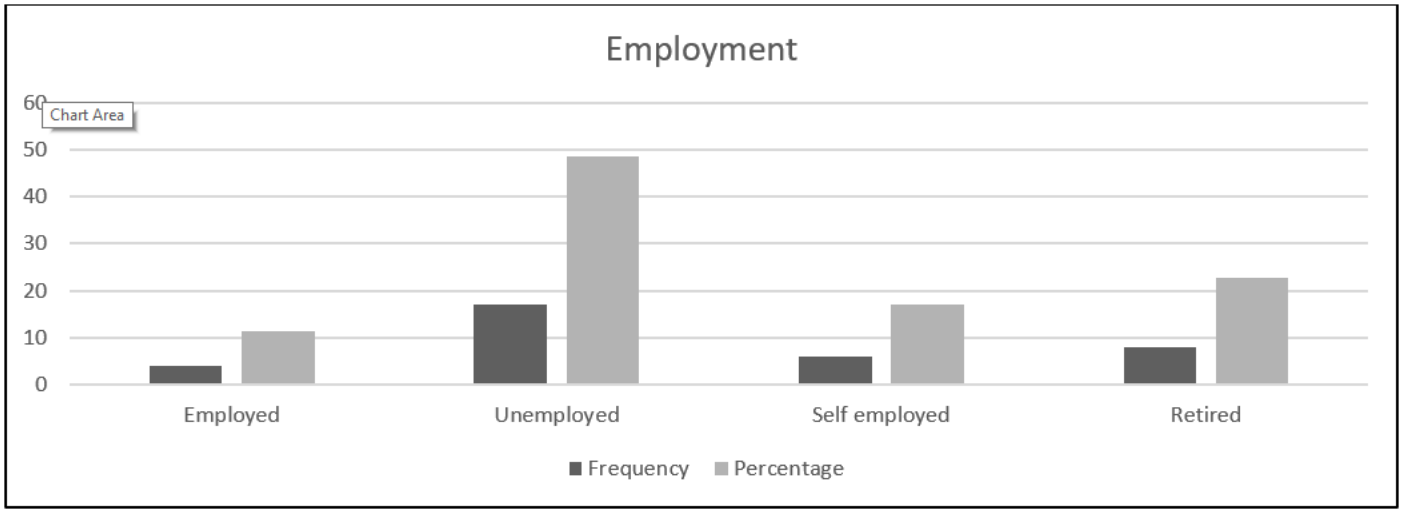


Fig 5 Employment Status

Table 2 Income, HIV Status and Comorbidities Distribution

| | FREQUENCY | PERCENTAGE |
|---|---|---|
| **INCOME** | | |
| 0-500Rtgs | 25 | 71.43 |
| 500-1000Rtgs | 8 | 22.86 |
| Above 1000Rtgs | 2 | 5.71 |
| **HIV STATUS** | | |
| Positive | 6 | 17.14 |
| Negative | 4 | 11.43 |
| Not tested | 25 | 71.43 |
| **CHRONIC ILLNESSES** | | |
| Present | 24 | 68.57 |
| Absent | 11 | 31.43 |

Monthly earnings were distributed as; 25(71.43%) earned less than 500Rtgs, 8(22.86%) earned between 500 and 1000Rtgs and, 2(5.71%) earned more than 1000Rtgs. The study participants' HIV statuses were 6(17.14%) positive, 4(11.43%) negative and 25(71.43%) unknown status. Other chronic illnesses presented in 24(68.57%) of the participants and 11(31.43%) had no any other chronic illnesses.

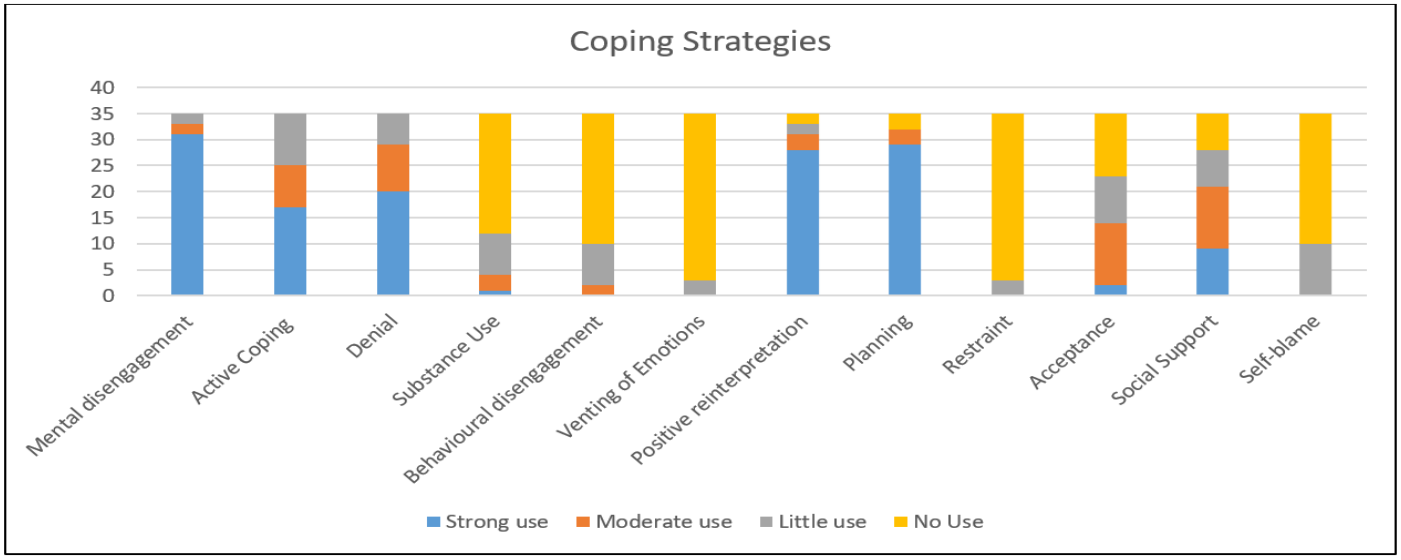


Fig 6 Coping Strategies

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The figure above shows the distribution of coping strategies implemented by chronic heart failure patients in living with the burden of heart failure among the study participants. The results were obtained using the COPE questionnaire and measurement scale. Participants responded with, 'I do this a lot', I do this moderately', 'I do this a little' and 'I never do this'. For mental disengagement 31(88.58%) strongly used it, 2(5.71%) used it moderately, 2(5.71%) used it a little. Active coping was used strongly by 17(48.57%), moderately by 8(22.86%) and a little by 10(28.57%). Denial usage had 20(57.14%) strong use, 9(25.71%) moderate use and 6(17.14%) little use among the study participants. Substance use constituted 1(2.86%) strong use, 3(8.57%) moderate use, 8(22.86%) little use and 23(65.71%) no use. Behavioral disengagement had 2(5.71%) moderate use, 8(22.86%) little use and 25(71.43%) no use. Venting of emotions was distributed as; 3(8.57%) little use and 32(91.43%) no use. Positive reinterpretation had 28(80%) strong use, 3(8.57%) moderate use, 2(5.71%) little use and 2(5.71%) no use. Planning had 29(82.86%) strong use, 3(8.57%) moderate use and 3(8.57%) no use. Restraint had 3(8.57%) little use and 32(91.43%) no use. Acceptance had strong use 2(5.71%) strong use, 12(34.29%) moderate, 9(25.71%) little use and 12(34.29%) no use. Social support had 9(25.71%) strong use, 12(34.29%) moderate use, 7(20%) little use and 7(20%) no use. Self-blame had 10(28.57%) little use and 25(71.43%) no use.

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# CHAPTER FIVE
# DISCUSSION

- *Introduction*

The focus of the study was to determine the coping strategies used in chronic heart failure patients at the Out-Patients Department of Parirenyatwa Group of Hospitals. The results are discussed in comparison with other researches done on same thrust. Significance of the study findings in nursing as a profession are discussed in detail as well as the limitations in the study. Demographic characteristics are discussed in conjunction with the type of coping strategy used. The study outcome will enhance evidence-based practice in the management of patients with chronic heart failure.

- *Demographic Characteristics*

Age range of 59years to 76years had the highest frequency of 20(57.14%). The statement that prevalence of heart failure is increasing with the aging population is fully supported by the finding of this study (Klein et al., 2007). The 77 to 95 years age group was the minority group. The average age of the participants was 64.3 years. This is in accordance with a study done in Norway where the mean age for chronic heart failure patients under study was 65.7 ± 9.6 years (Murberg & Bru, 2001). This is owing to decreased life expectancy due to rapid deteriorating health status secondary to heart failure and diminished physiological compatibility of body mechanisms as one ages.

There were more males (68.57%) than females (31.43%) in the study participants. It is in consistency with a study on the Swedish population which showed 58(72.5%) males and 22(27.5%) females (Nahlén & Saboonchi, 2010). Males predominate the chronic heart failure patients. This can be attributed to the type of lifestyle associated with the respective genders. Males have a risky behavior of smoking hence it propagates the occurrence and severity of heart failure. In another study at a large urban hospital in Zimbabwe males were outnumbered by females (42.1%) and (57.9%) respectively (Matowa, 2015).. More also, the findings are not in line with the notion which states that majority of CHF patients are females, prior to their longer life expectancy (Jeon et al., 2010).

In respect to marital status 60% were married, 17.14% widowed and 22.86% divorced. This is in synchrony with a study in which those married or living with someone were 56 (70%) and for the widowed, divorced, or single they constituted 24 (30%) (Klein et al., 2007). Taking into consideration that incidence of heart failure is much common in older adults there is increased need for social support especially from a spouse and family to assist in their coping.

The majority of the participants had more than 4 children and also children above 21 years of age. This influence the type of coping used in the way that most of these people are the dependent hence they live on the income and support of their beloved children and grandchildren. Monetary expenses to hospitals and reviews are catered for or can be neglected depending on the support they get from their beloved children.

Most of the study participants reside in the urban areas hence they have much access to private hospitals and better medical facilities. A few stay in the peri-urban areas. Some stay in the rural areas. The findings indicate that more participants went to school up to secondary level, therefore, they can choose an effective strategy since they have better literacy to understand recommendations and instruction. On the religious aspect, Christianity is much prevalent among the participants compared to African traditional religion. In cases of incurable and chronic physical conditions like heart failure, it's not surprising that patients would sought ancillary methods in particular, spiritual ones to enhance their ability to live with their condition (Naghi et al., 2012). Therefore, it's much expected that the choice of the coping strategy could be influenced by religious faith.

Unemployment was common among the study participants and a few self-employed individuals prior to retirement and employment deficit in the country. In the same manner this influence the coping strategy, which will be different between a worker and a jobless someone. Most study participants earn below 500Rtgs hence this affect the quality of lifestyle and also coping strategy implemented. A few earn above 1000Rtgs as shown by the percentage of incomes.

Majority of the participants have unknown HIV status, however, of those tested more are HIV positive compared to HIV negative. Moreover, majority have different comorbidities. This succumbs to the deteriorating physiological functions of body systems which are less able to compensate. This has an impact on the type of coping strategy used.

- *Coping Strategies*

Coping Strategies used mostly include mental disengagement, planning, positive reinterpretation, denial, active coping, social support, acceptance and substance use. The results reveal that venting of emotions, restraint, behavioral disengagement, self-blame, substance use, acceptance and social support were barely used. These coping strategies can be grouped into problem-focused and emotion-focused coping.

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Mental disengagement was the prevailing coping strategy among the study participants with 31(88.58%) of the study participants. It is a type of emotion-focused coping that distract an individual from thinking about his/her heart failure burden. Similar to this, a study at the Cardiology Department of the Emergency County Hospital in Cluj-Napoca showed a large number of patients, 60% using mental disengagement as coping strategy in heart failure (Farcaş & Năstasă, 2011). This coping strategy influence psychological distress symptoms like anxiety (L. Graven et al., 2014).

Planning was used by a notably high population of the study participants of 29(82.86%). Contrary to this result, a Japan Public Health Center-based prospective study found out that 19.9% of participants utilized planning as a coping strategy and the majority of them, 53.3% were men (Svensson et al., 2016). Positive reinterpretation is a coping strategy that is more problem-focused. The person will try to find something good in the stressor. It was used by 28(80%) of the study participants.

As shown by the graph on fig 4.5, denial was used by more than half of the participants. Denial is an emotion-focused coping strategy. Older adults have a lot of psychological stressors and much more likely to utilize denial as a means to cope with their chronic heart failure problem. In another study similar to this, the results showed 20% greater likelihood of using denial (Trivedi et al., 2009). Denial is associated with a critically lower health outcome for chronic heart failure patients (Murberg & Bru, 2001)

Active coping was used by 48.57% of the study participants. It is a type of problem-focused coping which fosters self-care and the decision making process with the objective of maintaining a balanced health state than emotion-focused coping (Li & Shun, 2016). According to a Japan Public Health Center-based prospective Study active coping styles appear to have a healthier emotional adjustment in chronically ill heart failure patients (Svensson et al., 2016).

There was a considerable proportion of study participants who implemented social support for their coping, 25.71% of the study participants. Acceptance received a small number from the study participants 5.71% who admitted to using it as a coping strategy. This is opposing a study at Cardiology Department of the Emergency County Hospital in Cluj-Napoca in which the outcome presented acceptance as the dominating coping strategy used with 69.3% (Farcaş & Năstasă, 2011). Of the coping strategies conveyed in this study substance use was the least implemented with only 2.86% of the study participants. This finding is similar to a study whereby substance use was omitted as a coping strategy for study prior to one participant reporting this as a strategy (Klein et al., 2007).

Behavioral disengagement, venting of emotions, restraint and self-blame were barely used hence their roles are insignificant. As indicated by the results, emotion-focused coping such as mental disengagement, positive reinterpretation and denial dominate the top four most used coping strategies. Planning is the only problem-focused coping strategy in the top four most used. This means according to the findings of this study older adults prefer emotion-focused coping to problem-focused coping. Mental disengagement exists dominantly in older adults. Prior to aging a lot of changes that take place physiologically to which they have no control hence they simply get off this through mentally disengaging from the real problem.

Older adults also make use of denial to escape stressors. They tell themselves that the stressor, in particular, heart failure problem is an illusion to them not reality. Positive reinterpretation is emotion-focused coping strategy which has a positive impact to the health-related quality of life of the chronic heart failure patients. It encourages adherence to the treatment regimen. Planning is a problem-focused coping which has positive impact on the health-related quality of life of heart failure patients. It fosters compliance to medications and management. Active coping, acceptance and social support are problem-focused coping strategies. According to the study findings, they were the least used.

Emotion-focused coping strategies have a negative impact on heart failure patients, they facilitate psychological distress, decreased health-related quality of life and increased mortality (Graven L et al., 2014).

➢ *Implications*

- *Implications to Nursing as a Profession*

The study outcome suggest that nurses have a mandate to educate chronic heart failure patients on the ways of coping which favour a high health-related quality of life. The proceeds from this research will be useful in planning an effective nursing management which will involve the chronic heart failure patients to enhance their knowledge about their condition and coping methods which support their existence. Educating the chronic heart failure patients on positive ways of coping will minimise the frequency of readmissions and reduce heart failure related mortality. This will also enhance the nurse's role as an educator.

- *Implications to Nursing Education*

The findings of this study can be used to review loopholes in the nursing curriculum to reinforce nursing education especially when dealing with different age groups, in particular the elderly. More also, this study will contribute to the reinforcement of the existing body of knowledge created by nurses. The information gained from this study outcome will enable nurses to be more capacitated to educate, promote positive health behaviours and bring awareness to the community on effective coping strategies.

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- *Implications to Nursing Research*

Identification of shortfalls in non-pharmacological chronic heart failure patient management will give the existing body of knowledge a stepping stone on other studies to be carried out to promote efficacy in clinical practice. Nursing research is meant to provide definite answers to unanswered questions, therefore, the study findings will encourage evidence-based patient management. Dissemination of study output is necessary for guiding application in nursing practice. The nursing society can utilize conferences to communicate study findings either in oral form or in written form and effect further studies with in the same field.

➢ *Recommendations*

- Utilize the study findings to educate the elderly on effective coping strategy which ensure adherence to medication.
- Involve heart failure patients in their own management and emphasize the significance of no-pharmacological management.
- A study to assess the determinants of health related quality of life for chronic heart failure patients.
- Similar studies should be conducted at various settings and using a larger sample size.
- A study to review how coping strategies vary chronologically with diagnosis.

➢ *Limitations*

- The study sample size was small and the study was conducted at Parirenyatwa Group of Hospitals only, therefore, cannot be generalized to the whole nation.
- A structured interview was used which might have introduced researcher's bias.
- The study was self - sponsored. Financial limitations also discouraged the recruitment of a larger sample.
- The study site used to obtain respondents in this study, is a referral centre where complicated condition is usually seen, thus may be full of respondents who are already overburdened with the complications referred from other hospitals.

➢ *Summary*

The purpose of the study was to determine the coping strategies used by chronic heart failure patients aged 40 to 95 years old at the Out-Patient Department of Parirenyatwa Group of Hospitals. It was guided by Roy's model of adaptation. A quantitative, descriptive, non-experimental design was utilized and study respondents were selected using simple random sampling. The study respondents were from Parirenyatwa Group of Hospitals. Structured interviews were conducted to collect data from a total of 35 study participants. The study findings showed that the elderly chronic heart failure patients use more emotion-focused coping than problem-focused coping hence there is need to educate them to use more problem-focused coping which is associated with a better outcome.

➢ *Conclusion*

The results of the study answered the following research question;

- "What are the coping strategies implemented by chronic heart failure patients aged 40-95 years old at Parirenyatwa Group of Hospitals?"

Mental disengagement was the prevailing coping strategy in the elderly heart failure patients which indicate the need for educating them on coping strategies that encourage adherence to therapeutic management of heart failure.

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