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An investigation of the reasons for defaulting by chronic medicine recipients (patients) in the metro district of the Western Cape

by

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DECLARATION

I, Lumka Ntwanambi, declare that the contents of this dissertation/thesis represent my own unaided work, and that the dissertation/thesis has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

Signed   **Date**

ABSTRACT

Research findings indicate that between 42% and 56% of people dying between the ages of 25 to 70 are most likely to die out of a preventable cause. Most of these illnesses are chronic illnesses, directly a result of lifestyles that people have adopted over long periods. Whilst it has been difficult to cure some of the diseases, it has been however possible to treat the ailments. Consequently, patients who have followed faithfully the treatment regimes have lived far longer than would have been expected. Because these illnesses needed continued treatment, they are therefore referred to as chronic illnesses. It is expected therefore that the patients should regularly go for medical check-ups as well as take their medicines continuously. Chronic illnesses are an increasing cause of morbidity and mortality in Metro District primarily because most chronic patients die even though their deaths are preventable. The research findings presented here are a result of a survey of 200 chronic-patients in the Metro-District in Cape Town using mixed qualitative and quantitative methods. The objectives of the studies were primarily to establish reasons for the noticed defaulting rate amongst the patients. Because the medication was subsidised by the government and the patients got the treatment at no cost, it was expected that few, if any, would default. The findings indicated that close of 40% of the patients' default and various reasons were provided ranging from forgetting, no transport money, no one to accompany them to the outlets to absence from town. The findings provide valid information to be used by the district to address the high rate of chronic medicines defaulting.

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I wish to thank:

DEDICATION

This thesis is dedicated to my loving and caring mum Nokhawuntala Ntwanambi, my late father Nkanyamba Ntwanambi who could have witnessed his seed, my kids and my family for interceding and providing the necessary support to make this a success.

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INTRODUCTION AND BACKGROUND TO THE STUDY ON DEFAULTING BY CHRONIC PATIENTS AND THE RESEARCH METHODOLOGY.
1.1. INTRODUCTION

The type of illness of a patient can be classified on the basis of the type of medication recommended by the doctors, which itself depends on the type of disease. A disease is defined in medicine (nursing) as "a particular abnormal condition Kelley, et al (2003:112-118) the presence of disorder in the functioning of an organ or a system which then affects the whole organism in part or in full. Too often disease is referred to as a health condition with particular indications specific and apparent to the patient Johnson (2002:443-450). Diseases may be caused by external factors like pathogens or may be a result of internal dysfunctions which may attack the immune system and cause disorder in the functions of the organs and or systems. Diedrich (2007:8-29) asserts that disease essentially is a state of the body producing undesirable conditions in the body which may manifest itself in different forms as symptoms. Thus, the term disease in the broad sense refers to any condition of the body operating outside of the normal body functions and thereby causing discomfort. Even though this is the general usage of the term, in medical circles the term too often implies specifically to infectious disease Hanne and Hawken, (2007:93-99). These are known to be clinically evident from the presence of the "pathogenic microbial agents.

Thus, in medical circles an infection without clinically visible impairment to the normal body functions is not classified as a disease. It therefore may be necessary to classify further the nature of diseases as used in the medical and nursing practice. There are four types of diseases, these are, namely;

1.   Acute disease – disease of a short-term nature.

2.   Chronic disease – disease spreading over a long time

3.   Incurable disease – a disease that cannot be cured.

4.   Terminal disease – disease that will lead to death

This research is focusing on chronic disease because by its nature (long term) patients become regular customers coming in for their medical supply at stipulated times, mostly on a monthly basis. In human beings (common terms) disease may be any condition that causes pain, physical distress, dysfunction and even death. Any one dying out of these is classified in medicine as dying out of natural causes. It may be necessary to identify the four main types of diseases such as infectious and deficiency diseases (genetic – hereditary and non-hereditary). Alternatively, these may be

classified as communicable and non-communicable diseases like coronary artery disease, cerebrovascular diseases and many other lifestyle diseases like diabetes.

1.2. BACKGROUND

The study of disease is called pathology which includes the causal study of etiology. Pathology by definition is branch of medicine that looks at the essential nature of diseases with emphasis on the structural and functional changes to the body brought about by the presence of the disease Mantle (2005-22). Disease brings about a change to the normal functioning of the body introducing an abnormality to the body which results in pain or discomfort by the individual. Etiology on the other hand is the study of the causes or the origins of the disease (Oxford English Dictionary, 2002). In view of this, disease is therefore often construed as a medical condition associated with specific symptoms and signs Marcantonio, Pascoe and Baldacchino (2017: 7-9). The symptoms are not the disease, but the result of the disease which needs treatment. Devroede (1992:189–91) refers to a symptom as change from the normal feeling of the patient indicating the presence of an unusual state of the body or part of the body. The problem with medical symptoms is that they are subjective and are not measurable and may not be observed by others. Whilst the symptoms are manifest in different forms, the medical practitioners will therefore seek to establish the origins of the disease. From the study of etiology, a disease is diagnosed and treatment prescribed, the body's response, which in many instances is foreknowledge to the doctor will be used to determine the untreatable and incurable diseases. Depending on the medicine (treatment), the illness is classified into either acute of chronic.

Acute illness this is a condition of illness Rothman and Wagner (2003:256-261), defined on the basis of the type of treatment the patient undergoes. A broken arm or limb is an acute illness and can be treated and cured and will not happen again or will not continue to break because it was broken before. Acute illness can therefore be considered to be the opposite of chronic, because the treatment required is not continuous Schmike and Schloman (2002:493-515). A broken arm or limb is an acute illness and can be treated and cured if there are no other underlying factors that may cause delayed curing of the disease. Acute illnesses are therefore not recurrent and may not happen now because it happened before, the broken limb will not continue to break because it was broken before. Rothman and Wagner (2003:256-261) refer to acute illness as the opposite of chronic illness, because the treatment required is not

continuous or lifelong and may not get to six months continuously. Most accidents and sudden illnesses common at hospitals may be of the acute disease type or be diseases that general respond to once off treatment leading to curing. Table 1.1 below lists the type of illnesses that depend or respond to once off treatments.

Table 1.1: Medical conditions responding to once off treatments – acute illness

tuberculosis	schistosomiasis	broken bone
substance abuse	helmentiasis	heart attack
influenza	asthma attack	bronchitis
pneumonia	respiratory infection	burn

Source: own construction

Some illnesses respond to once off treatment as stated in a sample of cases above, and these may be thought of as manageable and less demanding on the part of the patient. Even those diseases that require a once off treatment may cause other physical or physiological disorders like sterility (bilharzia) or may result in death (tuberculosis) if they are not attended to in time. On the other hand, certain types of ailments do not respond to once off treatment, meaning therefore that the patient which have repeated treatment – these are classified as chronic diseases Mantle (2005-22). Most of which may demand a long-term treatment (repeated over a long time) or may need permanent treatment (continued / repeated use of medication) requiring that the patient will have treatment for as long as they live. Table 1.2 below lists examples of such ailments.

Table 1.2: Medical conditions requiring continued treatment – chronic diseases.

High blood pressure	HIV	Hepatitis C
Diabetes	Asthma	Stroke
Cancer	Epilepsy	arthritis,
Alzheimer's disease	Depression	Obesity
Osteoporosis	Heart disease	High cholesterol

Source: own construction

These diseases listed in table 1.2 above constitute a 'cohort' of chronic diseases which require repeated treatment over are long period. In certain instances, the treatment

may be life time, like with diabetes and those stated above. According to Anderson (2004-119), the term chronic makes reference to an illness lasting for a long period of time. An illness may be considered chronic if it exceeds six months or more with the patient undergoing treatment and possibly undergoing periodic observation by the medical specialists. Mantle (2005-22) suggests that any illness where there is no expectation of improvement or radical change, as in the case of arthritis, is a chronic condition that typically does not go away after diagnosis. A chronic condition develops over a long period such as osteoporosis or asthma. Osteoporosis is essentially the increase in bone weakness in the body Golob and Laya (2015: 587–606) which increases the risk of breaking of bones, common amongst elderly people. Here is a typical example (amongst many others) of a chronic illness resulting in an acute illness.

An acute asthma attack occurs in the midst of the chronic disease of asthma which will have developed over a long period, sometimes unnoticed. A chronic condition can therefore be explained as a human health condition or disease that is persistent Ward and Black (2016: 735–738.) or otherwise long-lasting in its effects or a disease that comes with time. The term *chronic* is usually applied when the treatment course of the disease lasts for more than six months Hulme and Shepherd (2003: 403–423). The chronic diseases listed in table 1.2 above are generally the most common chronic diseases that hospitals deal with on a regular basis, among many others not listed.

1.2.1 Contrasting acute illness to chronic illness

It may be necessary therefore to draw the distinction between the two different forms of illness as listed above in a usable and friendly format. It is however important as stated above that there should be an understanding that some of the acute illness are a result of a body already suffering from a chronic illness. Alternatively, some acute illnesses not attended to early may eventually develop new complications resulting in the appearance of a chronic illness. Regardless of the sources of the illness, the classification of diseases into acute and chronic remains applicable because the underlying principle of the classification is the way the diseases respond to treatment. Table 1.3 below contrasts acute and chronic illness.

Table 1.3: Contrasting acute illness with chronic illness

Acute illness	Chronic illness
Symptoms appear and develop rapidly	Symptoms develop over a long period

Lasts for a shorter term with correct drugs	Lasts for 3 months plus with correct drugs
Often caused by virus, infection or injury	Life-style-disease from unhealthful living
Show distinct symptoms and need urgency	May have no signs or many varied signs
May go away on its own – common cold	Are permanent and cannot disappear
Patients will soon recover after treatment	Cannot be cured but simple controlled

Source: own construction from work experience as a nurse

Symptoms and treatment of these illnesses creates a distinction in that chronic patients will need to continue to come to the health centre for continued check-up. The reasons for the regular check is so that there should be a proper control of the disease in case new complications may be developing. Besides, the patients in this district under study collect their medicine (free) from the hospital pharmacy to continue with the control of the chronic illness.

1.2.2 Mortality rate from chronic illnesses

Roehrig, Miller, Lake and Bryant (2009:358-376) observed that there is a high rate of deaths caused by chronic illnesses, mostly because the treatment is not followed through. Of particular interest is the assertion by Farley, Wade and Birchmore (2003:205-212) indicating that the greater part of chronic diseases is non-communicable yet they cause high mortality rates worldwide. Figure 1.1 below illustrates the death rates in the United States where research is done constantly as compared to most developing economies.

Figure 1.1: Death rates by disease type in the United States

Leading causes of death in the United States

Y-axis: Total number of deaths (0 to 400000)

Legend:
- Major cardiovasular diseases
- Malignant neoplasms
- Chronic lower resperitory disease
- Diabetes mellitus
- Influenza and pneumonia
- Alzheimers
- Motor vehicle accidents
- Renal failure
- Septicemia
- Firearms

X-axis (Ages): Under 1 Yr, 1-4 yrs, 5-14yrs, 15-24 yrs, 25-34yrs, 35-44yrs, 45-54yrs, 55-64yrs, 65-74yrs, 75-84yrs, 85yrs and over

Source: "National Vital Statistics Report" (2002).

As indicated in the report (figure 1.1) above, the four (4) top major killers in the United States are all chronic illnesses with the major cardiovascular diseases (high blood pressure, high cholestral, heart disease, etc) in the lead. This is followed by malignant neoplasms (the cancer family) with chronic lower respiratory diseases in third position. Diabetes melitus is in fourth position, and all of these are chronic diseases as alluded to in table 1.2 above. Anderson (2004-119) concurs and posits that the highest killers are; heart disease, cancers, stroke, chronic respiratory diseases, diabetes, Alzheimer 's disease, mental illness and kidney diseases. Sondik, Huang, Klein and Satcher (2010: 271-281) say that in the United States 90% of seniors have at least one chronic disease and 77% of the seniors have two or more chronic conditions. Most common chronic conditions are a result of diet, the individual's lifestyle and metabolic risk factors, as stated by Diane (2013-11). In principle chronic conditions are preventable by behavioural changes such as not smoking, eating proper meals and proper times, and body exercise.

There is also a strong link between the gender, the social and economic status, the level of education of the individual, and the race of an individual that may also matter

as certain diseases are common in other races Bhatnagar and Aggarwal (2007:1331–1332) than they are in others. Delayed access to medical intervention often results in those in the lower income and semi-illiterate groups suffering from worse outcomes than those that have access to early diagnosis and treatment of the chronic ailment. Early interventions allow for use of preventive medicines or early diagnosis leading to quick responses to control the chronic effects Halverson (1996: 288-303.) New studies have indicated that overuse of antibiotics is a possible cause of future physiological disorders that may lend the patient to acquire chronic conditions. This condition has been associated with overuse which may affect the ability of the body to build its own resistance to attack and perpetuate the ailment.

1.2.3 Preventive measures to reduce the mortality rate

Hanne and Hawken (2007:93-99) are of the opinion that since these are conditions of lifestyle and social nature, in principle they are preventable. The reality on the ground though is that, whilst some of the conditions may be difficult to avoid, early detection results in less severe outcomes. Diedrich (2007:8-29) concurs and adds that primary health practice by the government through screening for early symptoms, immunization, and health education that may change lifestyles may assist in controlling the effects of the chronic illness. Danaei *et al* l (2009-6) posit that "the benefits of preventive services are not directly perceived by patients because their effects are on the long term or might be greater for society as a whole than at the individual level. The education of the people on health may play a critical role in the prevention or control of these diseases but the operations are done at a lower level (on the ground) where there are shortages of both human and financial skills and expertise.

Studies indicate that public health programs focusing on primary health care will be effective in reducing the mortality rates associated to cardiovascular disease, diabetes and cancer Deeks *et al,* (2013-11-02). Research findings show somewhat   the need for heterogeneous programs largely dependent on the type of condition and the type of programs involved. According to Chaudhury (2007-16) there is a marked increase in the number of patients diagnosed with chronic conditions, consequently, use of primarily health care becomes all the more important to teach the community to identify and avoid causative factors of these chronic conditions Miller (2006:12). Primary health care is intended to increase prevention which has a potential role to reduce occurrence and this impacts positively on the health costs.

A report from the Trust for America's Health suggests that investing $10 per person annually in community-based programs of proven effectiveness and promoting healthy lifestyle (increase in physical activity, healthier diet and preventing tobacco use) could save more than $16 billion annually within 5 years .Haldar (2007-16) asserts that one in two Americans (133 million) has at least one chronic condition ranging largely from ages 18 to 64 years .It is estimated that 177 million Americans will have chronic conditions by 2030 ,Jorde and Wooding (2004: 28–33).

Medication is a Science of healing the body of a patient in the practice of a diagnosis and the promotion of health in chronic disease (Gucciardi *et al.* (2008 -32), Karter *et al.*, (2004-32). For instance, in the case of lung diseases, the type of medicine prescribed depends on the Chronic Obstructive Pulmonary Disease (COPD) state. This is essentially the umbrella term describing progressive lung diseases like, emphysema, and chronic bronchitis. The type of treatment will help to reduce or decrease the symptoms and the progress of the condition of the sickness. In the case of HIV/AIDS, according to Anderson (2004-119), these are transmitable and are the major infections responsible for high mortality, especially in developing economies.

There   is a lot of chronic medication that the patient must get to remove the pains, some of the medicines used are OTC (over the counter), prescriptions some medication prevents disease like diabetic and also help to manage recurring problems. Sometimes to take OTC medication causes problems for the patient that is on certain medical condition. Defaulting from the treatment is among major hindrances to the achievement of the global target to control these chronic diseases and reduce the mortality rate. Charlton (2010: 74) postulates that chronic illnesses are being increasingly recognized as major threats to health in the Metro District of Cape Town metropolitan. Investigating patients' reasons for default from treatment can highlight areas for service improvement. Studies in developed settings have identified reasons such as patient motivation and time, side effects, and frustrations with clinic administration and doctors' attitudes.

1.2.4 Global nature and prevention

According to Lifestyle disease MedicineNet (2016-05-12), the type of illness of a patient can be classified on the basis of the type of medication recommended by the doctors, which itself depends on the type of disease. Some illnesses will respond to one treatment as in the case with diseases like STI and flue. On the other hand, certain types of ailments, such as High Blood Pressure, Asthma, HIV/AIDS need to be

controlled long term which invites repeated medication and medical examination by a doctor. The difference in the type of illness and how it is treated can therefore be used to classify illnesses into chronic and acute illnesses.

Prevention, Centers for Disease Control and Prevention, (2007-23) emphasise the need for disease control and the management of the illness to reduce mortality. Since these are conditions of lifestyle and social nature, in principle they are preventable and can therefore be attended to at the level at which the wrong lifestyles are practiced. The reality on the ground though is that, whilst some of the conditions may be difficult to avoid, early detection results in less severe outcomes Anderson (2004:119). Primary health practice by the government involves screening for early symptoms, immunization, and health education that may change lifestyles.

Primary health care is intended to increase prevention which has a potential role to reduce occurrence and this impacts positively on the health costs. Mead et al (2008:45) A report from the Trust for America's Health suggests that investing R10 per person annually in community-based programs of proven effectiveness and promoting healthy lifestyle (increase in physical activity, healthier diet and preventing tobacco use) could save more than R16 billion annually within 5 years.

The elderly appears to suffer more of the chronic diseases, the popular diseases amongst the elderly are; stroke, heart disease, arthritis and cancer, these account for 61% in the age group 65 or older according to Mozaffarian, Roger, Benjamin, Berry and Blaha (2014:129)

Sondik, Huang, Klein and Satcher (2010:31) suggest that some of the two most common geriatric chronic diseases are high blood pressure and arthritis, with diabetes, coronary heart disease, and cancer also being reported among the elder population. Another report by Singh, (2005b) states that "chronic disease shows that heart disease is the leading cause of death from chronic disease for adults older than 65, followed by cancer, stroke, diabetes, chronic lower respiratory diseases, influenza and pneumonia, and, finally Alzheimer's disease. The studies show interesting statistic showing that there is a relationship which is gender related in which certain diseases are more common in certain races.

1.2.5 Economic impact on age group

Rose (2005) says that the South African government spends R320 billion annually on chronic medicine specifically for the age group 65 % plus. The treatment and primary health programs have significantly improved on the life span of the elderly. Life expectancy in South Africa has increased drastically compared to what it was before

Stevens and Dellinger (2002:8). In another study Stevens, Corso, Finkelstein, Miller, (2006:12) estimate that the life expectancy in South Africa for year 2010 would be 54 years for males and 58 years for females. Again, there is enormous diversity among population groups as indicated in table 1.4 below.

Table 1.4: Percentage of South Africa Population in 2010-2025

GROUP	YEAR	AGE GROUP		
		50+	60+	70+
Black	2000……….	11.2	5.6	2.2
	2010……….	13.4	6.9	2.9
	2025	12.9	8.0	3.8
Coloured	2000………….	12.3	5.9	2.2
	2010…………	17.7	8.0	3.0
	2025	27.2	14.0	5.1
White	2010……….	26.0	14.3	6.7
	2010……….	32.5	19.0	8.4
	2025……….	40.4	25.2	12.6

Source; Jowah 2015 :13 cited from Pynoos, Sabata and, Choi (2005).

In 2010-2025 life expectancy for White South African women exceeds that of women in some African nations and is 25 years higher than for Black South African men. The low levels of life expectancy at birth for the Black population reflect, to some extent, the growing impact of HIV/AIDS mortality. The table above illustrates the changes in life expectancy Melton, Chrischilles, Cooper, Lane and Riggs (1992:7).

No specific statistics refers to chronic conditions but the overall increase in life expectancy in the context of the high rate of elderly people suffering from chronic diseases implies that the elderly are living longer, even though they have a higher rate of chronic diseases problem. HIV/AIDS which has a high mortality rate amongst the youth accounts for 80 % of the mortality statistics in the country. The development of combined antiviral therapies has contributed immensely to the survival rates of the HIV/AIDS patients. The rising rate of obesity which is another medical condition which leads to the development of chronic disorders like diabetes, stroke, cardiovascular disease and cancers Tennstedt, *et al,* (2008).

1.2.6 Risk factors for chronic condition

As alluded to above, the risk caused by the disease varies according to the age group and the most common chronic disorders are essentially lifestyle, dietary and metabolic risk factors. Behavioural changes may reduce the risk of mortality caused by these lifestyle disorders. Some of the necessary changes may be quitting smoking, eating and sleeping in a healthy way, and increase in physical activity. Anderson: (2004:119) identified social factors that impact on the chronic diseases as socioeconomic status, education level, and race/ethnicity, these cause disparities in the occurrence of the chronic disorders. The lack of access to information by patients compounded by delays in receiving good care in health facilities will compromise the health of the patients. Barriers and other health issues to medical care complicate the effective monitoring and treatment of the patients.

Adam and Jackson (2000:279-295) posit that if the disorder is diagnosed late due to either negligence, ignorance or late access to proper medical facilities, this may result in worse outcomes for the patients concerned. Basu (2001:57) posits that low-income populations will most certainly fail to get early detection of these ailments in order to receive preventive services in the early stages of the disease. Excessive use of antibiotics has also been attributed to the occurrence of some of the chronic ailments like chronic liver disease. Since these are lifestyle illnesses, it can be hypothesized therefore that early detection or the use of a particular lifestyle can be preventative measures. This would therefore effectively reduce the risk of adverse effects of the chronic diseases with they are complemented with regular medical check-up Smedley and Syme (2013:450-488).

1.3 PROBLEM STATEMENT

As alluded to in the preceding literature review, chronic diseases require that the patient regularly goes to get their medicine, generally on a monthly cycle. The psychological impact of leaving permanently with a disease might be of great concern to the patient even though the patients in the Metro District are generally non-fee-paying patients. What is required of them is to collect their medication at the clinics (dependent on where they stay) and are not charged for the medication. It is established in medical practice that the high rate of deaths of people dying from natural causes (chronic illnesses) emanating are generally people who do not regularly take their chronic medicine. The irregularity in collecting their medicine is of concern since they are non-fee-paying patients and the medication is provided for by the state.

Besides, instructions on the regularity as well as the importance of regularly taking their medicine is clearly explained to them in their own language. The defaulting rate is stated to be high from the clinic and pharmacy records, as most of them do not come to collect nor do they send relatives to collect. Collection is sporadic. The study seeks to identify possible causes of defaulting to enable the public health system in the district to improve on service delivery to enable these citizens to live longer and comfortably.

1.4 RESEARCH OBJECTIVES

The objectives of a research are essentially the purpose behind the conducting of the research. As stated in the problem statement, there are serious problems at clinics and hospitals because of chronic patients that default. The objectives for this research are listed below.

1.4.1 The primary objectives

•To identify the factors that contribute to the patients who receive medicine for free and have chronic diseases that are fatal will still default in coming to collect their medicine.
• To establish if the rate of defaulting is in anywhere related to the type of illness, the age and possibly gender of the people defaulting.

1.4.2 The secondary objectives

These were essentially derivatives of the primary objectives as listed above and will comprise of intentions to;
•To identify the age, level of education, income status and profession of the chronically ill patients that are defaulting.
•To identify the family and or social structure in relation to who they live with and the availability of anyone who could otherwise assist with collecting medicine.

1.5 RESEARCH QUESTIONS

Research questions assist in giving direction to the research and enable the researcher to determine the scope (limitations) of the study. These further assists in controlling gathering of information that may not be relevant to the study. Jowah (2015:78) postulates that the research questions generally emanate or a directly related to the objectives of the study. The research question below is discussed in two formations, primary and secondary research questions.

1.5.1 Primary research questions

- Why do patients who receive chronic medicine for free not turn up to collect their medication?

- Do these chronic patients realize the importance of maintaining their treatment by getting their medication regularly?

1.5.2 Secondary research questions

These questions are derived from both the secondary objectives as well as from the primary questions above. They reinforce and assist in getting clarity on the research questions and research objectives above.

- What are the age groups of the frequent defaulters for the chronic medicine given at these outlets for free?

- What is the general level of education for the defaulters that collect medicine from the respective collection points?

- What are the socio-econo-cultural structures from which the chronic medicine recipients come from?

- Who do these chronic medicine recipients live with (relationship) in the places where they stay / live?

1.6 RESEARCH AIM

The aim and objectives of a research are generally confused with each other or interchangeably used by authors. There is a clear distinction between these two, with the aim being what you hope to achieve and the objective being how you will achieve the same.

- The aim is to have a full understanding, or at least a better understanding of the causes of defaulting by people who have chronic illnesses.

1.7 RESEARCH DESIGN AND RESEARCH METHODOLOGY

Jowah (2014:76) clearly distinguishes between research design and research methodology and suggests that these two are too often wrongly used interchangeably. The researcher defines Research Design as a blueprint or program that clearly outlines what should be done and at what stage or level. The design assists with allocation of resources and answers the question "what is to be done." The design therefore stipulates the time period for the research and suggests costs that may be entered into since it explains the full road map to be travelled during the research project.

The researcher defines the Research Methodology as an explanation on how the techniques identified in the research design will be used or implemented Babbie and Mouton (2001 :55). Whatever things have to be done, the methodology explains how they will be done since there will be more than one method of executing the tasks.

Table 1.5: Differences between research design and research methodology

RESEARCH DESIGN	RESEARCH METHODOLOGY
Strategic master plan	Operational or execution plan
Emphasizes the road to be walked	Emphasizes how the walking is done
Emphasis on what results are expected	Emphasis on tools/techniques for results
Guided by research problem / question	Guided by the tasks and work packages
Focuses on rationality of research	Focuses on procedures and processes
Focuses on the "what should be done?"	Focuses on "how should it be done?"

Source: Jowah, 2014:77

The author states that the research methodology is "derived from the stipulates of the research design," meaning therefore that the methodology is the next step after setting up the design. The methodology is the design in operation. The design and the methodology together will comprise of the population, sampling, sample size, data collection, data analysis, and the reporting.

1.7.1 Target population

The target population comprises of the chronic medicine recipients at the Metro District hospital and clinics who have a record of defaulting. The District has a total of 58 clinics (receiving points) with just over 17 500 chronic medicine patients on the District's records. The population studied was the chronic medicine recipients waiting to get their medication on the days when the survey was conducted.

1.7.2 Sampling frame

It was difficult to determine the accuracy of the people on the hostal records for a number of reasons – firstly, some had defaulted for a period exceeding three months, thereby causing concern if;

- they had travelled and were outside the district receiving from other districts since there are no inter-district records,
- they had infect passed away and no information on their passing away had been communicated to the district,
- they had discontinued because they had opted for alternative treatments – buying directly from pharmacies, or
- simply discouraged / resigned because of the incurable nature of the illness and were tired of taking medicines.

The number 17 500 was therefore merely the records the different clinics and the hospital kept since there is no follow up of the movement or relocation of the patients. It was also surprising to notice that, with modern technology in use, there was no universal (province wide) record of the patients. This would have enabled a patient to go to any health centre in the province, or in the country for that matter, and still collect their chronic medicine.

1.7.3 Sampling methods used

At the pharmacy the medicine was sorted out in groups (on the day of collection) according to the type of illnesses, the list of those with defaulting history had been provided by the pharmacists who helped with the research. The first practical problems encountered was the fact that "not all recipients turn up" on that day since their collection days are spread over five working days. The second problem was that some of the recipients sent "helpers" to collect for them, especially where they had no appointment to see the doctor. The sampling method used then was to give to every second defaulter in the queue that day, making it a mixture of randomly selecting every second person who was there on the days when the survey was conducted.

1.7.4 Sample size

Using both the convenience (those available at the time) and random sampling (every second defaulter), just over 2000 (2036) respondents filled in the questionnaires. This constitutes 12% of the sample frame, every one of the 58 outlets responded to the request to provide questionnaires to the patients. Blomberg (2008:178) suggests that a sample must bear some proportional relationship with the population, the bigger the sample the better the results. It may have mentioned here that the presence of the records file did not constitute exactly the correct number of active chronic patience in the Metro District which was under review.

1.7.5 Data collection methods used

Questionnaires were administered (by trained pharmacy assistance at the medicine dispatch points) to the recipients who had defaulted previously (the pharmacists keep the forms separately), the last month or months. After guiding the respondents on how to fill in the forms, the questionnaires were collected, cleaned, edited, coded and the data was captured with the help of the hospital admin staff. Whatever was incorrectly filled in was discarded (close on 200 questionnaires) and data from the questionnaires that were properly filled in (2036) was captured. The questionnaires were filled in under supervision to reduce the number of faulty responses Babbie & Mouton (2007:166).

1.7.6 Data analysis

The SPSS (Software Program for Social Sciences) was used for analysis because of its effectiveness and user-friendly qualities. Welman and Kruger (2002:194) state that the collected data will be processed into information by converting it to charts, graphs and tables for easy reading and comparison where necessary. Each chart, graph or table will be explained in detail to provide a comprehensive analysis of the data and information Babbie & Mouton (2007:174-175).

1.8 ETHICAL CONSIDERATIONS

According to Kumar (2005:190), there has to be attention paid to ethics and the protection of the respondents. All the respondents were informed about their rights to anonymity, and protection from participating against their own will. The questionnaire clearly stated that they were answering "voluntarily" and were thus free to omit any questions they found offensive, ask for clarity where they did not understand, or withdraw from the survey for any reason. It was clearly stated to them that this was meant to provide information for the intended improvement for their service and supply of drugs regularly. Prior to the survey the questionnaire had been reviewed by the university statistician and the ethics committee there eliminating any questions that might have implied anything unethical. No physical tests on their bodies, nor questions about their illness or the type of ailment they suffered from was required. What was important was to establish that they are chronic patience (according to definition) and that they are expected to attend clinic regularly.

1.9 CONCLUSION

According to Everett, Salamonson, Zecchin and Davidson *(*2009:1842-1849) the practice of non-adherence to treatment is of critical importance and risk on chronic patients. Non-adherence by chronic patients varies depending on the type of non-adherence across the range of self- care behaviour. The prevalence rate should be assessed by the type of behaviour by the patients themselves in relation to their condition of illness. There appears to be presence an interesting pattern where, the rate of adherence is very much according to the nationality and culture of the patients. There are many factors around the behaviour of the recipient of chronic medicine that should be taken into consideration when assessing the prevalence of adherence of the chronic patients. The poor adherence to a regiment is only one of several possible reasons for its failure, there are other observable patterns. The patients need advice and support from health professionals in order to understand all the major problems that make a patient to default on their medication. Communication with patients about

medication regiment and the value of treatment is very important. It helps to facilitate and to identify all the problems, barriers of adherence to help the treatment planning Anderson (2004:119). The factors that influence regular attendance by the patient are numerous, complex and multifactorial in their nature. A range of strategies are needed to address the myriad of patient-related and health-system factors to increase attendance rates and ultimately improve health outcomes.

1.10 CHAPTER CLASSIFICATION/STUDY LAYOUT

Chapter 1 – The chapter outlines the introduction, background literature, problem statement, research objectives, research question, research methodology, data collection data analysis, and the conclusion.

Chapter 2 – The chapter details diseases and their nature, chronic diseases and the different types, the impact on the socio-economic status, the segregation of the effects of chronic on race, gender and age.

Chapter 3 – The chapter focuses on the medical effects of defaulting on the patients, the motality rate, the economic effects and managing the risk and maintaining the control pattern.

Chapter 4 – The chapter addresses in detail the research design, research methodology, target population, sample frame, sampling procedure, sample size, the research instrument, questionnaire, data collection, data analysis, data collection methods, and data analysis.

Chapter 5 – The chapter focuses on the data, conversion of data into information by use of graphs, tables, pie charts, bar charts, histograms and the interpretation thereof.

Chapter 6 – The chapter summarises the research findings and makes conclusions and recommendations including openings for future research.

CHAPTER 2
DEFINITION AND ANALYSIS OF CHRONIC DISEASES AND THE MANAGEMENT OF THE DISORDER.

2.1 INTRODUCTION

This chapter details diseases and their nature, chronic diseases and the different types, the impact on the socio-economic status, the segregation of the effects of chronic on race, gender and age. Diseases by their nature have a psychological impact on the individual infected coming specifically from the fact that they are enduring pain. The presence of healers (herbalists, homeopaths, ayurvedics or allopathics) send to the patient a sense of hope, and in a condition of pain the average patient is obedient to almost any instructions. When patients line up at the place of healing, they too often discuss their illnesses, but besides that, there is general understanding that each one expects to be helped. It is important to note that, though many people still consult with other forms of treatment, allopathic medicine seems to have taken precedents over the other medical forms. It is generally more organized with fixed infrastructure, trained personnel and technology and equipment used to diagnose patience. Besides, it happens to be the only form of medicine more advanced with well documented treatment procedures, large training institutions and hospitals and clinics where the trainees (nurses and doctors) get educated to carry out the trade.

2.2 DISEASES IN THEIR GENERAL STATES

Disease may be understood in the layman's terms as an unusual health condition outside of the ordinary for an individual. Any feeling outside of the norm immediately causes discomfort resulting in the need for attention to retain the state that an individual is used to. There is no one single cause of diseases, there are presumably as many causes as they are diseases (physiological disorders) with some being infectious and others merely a result of a life style. There are there numerous forms of illness, with some of the illnesses requiring a one stop cure, whereas others become lifelong treatment. Whatever the cause of the disease, when that discomfort is felt, the patiently usually approaches a clinician from whence a medical diagnosis of the problem is conducted.

2.2.1 Medical diagnosis

Medical diagnosis is process and procedure of identifying the type of disorder in an individual (patient) based on the symptoms and signs (Jingfeng, 2008: 1529–1534) as explained by the patient and observed by the medical practitioner. The required information for diagnosis comes from the history as narrated by the patient and from

the physical examination. Treasure, (2011:10) opines that diagnosis is a very challenging procedure as some of the signs and symptoms are nonspecific and can be found in other medical disorders. An example can be made of the "redness of the skin - (erythema) is a sign for many diseases and cannot tell the practitioner what the disease is at the onset. Differential diagnosis therefore becomes inevitable resulting in the comparison of many other possibilities. Diagnosing the illness is the major role played by a medical doctor during the visit by a patient. Diagnosis is a form of classification of the ailment, it is on the basis of this diagnosis that a medical practitioner will decide on treatment or refers the patient to a specialist. Langlois (2002:198) identifies differential and pattern recognition diagnosis, the latter is based on the experience of the practitioner using association of the disease. This is the case in which diseases are regarded as obvious, and many times no extended diagnosis or diagnostic tools are employed. Chan, Felson, Yood, and Walker (1994: 814–820) indicate the problems with delayed diagnosis as one factor that complicates the symptoms and signs of the medical disorders. Johnson, Duran, Hassebrock, Moller, Prietula, Feltovich and Swanson (1981: 235–283) state that the failure to perform the correct diagnosis by the practitioner constitutes malpractice. Without the added assistance of diagnostic tools, it would be extremely difficult for medical doctors to have a correct diagnosis since some of the symptoms are nonspecific (Langlois 2002:204). This implies therefore that early detection of many of these chronic diseases may enable interventions that may assist in reducing the adverse effects of a fully blown disease. Diagnosis may also follow interactive methods (using computers) or the use of algorithms, for example in the diagnosis and treatment of overweight and obesity.

Wrong diagnosis happens often; it is estimated that every individual may have one diagnostic error in their life. Treasure, (2011:21) suggest causes and factors responsible for wrong diagnosis, these are listed in table 2.1 below.

Table 2.1: Factors causing wrong diagnosis of diseases

CAUSE	EXPLANATION
Unnoticeable symptoms	Some diseases have symptoms difficult to determine or the symptoms do not manifest themselves clearly enough for the doctor to see.
Mislead by symptoms	Because of nonspecific symptoms, some diseases are not identified or appear dormant and may be omitted during diagnosis

Wrong emphasis by the practitioner	One aspect of the diagnosis may be overdone to the neglect of numerous other possible medical disorders – may be because of frequency of such diseases coming to that doctor
Rare diseases	Some diseases which are not commonly diagnosed may not be suspected and the symptoms may be taken to refer to other known diseases.
Unusual presentations	Some illnesses have rare presentations of their symptoms and signs leading to a wrong diagnosis and possibly inappropriate medication for a wrong disease.

Source: author's construction from existing literature

Delays in getting the correct medical diagnosis may be because too often most people may visit the pharmacists, ayurvedics, homeopaths or even traditional healers who never use diagnostic tools. Some delays are caused by the doctors who may want to apply pattern diagnosis until they realise that there is no progress. All these factors affect the time it would have taken to take care of an illness before it developed to cause more serious harm which may be more difficult to control. Some of the illnesses that eventually become chronic may have been controlled during early stages of the development of the disorder.

If the patient does not respond to the treatment provided, then the medical practitioner is compelled to make other diagnosis. Beyond the naming or classification of the disease there is a need for management-naming or prognosis-naming. If an opinion is reached as to what type of illness it is, diagnostician can propose a management plan (treatment and repeat visits) for the patient. The diagnostician will then inform the patient on the etiology, progression, prognosis and possible treatments of the ailments.

2.2.2 Diagnostic concepts and sub-diagnostic types

The follow-up plan for the treatment is made and given to the patient to adhere to their own welfare. When a patient does not respond to treatment, this indicates the need for a review of the diagnosis. Listed below (table 2.2) are some of the sub-diagnostics.

Table 2.2: Diagnostic sub-types used for diagnostic follow ups

Clinical diagnosis	Based on what the patient reports as medical symptoms but no diagnostic tools are used for the assessment

Laboratory diagnosis	A diagnosis beyond signs, symptoms and physical examination where samples are extracted and taken to the laboratory for tests – like in viral infections
Radiology diagnosis	Medical imaging studies are used to identify, for instance lung infection, broken limps, swollen hearts or other diseases identified through scanning and or X-ray
Principal diagnosis	Based largely on the patient's chief complaints- additional diagnosis is required too often before treatment type is decided
Admitting diagnosis	May differ from the actual problem but is based on the reason why the patient had to be admitted; normally the discharge diagnosis is the more accurate diagnosis than the admission diagnosis.
Differential diagnosis	Based on the signs and symptoms all disorders related or implied by the symptoms and signs are diagnosed including lab tests to find the final diagnosis
Diagnostic criteria	The diagnostician uses combinations of signs, symptoms and tests against existing standards which offer high sensitivity and specificity to diagnose the ailment sometimes using state-of-the-art-technology
Prenatal diagnosis	A combination of all relevant diagnosis which may not harm the foetus to identify any anomalies with both the carrier and the foetus – before birth of the child
Diagnosis of exclusion	Use of diagnosis by elimination of possible medical disorders – commonly used where it is difficult to identify a specific diagnosis directly.
Dual diagnosis	Specifically, where two closely related disorders with same signs and symptoms and yet different from each other like in the case of a serious mental illness and a substance addiction.
Self-diagnosis	Where the patient diagnosis themselves by identifying what kind of medical condition it is possibly based on previous illnesses personally experienced or from someone they know
Remote diagnosis	A type of telemedicine that diagnoses a patient without being physically in the same room as the patient.
Nursing diagnosis	Generally based on the willingness for the patient to change and or preparedness to get assistance

Computer-aided diagnosis	Diagnosis based on the use of computers through identification of the body part where symptoms are by using computer cross-referencing on the database for the medical condition thus making the diagnosis.
Overdiagnosis	Focusing diagnosis on a disease or ailment that will not be fatal in the life time of the individual nor will it causes symptoms, distress, or death.

Source: author's construction from preceding literature

The process to diagnosing a disease is generally cumbersome, and after so much work is done for the patient, it is expected that there should be an appreciation of the part of the customer, the patient. After exhausting all these processes and procedures, a patient is finally diagnosed to have a specified ailment. If it happens to be chronic, it means therefore that the patient has to comply with the diagnostician. If the patient is scheduled for regular check-up and treatment, this is meant for their own health and their life. The process of management and controlling of the disease needs the cooperation of the patient to enable the hospitals to manage and to control the disease.

2.2.3 Chronic care management

As alluded to in the previous chapter chronic illness requires continuous relationship between the hospital (clinic) and the patient (Znaniye, 2001:32), in that at set intervals the patients must report for check- up. Unlike acute diseases, chronic diseases become a life long illness which needs regular reviews by medical personnel if the patient is to continue to live or at least leave longer. Apart from the regular visits to collect medicine and get occasional check-ups, management of chronic patients (Chronic Care Management) includes the check-ups (Moscow, 2003:12), education by health care professionals to assist with the health conditions (diabetes, high blood pressure, lupus, multiple sclerosis and sleep apnea). Samwel, Evers, CrulB and Kraaimaat (2006 245-51)   suggests that regular interaction with the patients encourages persistent taking of the necessary therapies, this allows for interventions if there are any other possible developments injurious to the patient's life. Understandably, the prolonged visits by the patient to the doctor or clinic because difficult for the patient and somewhat interrupts and interferes with their life.

Chronic care and the medical system – to be effective the medical care for chronic patients requires longer visits to the doctor (Lubkin and Larson (2002) compared to acute ailments. The chronic patients need to understand that chronic care is a life-long disease and cannot be cured but can only be controlled through constant management. Burckhardt (1987: 543–50) posits that to be effective, chronic medical care usually requires longer visits to the doctor's office than is common in acute care. Moreover, in treating chronic illnesses, the same intervention, whether medical or behaviour al, may differ in effectiveness (Ware, *et al,* 2000: 3–27) depending on when in the course of the illness, the intervention is suggested. If the management of the care for the chronic ailment is fragmented, there is an inevitable risk in the life of the patients since multiple chronic diseases coexist frequently. In agreement to this, Wellard (1998: 49–55) asserted that necessary interventions from other specialists may be sought if the patient is regular with their chronic care management program.

2.2.4 Chronic care management is patient responsibility

The first individual who has the problem and then consults a medical practitioner is the patient, as such the patient is the one experiencing the medical disorder. The nursing and medical personnel respond to the patients (Wagner, 1998: 2–4), who report to them with a medical condition. The discomfort and need for reversing of the discomfort in the form of signs and symptoms is felt by the patient, who is the customer. Lorig, Sobel and Stewart (1999: 5–14) assert that it is important that the patient should be a critical component of the treatment program. Meaning therefore that the patient with these chronic conditions has a critical role to play because chronic diseases are lifestyle medical disorders (Anderson and Knickman, 2001: 146–60), the patients need to manage their conditions by;

- Managing their conditions as prescribed to them by the clinicians where they go for treatment
- Must regularly administer their treatment as per the prescription from the doctor and or from the hospital / clinic
- Must monitor their health by Observations of Daily Living (ODLs) as part of the patient's self-care.

Prochaska, DiClemente and Norcross (1992: 1102– 1114) opined that some of the chronic illnesses are not medical illnesses specifically but relate to interaction with

people at the workplace or with families. These require families and workmates to make lifestyle changes, supported by proper education on the benefit of the treatment. The risk of not following correctly the treatment regimen should be clearly stated and explained, if possible continuous education may be planned and used to educate the patients and the community at large. It should be made clear to them that chronic diseases are not curable (Zwar, Harris and Hasan, 2005:183) but are treatable. Personal chronic care management enables the patient to monitor their own progress and consult promptly if there are any anomalies during the treatment period. Chronic care is better managed by primary care physicians because of the nature of its diversity and the psycho-social context of the source of their problem (Hudson, 2005:13).

2.2.5 Chronic condition and universal types of chronic diseases

As alluded to in preceding chapter a chronic condition is a persistent health condition going for 3 months of longer, most instances it will last for the duration of the life of the patient. Chronic diseases are generally incurable lifestyle diseases and are generally not infectious medical disorders. But most of them have correlations or are associated with other diseases, for instance, high blood pressure is a chronic condition and associated with heart attack or stroke. Below, table 2.3 gives a more elaborate list of chronic diseases as they are known.

Table 2.3: Non-communicable chronic diseases

Thyroid disease	Cancers	Cardiovascular diseases,
Cerebrovascular disease,	Heart failure,	Ischemic cardiopathy
Asthma	Obstructive pulmonary	Diabetes mellitus
Addiction	Alzheimer's disease	Deficit hyperactivity disorder
Autoimmune diseases	Bipolar disorder	Blindness
Cerebral palsy	Graft-versus-host disease	Chronic hepatitis
Chronic kidney disease	Osteoarthritis	Rheumatoid arthritis
Chronic pain syndromes,	Deafness Hearing	Ehlers–Danlos syndrome
Endometriosis	Epilepsy	Fibromyalgia
HIV/AIDS	Huntington's disease	Hypertension
Lyme disease	Multiple sclerosis	Myalgicencephalomyelitis
Narcolepsy	Osteoporosis	Parkinson's disease

Periodontal disease	Postural orthostatic	Sickle cell anemia
tachycardia syndrome		

Source: own tabulation from literature

The risk factors vary with age and gender but are generally caused by dietary, metabolic or lifestyle factors. These chronic disorders are responsible for the high mortality in old age (Sondik, *et al* (2010: 271-281) having originated from unhealthy habits. The bulk of these unhealthy habits and lifestyles could have been corrected by behavioural changes. It should be understood that the list above may not be universal in that there are other chronic diseases that may be regional or climatic. The similarities in these diseases are however universal in that they are incurable (Halverson, 1996: 288-303), need persistent visits to the health centres and have a high degree of risk. Regular contact with medical personnel can assist in learning to change the behavioural patterns that cause the disease. Some of the causes of these chronic ailments are, namely; smoking, using an unhealthy diet (Braveman, 2010:186-196)), lack of physical activities (exercises). Mead H *et al* (2008) observed that there are social factors at play such as socio-economic status, education level, and ethnicity/race. These socio-economic factors have been identified placing pivotal roles in the disparities amongst the chronic patients. Those with little education, the underserved and generally poor people do not have the same access that the well to do patients have.

2.2.6 Chronic disease prevention

Because chronic diseases are lifestyle diseases born out of behaviour, they are preventable before they attack the patient. After an individual becomes a chronic patient, if diagnosed in time, certain behaviours may prevent the adverse effects of the chronic ailment (Wagner, 1998: 2–4). If these are detected early and the proper behaviour adopted, the effects will be less severe for the patient allowing the patient to live much longer. Halverson (1996: 288-303) advocates that there are numerous steps that may be taken to prevent these ailments, chief among them are grounded in primary health care which teaches,

1. Education on the disease from early life to assist in developing a lifestyle that avoids falling victim to the disease,

2. Abstinence from harmful intakes like smoking, alcohol, eating fatty foods, too much sugar or sweet things and any other unhealthy foods

3. Realising the importance of physical exercises or activities that enable the body to burnout all excess fats and sugars keeping the body in order,

4. Avoiding overweight and or obesity as an unhealthy practice or condition of the body being the precursor of diabetes and related illness

5. Screening for this disease early (regular medical check-up) resulting in clinical preventive measures indicated by predisposition to its development,

Mays and Smith (2011:8) posit that an intensification of public health programs can effectively reduce the occurrence of chronic ailments resulting in reduced mortality rates. The chief chronic conditions associated with high mortality rates are diabetes, cardiovascular diseases, cancer (Roehrig, Miller, Lake and Bryant, 2009:358-376) and other disorders like obesity, and overweight.

2.3 CHRONIC ILLNESS AND AGE

Boeve, *et al* (2008:58-69) posit that the elderly appears to suffer more of the chronic diseases, possibly because the chronic diseases develop over a long period of a particular lifestyle. In geriatric medicine, the most common ailments are diabetes, cardiovascular and osteoporosis (Griffith, *et al,* 2002:329-336) which are a result of many factors dependent on the type of ailment. It is of medical interest however that some diseases are strictly or commonly found in certain age groups with others, except in exceptional circumstances, exclusively belong to a particular age group. Diseases common amongst the elderly are; stroke, heart disease, arthritis and cancer, and these account for 61% in the age group 65 or older. The two most common geriatric chronic diseases are high blood pressure and arthritis, with diabetes, coronary heart disease (Thomas *et al*, 2004:8) and cancer also being reported among the elder population. Even though younger people may suffer from some of these, too often hereditary chronic illnesses, but they are predominantly age related.

2.4 CHRONIC ILLNESS ACCORDING TO GENDER, AGE AND RACE

Crane, *et al* (2006: 73-81) submits that there is a relationship between some illnesses and the gender of the patient. The studies show interesting statistics showing that there is a relationship which is gender related in which certain diseases are more common in certain races (Larsson *et al* 2003:204 -211). Oesteoporosis is a common disease among elderly women, and so is breast cancer among women of differing ages in

general. Osteoporosis develops over a long period (Lexchin *et al,* 2003:1167–1170*)* and may cause a broken bone, which may end up as an acute condition. It is also a common occurrence that many older women fall in bathrooms, by the steps and in some other circumstances at home.

The 2005-2006 Multidimensional Survey of Elderly South Africans at the University of Cape Town conducted by the HSRC/UCT Centre for Gerontology DS, was the first comprehensive research on the elderly. The report indicated various aspects of the health of the elderly with the most prevalent self-reported condition affecting blacks, Asians, and Coloureds being hypertension (HBP). Norman, Bradshew, Schnelder and Pieterse (2000:6) report that this condition went untreated for 15 % of both urban and rural blacks.

A subsequent national household survey confirmed the importance of hypertension and also found that 70 % of the elderly (age 65 and over) had a chronic illness or ongoing health problem. More than half of the survey respondents reported having a disability, the most common being difficulty with vision. Other epidemiologic evidence suggests high mortality risks due to heart disease among non-Blacks, with very high lung and breast and lung cancer mortality rates reported amongst the Coloured population. While the importance of non-communicable diseases clearly was rising, it should be stressed that infectious diseases remain a prominent cause of mortality and morbidity even at adult ages, at a rate higher than that of violence and motor vehicle accidents WHO (2004:1495-1542).

Medical insurance has been generally unavailable to blacks and coloureds because of the economic imbalances of the past. Consequently, few of these two population groups have a high rate of severe chronic illness with most persons failing to reach the full old age because they don't have medical benefits. In 2005, 95 % of urban and 99% of rural elderly blacks had no medical insurance yet they had medical expenses (Kabeto, *et al* 2001:770-778). Most relied on help of children and relatives who are generally underpaid semi-skilled or unskilled labours to defray medical costs. Elderly Asians (96%) and coloureds (92%) had no medical insurance, but 65% of all elderly whites were on medical aid (Miller, 2001:215-226). Only 1% of the South African European population reported depending on family and relatives for their medical costs. Brown (2005:1-26) asserted that during the apartheid dispensation the rural communities were underserviced, the current government has somewhat improved access to health facilities for the poor. The post-apartheid government has committed itself to the development of a primary health program, one facet of which is to establish

primary care clinics in underserviced areas (Lewin, *et al,* 2010:210-212). The elderly in all the geographical locations continue to experience difficulty accessing these services because of lack of transport. And, with the health program's current emphasis strongly on maternal and child care, there is mounting concern that resources are being shifted away from needed geriatric care at a time when growth in the older population is accelerating (Peterson, Lund, Bhana and Flisher, 2011:318-323). The main victims of this problem continue to be first and foremost the blacks who are resident in the rural locations and then the coloureds. Whites generally have transport, the bulk of whom are urban residents and have medical insurance meaning they can choose a practitioner nearest to them.

2.5 CHRONIC ILLNESS AS A TERMINAL ILLNESS

According to the World Health Report (2002:86-91) a high percentage of people die from chronic illness, mostly because the treatment is not followed through. The defaulting levels are high and the lifestyles have not changed to assist with controlling of the chronic illness. As alluded to before, the greater part of chronic diseases are non-communicable lifestyle dependent physiological disorders, yet they cause high mortality rates world-wide (Viswanathan, Rocca and Tzourio, 2009:368–374). The highest killers are; heart disease, cancers, stroke, chronic respiratory diseases, and diabetes, Alzheimer 's disease, mental illness and kidney diseases. As alluded to before and further confirmed by Rusanen, Kivipelto and Zhou (2010:333-9) chronic conditions are preventable as a matter of principle. The solution to this is by behaviour al changes which have a strong link to social and economic status. Delayed access to medical intervention often results in those in the lower income and semi-illiterate groups suffering from worse outcomes than those that have access to early diagnosis and treatment.

Chronic ailment allows early interventions for use of preventive medicines or early diagnosis leading to quick responses to control the chronic effects (Lancet, 2004:4–6). New studies indicate that overuse of antibiotics may cause physiological disorders that may lend the patient to acquire chronic conditions. Over use of antibiotics may weaken the body's natural resistance to attacks leading to the possibility of notwithstanding attacks. Examples of such chronic diseases are common with the liver diseases (Hall, Yee and Thomas, 2002:300-01). Since these are conditions of lifestyle and social nature, in principle they are preventable. The reality on the ground though is that, whilst some of the conditions may be difficult to avoid, early detection results in less severe outcomes. Boeve, *et al.,* (2008:58-69) estimate that one in two Americans (133 million)

has at least one chronic condition. ranging largely from ages 18 to 64 years. It is estimated that 177 million Americans will have chronic conditions by 2030. the most common chronic illnesses in America are; high blood pressure, arthritis, respiratory diseases like emphysema, and high cholesterol.

2.5.1 Economic impact and life expectancy

Campolina *et al.* (2013) state that the South African government spends R320 billion annually on chronic medicine specifically for the age group 65% plus. The improvement of the treatment and primary health programs have significantly improved on the life span of the elderly. Life expectancy in South Africa is compared to what it was before is tabulated in table 2.1 below. The table illustrates the changes in life expectancy in the country since intervention with primary health care programs. Table 2.4 below illustrates the South African population and the age groups.

Table 2.4: Percentage of South Africa Population in 2005-2025

GROUP	YEAR	AGE GROUP		
		70+	50+	60+
Asian	2005………	16.1	7.2	2.4
	2010………	22.1	11.1	4.0
	2025………	29.7	11.4	7.1
Black	2005……….	11.2	5.6	2.2
	2010……….	13.4	6.9	2.9
	2025	12.9	8.0	3.8
Coloured	2005………….	12.3	5.9	2.2
	2010………….	17.7	8.0	3.0
	2025	27.2	14.0	5.1
White	2005……….	26.0	14.3	6.7
	2010……….	32.5	19.0	8.4
	2025……….	40.4	25.2	12.6

Source; Statistics South Africa 2011

Pynoos, Sabata and Choi (2005) accept that no specific statistics refers to chronic conditions but the overall increase in life expectancy in the context of the high rate of elderly people suffering from chronic diseases implies that the elderly are living longer. Though the elderly generally has a higher rate of chronic diseases, they appear to be living longer than they used to. HIV/AIDS which has a high mortality rate amongst the youth accounts for 80 % of the mortality statistics in the country. The development of combined antiviral therapies has contributed immensely to the survival rates of the HIV/AIDS patients. There is a disturbing rising rate of obesity, which is another medical condition which leads to the development of chronic disorders like diabetes, stroke, cardiovascular disease and cancers.

Chronic treatment takes in a large portion of the health budget, in 2010, 75% of the US$2 trillion in the United States was spent on chronic conditions. Apart from the amounts spent on health towards maintenance of chronically ill patients, tremendous amounts of revenue are lost through limitations to the productivity of these chronically ill patients. According to the Information Knowledge Systems Management (2010:127-152), there is a high rate of absenteeism from work because of chronic illnesses resulting in lost production and high medical bills.

Obesity, a medical condition and not a medical disease constitutes a high risk factor as it may assist in the development of these chronic conditions as a major risk factor for developing chronic illnesses (Mathers,Lope and Murray, 2006:45). The resultant diseases have already been mentioned, and all these causes early death of the citizens causing financial loss to both families and communities alike. Texas Comptroller of Public Accounts (2011: 1360) posits that obesity results in significant health care spending and indirect costs. Recent studies in Texas showed that R9.5 billion was spent on chronic treatment including R4 billion plus towards health care, R5 billion for lost productivity and absenteeism, and R321 million for disability due to chronic conditions.

According to Ferlay, *et al* (eds), (2002) citing the Global Cancer Statistics in South Africa (2005) life expectancy for cancer patients is estimated at 54 years for males and 58 years for females. There is an interesting enomous variance between South African European women and those from other countries, the South African Europeans have a higher life expectancy. The low levels of life expectancy at birth for the Black population reflect, to some extent, the growing impact of HIV/AIDS mortality (Lancert, 2007:1040) apart from the fact that they are generally poor (71% of South African blacks are chronically poor) and resulting in inadequate access to health facilities and primary health care. The long-term consequence of the HIV/AIDS epidemic on population aging remains highly uncertain. HIV/AIDS may suppress urban growth rates in South Africa and in much of Sub-Saharan Africa and have a selective impact on young and middle-aged adults who would be potential supporters of and caregivers to the elderly (Ashraf *et.al,* 2006:181-187).

South African women outlive their men, regardless of the population group. Except among Blacks, the gender difference in life expectancy is greater than in most developing countries. Among persons who survive to age 60, women retain their life expectancy advantage over men. At older ages, however, years of remaining life expectancy for population groups are similar, according to Mathers, Iburg and Begg

(2003:4). South Africa is in the midst of an epidemiologic transition from the prominence of infectious diseases to chronic diseases, with different emerging health patterns among population groups.

2.5.2 Required medicine for chronic illness

According to JAMA (2000;284), there has been a little co-ordination across the Health providers of treatment of Chronic illness care. Chronic medication is very complicated medicine, there can be difficult for the patient to comply with their treatment protocols. It also requires longer visits to see doctors, nurses than in common acute care. Treatment that will correct behaviour may differ and also depend on type of the chronic illness in question. Consequences of chronic patient conditions can become worse if the delivery of the care is not administered correctly and in time.

There are numerous diseases that are common to chronic medication which include those such as; arthritis, asthma, cancer, COPD, diabetes and viral disease such as hepatitis C and HIV /AIDs. Chronic diseases are major causes of mortality and WHO states that these ailments represent 35 million deaths in 2006 and over 60% of death chronic deaths (WHO 2012-11-27). The majority of chronic treatment defaulters could prevent higher costs and higher mortality by pro-actively attending to their ailments and prevent the same from getting worse than they may be at the start or if they had adhered on to the treatment regime (Molen and Schokker (2009:704 -706).

2.5.3 Chronic condition

A chronic condition is a health condition or disease that is persistent and long-lasting in its effects and generally can be treated but not cured (Halloran, Miller and Britt, 2004:381-386). These conditions will generally last for periods exceeding three months, some of the diseases included in this list, are arthritis, asthma, cancer, COPD, diabetes and viral disease such as Hepatitis C and HIV /AIDS can be prevented depending on the sources of the illnesses. Whilst those involving viral infection are generally communicable, they still are preventable diseases in that individuals may be immunized, avoid contact with infected people or practice healthy preventative life styles.

The remainder of these, those that are not viral-based, are generally life style except where they are genetic. These diseases are generally non-communicable disease but have lasting medical conditions. As alluded to earlier, chronic diseases are a major cause of mortality and World Health Organization(WHO) reports chronic non-communicable conditions to be leading cause of death in the world. In the United States, chronic illnesses account for 70% of deaths, amongst which diseases are heart

disease, cancers, stroke, chronic respiratory diseases, diabetes, Alzheimer's disease, mental illness and kidney diseases. The diseases above constitute six (6) of the ten (10) top killers in the United States as reported by the National Centre for Health Statistics (2004). Ninety (90%) of all seniors in the United States have at least one chronic disorder, seventy seven (77%) have two or more chronic disorders (Petersen,Dubois and Mckee 2006). Table 2.5 below lists all the chronic diseases commonly experienced by patients world-wide.

Table 2.5: Chronic illness common world-wide

Alzheimer's disease	Parkinson's disease	Neurodegenerative disease	Addiction
Ulcerative colitis	Lupus erythematosus	Crohn's disease	Coeliac disease
Hashimoto's Thyroiditis	Relapsing polychondritis	Blindness	Cancer /neaplastic disease
Cardiovascular disease	Cerebrovascular disease	Heart failure	Ischemic cardiopathy
Myalgic encephalomyetis	Graft -versus -host disease	Chronic hepatitis	Cerebral palsy
Chronic pain syndromes	Osteoarthritis	Rheumatoid arthritis	Chronic renal failure,
Chronic Kidney Disease	Asthma	Chronic Obstructive Pulomnary disease (COPD),	Pulmonary Hypertension
Deafness and hearing impairment	Hypertension	Diabetes Mellitus	Endometriosis
Fibromyalgia	Epilepsy	Mental illness	Osteoporosis
Periodontal disease	Sickle Cell Anemia	Thyroid Disease	Lyme Disease
Blood Pressure abnormalities	Ehlers-Danlos Syndrome	Sleep apnea	

Source: Jowah: 2015

The risk caused by the disease varies according to the age group and the most common chronic disorders are essentially lifestyle, dietary and metabolic risk factors. Behavioural Yach and Hawkers (2004) supported by JAMA (291: 2616 -22) state that changes in behaviour may considerably reduce the risk of mortality caused by these

lifestyle disorders. Some of the necessary changes may be quitting smoking, eating and sleeping in a healthy way, and increase in physical activity. Studies have also identified social factors that impact on the chronic diseases as socio-economic status, education level, and race/ethnicity, these cause disparities in the occurrence of the chronic disorders. If the disorder is diagnosed late due to either negligence, ignorance of late of access to proper medical facilities, this may result in worse outcomes for the patients concerned. Sondik, Huang, Klein & Satcher (2010: 271-281). The low-income populations will most certainly fail to get early detection of these ailments in order to receive preventive services in the early stages of the disease. Excessive use of antibiotics has also been attributed to the occurrence of some of the chronic ailments like chronic liver disease. Since these are lifestyle illnesses, it can be hypothesized therefore that early detection or the use of a particular lifestyle can serve as a preventative measure to the development of such ailments. Research proposes that regular medical check-up may help detect these in their early stages and serve as a deterrent against serious consequences.

2.5.4 Caring for people with chronic conditions

According to Epping, Pruitt, Bengoa and Wagner (2004: 299-3055) few people will go through life unaffected by chronic disorders. Whether as sufferers, informal cares, health professionals and managers, or developing policies in the health and other sectors. The caring of people will inevitably be of the most interest to the last two stated above, the hope is that there will be something useful in it for the other patients (Henning, *et al* 2004: 182-92). The nature of healthcare is changing, in many cases quite rapidly, and there is a need for constant check-up for most people to avoid getting into the problem of suffering from preventable diseases.

The many health systems are still configured in ways that are more appropriate for the demands of the mid-20th century rather than the mid-21st century. The effective responses will require initiatives at all levels to ensure that the right resources (skilled staff, technology, pharmaceuticals and knowledge) can be assembled in the right place at the right time, while establishing support and incentives for everyone to work together to achieve (Badamgarav,*et.al,* 2002:325-925). There are no easy answers, and those working in different health systems must also find models that are appropriate to their own circumstances. Because defaulting is a human behaviour caused by many factors hitherto unidentified, the respective institutions need to devise models within the context of their own problems.

There is also a considerable scope for shared learning from each other's experience that shows the successes (and failures) of clinicians to solve this problem. Nolte and McKee (2008, 364-371) posit that the increasing burden of chronic diseases (WHO 2002) is one of the greatest challenges that will face health systems globally in the twenty-first century .Greater longevity, modernization of lifestyles, with increasing exposure to many chronic disease risk factors, and the growing ability to intervene to keep people alive who previously would have died, have combined to change the burden of diseases confronting health systems (Wilson, Buck and Ham, 2005:330).

2.5.5 The burden of chronic disease

A detailed account of the empirical evidence on the costs of chronic disease is found from empirical evidence from Eastern Europe and Asia (Ben-Shlomo and Kuh, 2002: 285-293). Five costs concepts can be identified as being directly attributable to the financial and economic impact of chronic diseases, namely;

- costs of illness – the regular / repeated visits to the clinicians for the same illness
- microeconomic costs – financial consequences suffered by the patient themselves,
- macroeconomic costs – the impact on national budgets for construction of other facilities,
- "welfare" or "true" economic costs emanating from provision of the treatment on a life time basis, and
- public policy-relevant versus policy-irrelevant costs incurred by the government and other institutions**.**

 Bundrikrchen& Schwinger (2004: 57-60) described the major contribution that chronic diseases make to the overall burden of disease and death in the WHO in the European Region. With cardiovascular diseases and cancers continuing to be the leading causes of mortality in the region, and complex conditions such as diabetes and depression projected to impose a growing and costly burden. As stated earlier most of these are life style diseases, sometimes referred to as the richman's illness. Extensive data gathering mechanisms are required to provide reliable, appropriate and comparable the data to inform local, national policies and initiatives. With the changing of the previous (old) strategic implementations, there will be demographic patterns and increasing evidence of the health and societal costs of chronic diseases. Imbert,*et al* (2008:178-83) suggest urgent focus on the methodological challenges in assessing and monitoring the chronic disease burden.

2.5.6 Economic aspects of chronic disease and chronic disease management.

According to Brunello (2007:5), there are serious economic costs of chronic disease including the economic aspects of chronic disease management. Europe has much of the information that South Africa can borrow from in terms of developing conceptual perspectives on management of this problem. Whatever the particular cost concept applied, there is much evidence to suggest that chronic diseases impose substantial cost burdens on the society. There is evidence that part of these costs justify the need for government intervention in the prevention and controlling of these chronic diseases (Fireman, Barlett and Selby, 2004:23). There is increasing recognition that improving health care facilities and resources can provide direct economic benefits (Davis, *et.al* 2001:64-78) at both the individual and perhaps even at the macroeconomic level. Much research still needs to be done because there is far less information on the costs of the different ways of achieving better health, and, hence, on the return on investment. This applies to both preventive and curative approaches, and, as it has been argued about the economic aspects, this seems to apply with a vengeance to chronic disease management .The economic evaluation of chronic disease management is a significantly under researched issue and hence there appears to be increasing attention but the focus needs to be intensified .In greater part, this is because the essential building blocks have not been researched, identified and put in their proper perspectives (Gonseth and Banegas, 2004:25). Most countries have not made much of that investment in researching these and providing quantifiable costs that would enable governments to decide on alternative methodologies to solve this problem (Balie, Robinson, Halpin and Wang, 2006:63).

Looking ahead with intentions of taking care for this costly health problem, Fireman, Barlett and Selby (2004:23) make key recommendations necessary to undertake much more research. The research should be focused on establishing whether the chronic disease management programmes make any difference to health outcomes. Should this have been supported by the resulting evidence on a larger scale, that in itself it would be a major step forward for any future economic assessment. Mattke, Seid and Ma (2007:13). Business cases from the societal or economic point of view studies have identified a worrying disconnect between the two, which unless it is overcome through appropriate financing, no adequate delivery mechanisms will result. The provision of a socially suboptimal level of active chronic disease management, a consequence that will be hard to tolerate in light of the ever more pressing need to tackle the high and growing burden of chronic disease our societies will inevitably face. The question of

how better to align the financial and economic incentives involved in chronic disease management should be high on the research agenda, and this is an issue that should be addressed in some detail (Butler, 2004:1).

2.5.7 Integration and chronic care

Sperl-Hillen,*et.al* (2006:4) state that there is a general emerging consensus that the effective management of complex chronic diseases represents one of the greatest challenges now facing health systems. There were also substantial consensuses that this will require new ways of delivering healthcare, involving integration of care providers, or, at least, much closer coordination of their activities. Yet beyond these areas of agreement, there is much less consensus about how this should be achieved. In part, this is a result of the plethora of terminology involved, which tends to confuse rather than clarify (Bodenheimer, Wagner and Grumbach, 2002b). Frequently, the same words mean very different things to different people. However, it also reflects the reality that health systems exhibit the property of path dependency, whereby the options to go forward are constrained by what has happened in the past.

Henning,*et.al* (2004:117) supports the view that the health system is characterized by a particular set of relationships between entities providing complementary service. The different professionals and institutions that deliver care, and change must take account of what is possible. Too, where constraints created by the existing system are insurmountable, more radical approaches may be needed. For both of these reasons, it cannot be assumed that a model of care developed in one setting can be transplanted to another. Schaefer, *et al* (2005:59) observed that the experience gained in the implementation of the programmes in the United States could not be applied directly in the United Kingdom. Many pitfalls were identified, thus discouraging the concept of cut-and-paste, rather that the models and methodologies should be made context relevant. It does, however, seem that innovative models of care can be more easily implemented in health systems where there is a strong orientation to primary health care. A single point of access to the health care system providing continuity may be the ideal for effective chronic disease prevention and control. The decision on how to move forward must be made for each health system, according to Wagner (2003:138).

Henning, *et al* (2002:325) think that it is appropriate to begin by determining the nature of the integration being pursued, including the type, breadth, degree and process of integration. It should be also take into account the very diverse population of people living with chronic disorders, some of whom will require only that the services they

need communicate with each other while others will need carefully managed and tightly integrated services so that no-one falls through the gaps. There are now a number of models that policy makers can learn from as they seek a solution that is appropriate to their needs. The CCM has the advantage of a sound theoretical underpinning, identifying key elements that should be considered in any strategy (Wallace, 2005:27). Integration may occur in different and complex structural configurations, reflecting the diverse environments and historical paths taken by health systems and the range of options available to establish and maintain linkages among their various components (Henning.*et.al,* 2004:117). Ouwens, Woller, Sheim and Grol 2005:141-146 designed a model for integrating the health care systems, on the basis of which the researcher hereby suggests an integration model. Figure 2.1 below illustrates the model.

Figure 2.1: Levels of Integration and user need

High   -Multidisciplinary team

                                                -Management

                                                -Purchasing   fund   of   new

services

Moderate   -risk population

                                                -Planning

                                                -Reporting

                                                -Staff linkage

                                                -Payment on arrangement

Low   –emergency need

                 -Follow up on patients

                 -Information of patients

                 -Person responsible for payment

Linkage ⟵ Coordination ⟵ Integration

Level of integration
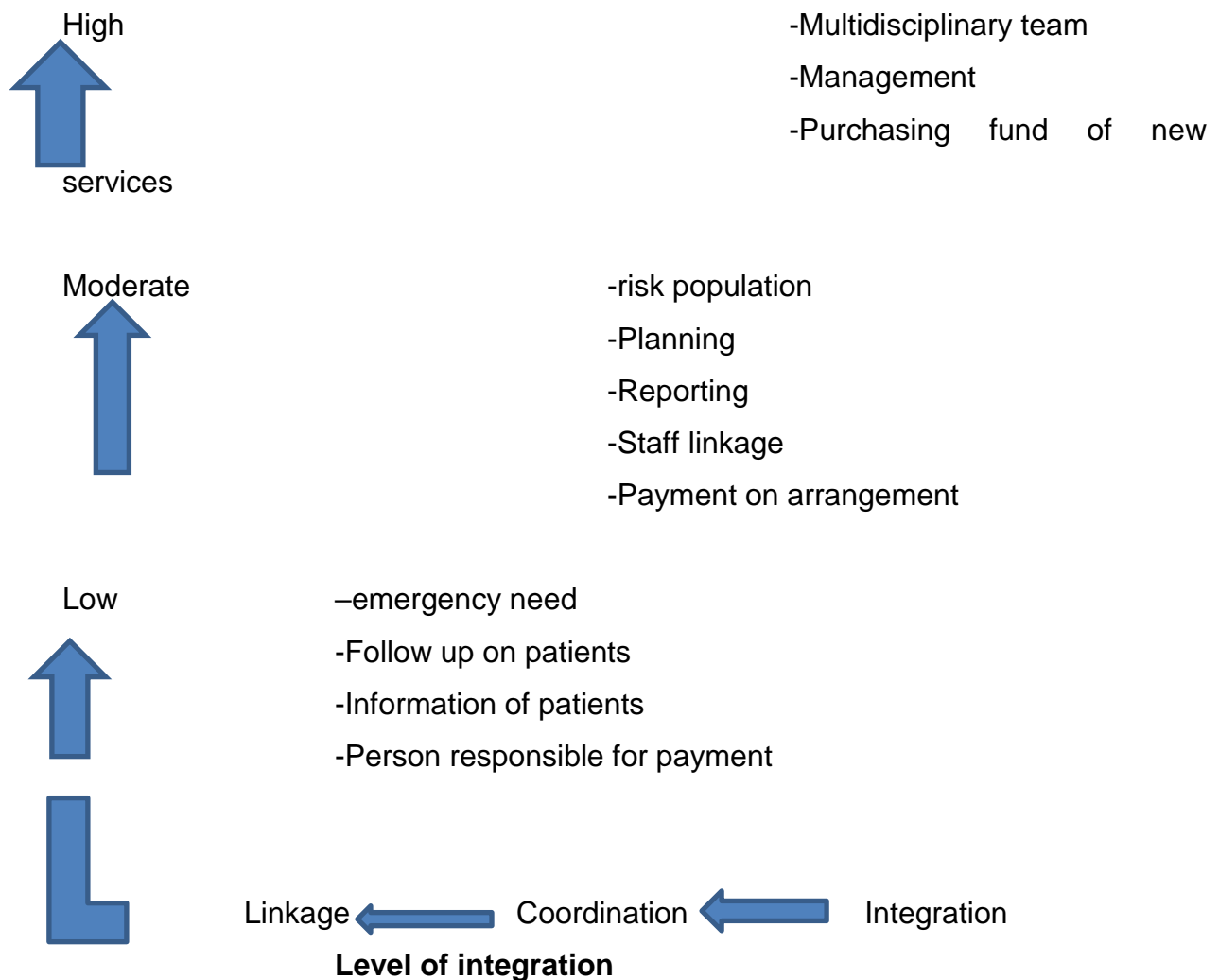
Source: Own Construction

The presence of a well-integrated health care system presumably starting with children in school may pay off immensely. The life styles of adults are normally developed in

the early years as they observe other people of get to see their own parents live thus. Proper education should therefore be the education that enables them to know the consequences of certain life styles and avoid whatever life styles that may causes them disease and illness in the later part of their lives.

2.5.8 Preventing chronic disease

According to Gostim (2007:297), the prevention of chronic diseases has been founded on an integrated approach involving government policy, healthcare systems and preventive practice standards, public information, and individual responsibility for self-care. In the case of tobacco use, substantial evidence is available on effective integrated interventions, but preventing chronic disease, the evidence for population or even clinically based approaches remains limited. Borch-Johnsen, *et al*, (2003:101) posit that cardiovascular diseases occupy the first place in the chronic disease burden. They suggest that there is enough evidence for a multiple risk factor reduction approach at both the population and individual level. Hypertension, hypercholesterolemia, smoking, obesity and physical inactivity require multiple channels of intervention for optimal effect. The healthcare system is critically important in this respect, as those patients with risks but without established cardiovascular disease, as well as those with early or subclinical chronic disease, can be effectively treated. This will reduce future burdens on the health system as well as on the patients themselves (Law, 2003:326). It is clear, however, that prevention is truly everyone's business, from the government, the private sector, the healthcare system and the individual. There is a need to apply well researched scientifically based prevention practices to the growing epidemic of chronic diseases.

2.5.9 Supporting self-management

According to Barlow, Wright and Sheasby (2002:48), an extensive and elaborate Interactive Health Communication (IHC) is one way to make use of electronic connectivity to enhance self-management which goes through the application of TeleHealth. "Interactive Health Communication Applications (IHCAs) are computer-based, usually web-based, information packages for patients that combine health information with at least one of social support, decision support, or behaviour change support. TeleHealth (IHCA) functions include to Goldberg, Ralston, Hirsch and Ahmed (2003: 29):

➢ Relay information
➢ Enable informed decision making

- ➢ Promote health behaviour s
- ➢ Promote peer information exchange and emotional support
- ➢ Promote self-care
- ➢ Manage demand on health services.

According to Glasgow, Davis and Funnel (2003: 29), after an extensive study on the need for self-management, established that the most important element of self-care that applies to all people with chronic conditions. Self-management requires individuals to take action to change their behaviour (Petrie, 2003: 54). Most individuals will need support in order to be successful in the self-care programmes if they will be successful in self-management. By designing and evaluating self-management support systems and or programmes, it is important to draw the understanding of human behaviour which is too often the cause for the ailment in the first place (Coughlan, *et al,* 2002:20). This brief review shows that there is some evidence that self-management support programmes to improve outcomes, but more research is needed to understand which components impact on which outcomes and whether improvements are sustained over the long term. The support programmes vary in their design and content, largely dependent on the resources, the type of ailment, the character of the patient, and of cause the resolve to redirect one's life destiny.

Spport programmes should generally be tailor made (Glasgow, Davis and Funnel, 2003: 29) to meet the different needs of the different people at their point of need. Although self-management support is recognized as an important element of chronic care, few countries seem to be developing or implementing systematic strategies to support this process. According to Fuller (2004:12), data from a cross-national survey of sicker adults in five countries in 2004 found that significantly fewer respondents in the United Kingdom and United States reported that their doctor had given them clear advice on what to do and what symptoms to watch for compared with those in Australia, Canada and New Zealand. A clear indication that primary health care is not practiced or taught to the patients by the clinicians themselves (Coleman and Newton 2005:1503-10). Fewer than two out of three respondents in all of these countries reported that the doctor gave the planning for managing care at home, with as few as 37% reporting this in Germany. It is vital that health policy makers, insurers and providers create systems that enable all patients to self-manage effectively.

2.5.10 Challenges in human resource at chronic illness

Blakeman, Harris, Comino and Zwar (2001:175) report that there is a critical need to analyse and accept that the workforce is central to the success of any health care

programme. Equally so, workforce issues should be considered as important and central to the development and implementation of any new ways to manage chronic care. New models of conceptualizing and delivering chronic care involve at least four factors that herald the need for significant workforce changes.

➢ Integration at an individual, team and organizational level;

➢ person-centered care;

➢ Population-based focus;

➢ Increased focus on quality improvement.

Bodenheimer, Wagenr and Grumbach (2002: 288) argue that improved chronic care offers many clinical and quality benefits for service users, but it also impacts on staff. These impacts, while positive in the longer term, may be seen as challenges in the short term. Investing in the staff, in terms of time, training and resources, will be crucial to the success of any system or programme-level changes in chronic care. Whilst some targeted work is undertaken to develop new staff roles and competency frameworks, less thought may have been put into tackling the more complex aspects of workforce and organizational development. It may be important to have these questions in mind whilst addressing workforce issues;

➢   Just how can we ensure that health and social care staff work together?

➢   What will motivate a hospital consultant to point out potential gaps in the system?

➢   What needs to happen to ensure a nurse is motivated to take on and develop the ideas of service managers and planners in day-to-day practice?

Newsom, *et al* (2012:279) urge us to think about the answers if we are serious about transforming chronic care. It is known that audit and feedback, practitioner education sessions, shared learning approaches and clinical guidelines have mixed success in changing behaviour s. It is also known that competency frameworks only go some way in addressing the new skills and roles needed. There is therefore a need to focus on changing more than the attitudes and behaviour s of individual staff or groups of professionals. For change to be implemented in all the systems, there needs to be changes at structural and organizational levels. There are some of illustrated key levers that can be motivated to change and enable successful and sustainable implementation of chronic care models from a workforce perspective (Goldberg, *et al,* 2013:51). These include conceptualizing a human resources continuum with service

users taking a key role, redefining professional roles, developing generic competencies and reconfiguring the practice environment.

However, perhaps the most important lesson from this chapter is that someone must make and sustain those changes in order to change chronic care. The workforce is that someone, so there is need to put more effort into considering the needs, perceptions and motivators of workforces in order to facilitate sustainable changes (Newsom, *et al* 2012:279).

2.5.11 Support decision of chronic disease

Druss, *et al* (2012:118) reports the establishment of organisations that care for chronic patients (care for patients with chronic illness) which has spent considerable amount of time trying to develop programs that can effectively care and manage chronic patients. They identified and clustered various common elements, the use of explicit plans and protocols were;

➢ The reorganization of the practice to meet the needs of patients who require more time, a broad array of resources, and closer follow-up

➢ Systematic attention to the information and behavioural-change needs of patients including change of location and physical conditions

➢ Ready access to necessary expertise within range for the elderly person including providing transport and support for mobility where necessary.

➢ Supportive information systems and effective context relevant means of sending information to the elderly patients.

McDonald,*et al* (2005:293) suggest that there should be adequate support for the clinicians and this should be linked to the existing electronic communications systems. This may assist the clinicians to improve the chronic care and possibly develop their own patient relevant Chronic Care Models to manage the chronic illnesses (Lobach, 2005:330). The decision support innovations are aimed at improving the quality and safety of chronic disease care and should be available to all the medical, nursing and allied health professionals, patients, healthcare managers and policy makers. Computers are increasingly the platform for delivery of quality decision supports (Duryea, (2006:590). Within the Chronic Care Model, decision support activities are directly relevant to enhancing self-management through both the electronic presentation of information and TeleHealth. Innovations in clinical decision support are occurring in many parts of the health system (Park, 2006:11), most often these are focused on one particular chronic condition in one specific health service setting.

Murray *et al* (2005:40) observed evidence of gains between quality and safety of caring because of the use of the decision support systems. There are profound implications for traditional relationships such as those between doctor and patient (Thompson and Robinson, 2001:10).

There are also profound implications for those who fund health services be they private companies or government units. New technologies are expensive and new activities need to be funded, and governments have tackled most of these through Public-Private Partnerships. There is no certainty that these new expenditures will be off -set by savings elsewhere in the system. Reform weariness on the part of clinicians and managers of health services may result in negative perceptions of proposed new initiatives.

2.5.12 Paying for chronic disease

Kontopantelis, *et al* (2007:357) observed that health systems are only as good as the people working on the systems to support chronically ill patients. But the importance and effectiveness of the systems also depends largely on the cooperation of the patients themselves. In the South African system, the bulk of the chronic patients do not pay for the care, even though in other countries (Chassin,2006:63) payment is levied for the service. Ibrahim (2006:63) concurs with the presence of fee-for-service structures in other countries and states that such systems tend to discourage continuity of care. Systems with strong primary healthcare are more likely to give greater attention to the management of chronic conditions (Chassin, 2006:63) with better results. Roland (2004: 351) concurs and asserts that the barrier to effective chronic management is raised when separate charges are levied for treatment and for the management of the condition. Indeed, in most countries, chronic disease management programmes have tended to evolve condition by condition. Yet, in reality, chronic illness lies along a continuum (i.e. from the asymptomatic person at risk to those with a range of established chronic illnesses) and chronic conditions are increasingly seen as being strongly interrelated (Wasem and Zmora, 2007:83). Yet another, similar, commonly encountered barrier related to system fragmentation, is a tendency in many systems to pay different healthcare professionals separately, thereby perpetuating traditions of independent, solo practice. Iles, *et al* (2003:17) observed that much of the chronic conditions care depends on multidisciplinary teamwork but is frequently frustrated by these payment systems.

McNamare (2006:63) points out the difficulties in the Australian EPC initiative which is somewhat fragmented and makes payment for general practitioners only. In response

to such obstacles, policy makers and payers have been increasingly looking for ways of bringing together (bundling) different budgets. There is a greater need for patient-centred methods of payment, rather than paying different professionals separately for individual activities (Jowsey, 2008:32). They have also begun to develop blended or mixed approaches to payment for chronic disease care, which attempt to capture the benefits and offset the drawbacks of each separate payment modality. The economic conditions of the patients are important in this regard. Many pay-for-performance initiatives use a blend of payment methods, including paying directly for the delivery of specific measures of quality and/or outcomes. Smith and York (2004:23), focused particularly on recent high-profile pay for performance initiatives such as the 2004 General Practice Contract in the United Kingdom's NHS and the current demonstration programmes of the Centers for Medicare and Medicaid Services in the United States. Evidence shows that financial incentives to encourage providers to undertake desirable activities may be effective in improving performance in chronic care. Ibrahim (2006:63) opines that the volume of evaluative research in this field is still comparatively small given the many complexities inherent in designing payment systems. In addition, there is no established conceptual model in the literature as to how financial incentives such as pay-for-performance should work and what factors would facilitate or reduce their impact.

It cannot be assumed that the financial elements in pay-for-performance schemes are always the major motive for professionals to change their practice (Fleming, (2007:335). Professionals are motivated by more than remuneration for the service they provide to patients (Talavera, 2007:80) choosing rather reputational incentives. There is also extensive psychological evidence that excessive use of externally imposed incentives, particularly financial ones, can crowd out the internal motivation to do a good job. The indicators of performance used should be supported by the target population of professionals and aligned with their conceptions of what a high-quality service comprises (Flemming,2007:335).

2.6 CONCLUSION

Increasingly the evidence continues to point out to one permanent solution to the reduction if not eradication of chronic diseases as primary health care. Special emphasis may be put for those who are 65 years and older and that chronic management programs should be intensified for that age group. With effective medical care the number of those above 65 years has been increasing (Berker, 2005,95) and the health care needs will be a burden if not managed correctly now. Such an approach

has potential to reduce both the financial and health impacts of the disease or conditions.Taking action to halt and turn back the rising chronic disease pandemic is a pressing challenge for the field of global public health. Fortunately, the effective and feasible strategies for doing so already exist. The global goal of saving 36 million lives by year 2015 needed marshaling of urgent coordinated action (Mathers *et al, 2002*:54) to be able to achieve that. Many countries have already made major reductions in chronic disease deaths, in low income countries supportive policies are needed now to reduce risks. Where chronic disease problems are already established, additional measures are needed to both prevent and control the chronic conditions. The failure to use available knowledge about chronic disease prevention and control is unjustified, and recklessly endangers future generations. With the current knowledge, there is no need for the deaths of millions of lives each year on matters that could be controlled, managed and prevented.

CHAPTER 3
THE MEDICAL IMPLICATIONS OF DEFAULTING; THE RISK INVOLVED AND HOW IT COULD BE AVERTED.

3.1 INTRODUCTION

When a prescription is given to cure or treat a medical condition, it is expected that the patient should follow through as per the doctor's prescription. The first important observation to be made is that the clinician is qualified and knows what to give to treat the patient, this is done after a diagnosis. As alluded to in an earlier chapter, the diagnosis process has its own complications, but when an ailment has finally been identified, it is upon the patient and the clinician to cooperate. Understandably, the average chronic condition patient doesn't fully understand why they have to be going for treatment for the rest of their lives. The difference between acute and chronic illnesses is not as clear to the patient as it is to the clinician – the clinician is a qualified practitioner in this field. There is a degree of trust from the patient's side that the clinician will help, this might be in part because of pressure from the symptoms that may be causing tremendous discomfort. Yet, from another perspective, the patient may be afraid of death or other possible consequences (from street talk), the patient may feel compelled to cooperate.

Largely in the black communities, where this research is to be conducted, there are other medical practices that are somewhat trusted. Some authors claim that 65%-72% of the community's consult sangomas before they can go to the clinic. A sangoma is a self-proclaimed healer, normally associated with ancestral worship and tied up in the belief that these have been called to healing by the ancestors. From a cultural practice also, disease is generally associated with witchcraft, and sangomas propagate this belief, thus delaying the patient from going for allopathic Medicare. Sangomas do not use scientific diagnosis and may therefore not be able to identify certain diseases and their causes. The chronic condition patient should therefore also be understood from the cultural and traditional perspectives where they spend most of their time. Defaulting from going to the clinic may have to do with the fact that they are hopping around for assistance from whoever can help.

3.2 DEFAULTING

The medicine prescribed for the patient is scientifically calculated with known effects and measured amounts that will assist to a point (Murdey et al, 2005:283-296). This is precisely the reason why the drugs have a known standard size and content also known to treat a particular ailment. Hence, the clinician will state how many of these

(tablets, liquids, etc.) should be taken daily per given period, after which a review needs to be done. Thus, a patient is given medicine lasting a specific period (generally a month) after which the patient must be re-examined to ascertain if the intended treatment is taking place. Because this is scientifically measured, it is understood therefore by medical personnel that the period given to the patient is not too long (Spiegel *et al*, 2004:846-850) to allow for adverse conditions. The patients are always advised to return to the clinic immediately they have other problems, in case there may be either a continuation of the symptoms or new symptoms come up. When a patient doesn't come back for their medicine at the given time and doesn't meet the medical practitioner at those prescribed times, they are therefore defaulting on the treatment program. This has a direct impact on the intended effective treatment and control of the ailment.

3.2.1 Defaulting and the risk

Defaulting is the failure for one to meet or fulfil or comply with an expected role (Merriam Dictionary, 2015) towards an agreed-on performance or objective. In this case it is defaulting on getting treatment meant to assist in the improvement or the control of the ailment the patient is suffering from. Thus, any patient missing out on the doctor's appointment or collection of the regular treatment regiment is a defaulter. The Medical Dictionary (2014) refers to the act of defaulting as "an omission of that which should be done." It is expected from a medical perspective that when treatment is prescribed and started it should be carried through till the patient is cured or to control the disease where it is not curable. According to Ansah *et al* (2001:97) any patient who missed their scheduled date for medical appointment will have defaulted and this brings the patient to be in the risk categogory. All the patients who are under the risk factor need intensive counselling and family support in order to bring regular dates for follow up and also to minimize the occurrence of adverse conditions (Homedes and Ugalde, 2001:52). Risky defaulting is mainly linked to the treatment and may make it difficult for the medical clinicians to establish if there may be a problem with the efficiency and efficacy of the regiment (Dunyo, *et al,* 2000:94). Some problems may emanate from the poor response of the body (of the patient) to the regiment prescribed, thereby creating another risk factor. The risks commonly encountered are;

1. Defaulting may end up / result in the patient becoming reminally ill and may develop other opportunistic disorders.

2. This may create a new problem where new strategy have to be devised to treat and manage (control) more related chronic (sometimes acute) illnesses

3. This becomes expensive in that more care; more money and more specialized personnel is required – just because the patients were defaulting.

4. Patients may have to be admitted if because of defaulting adverse conditions start developing which may make it necessary to observe the patient.

5. Too many of the chronic illnesses on one individual generally become difficult to manage away from the clinicians and too often lead to loss of life

In as much as defaulting may not be taken seriously by the patients themselves or the family, the medical personnel (the clinicians) are concerned about this practice or habit because it exerts a lot of pressure on the practice. Besides, it ends in the loss of life, and in other instances it may lead to disability through amputations (diabetes), removal of some internal organs (lung cancer or TB) or any other undesirable last resorts to save the life. This can only be averted through creating a holistic care plan with intergrated treatment of the patient.

Arah, Westert and Hurst (2006:18) make reference to the growing recognition of risky defaulters in chronic disorder and suggest well-designed models to be implemented. This is expected to potentially bring about great improvement in health care quality by focusing on health care quality and the increase in efficiency and reduction of health care costs. There is a need for a complex intervention requiring careful consideration of its goals, how it has been delivered, and who receives it. Patient safety and quality of care are seriously compromised by flawed system-designs or functionality or improper use (James *et al*, (2008:273). Failure to address information integrity issues based to the systems will lead to spiralling, rather than declining, healthcare costs and medical errors as a result of the proliferation of new types of patient safety hazards (Jennifer *et al* (2012:610).

3.2.2 Drug dependency and economic impact

One of the serious concerns with chronic patients is the inevitable dependency on drugs which on its own is a problem (JAMA, 2000:284). This brings the attention to what has been alluded to already in the preceding chapters that preventative measures are more desirable than the use of drugs later. Because of the nature of chronic disorders, the use of drugs is optimized when patients are perpetually monitored (Silver, 2002:2) which becomes a strain on the resources. There is no known research finding on the effect of a specialty program that may have been designed and coordinated through primary care which may adequately solve the problem of chronic

disorders. Popalisky (2002:71) proposes an extensive primary health care program for medical personnel during training. White (1904:68) makes reference to this as preventative medicine which would in our terms become primary health care. White's emphasis on lifestyle practices including the diet and exercise is noticeable, and current research confirms what she stated at the turn of the 19th century. Dependency on drugs should not be the norm, unfortunately there is no known cure for chronic disorders, and thus treatment becomes the panacea for this physiological disorder. The continued supply of the treatment medicines because an economic strain on government resources, there appears to be no end in sight.

Another economic factor from the chronic disorders, as observed by Bao *et al* (2003:693), is the loss of man hours. When patients are not able to go to work either because they are going for check-up, to collect their medicine regiment, or because they are not feeling well. This impacts negatively on the productivity of the company and the individual for those who are still at the working stages. This impacts also on the medical insurance or rather the costs borne by the state in public health facilities and free medicines to indigenes. Evidence, according to Marcotte, (2001:21) suggests that the savings from all these preventable costs coming from a faulty lifestyle, would have been large. The employers, according to Birnbaum et *al*, (2003:1465) should factor in the costs they incur from the chronically ill patients as part of their loss in the net profits of the organisation. Murray (2012:182-195) asserts that these losses can be capped through control on number of sick days per year allowed by the employer. Employers have other losses which they cannot calculate as they are not measurable (Stansfeld, 2012:1) like the inability of an employee to perform to normal levels even though they have reported for work. It poses great difficulty for researchers seeking to quantify economic losses firms and other organisations incur due to absenteeism or slowed down productivity due to chronic disorders of the employees.

3.2.3 Health Implication in Sleep Loss and Sleep Disorders

Research findings in the United States of America show that 50-70 million Americans suffer from a sleeping disorder of some kind (Walsh *et al,* 2005:648-656). There is no statistics available in South Africa, but the percentage of people with sleeping disorders is disturbingly high. This affects the way people would function during the day and possibly slow down performance at the workplace, ending up with possible costs for drugs to solve the problem. Medical studies identified and listed around 90 distinct sleep disorders and these have cumulative long-term effects which may end up or may

result in hypertension, diabetes, obesity, depression, heart attack, and stroke. The general conditions or effects of sleep disorders are listed in table 3.1 below.

Table 3.1: Some of the by-products of sleep disorder

sleep loss,	sleep-disordered breathing,	insomnia,
narcolepsy,	restless legs syndrome,	parasomnias,
sleep-related psychiatric disorders,	sleep-related neurological disorders,	sleep-related medical disorders,
circadian rhythm sleep disorders	hypertension	diabetes

.

Source: Own construction from medical literature

This disorder may be understood generally as reduction in the number of hours the individual sleeps or should sleep (7 to 8 hours) per night (Dinges et al., 2005:67-76). This is generally followed by excessive sleepiness during the day which subsequently reduces concentration, chronic sleep loss though it is not a disease, yet it has serious health repercussions. Some research findings report at least 18% of adults' report receiving insufficient sleep (Kapur *et al*, 2002:289-296). In South Africa the percentage of men and women sleeping for less than 6 hours per day has been increasing, this may be cause for concern considering the preceding findings. Carskadon *et al* (2004 :276-291) found that there is a global increase in the number of adolescents who do not have enough sleep. The required sleep time for this age is 9.5 hours, but because of extensive television viewing and growing social, recreational, and academic demands, they never sleep enough. This does not promise a good future for the world, since the causes of less sleeping hours is multifactorial; these different studies involved between 83,000 to 1.1 million people (Hasler *et al,* 2004:661-666). The sleeping disorder may exacerbate the current state of illnesses like depression, anxiety, and bipolar disorder, to obesity, autism, alcoholism, premenstrual disorder (PMDD), erectile dysfunction (ED), and attention deficit disorder (ADD).

If these can be added to pre-existing chronic disorders such as cholesterol, blood pressure, heart disease, cancer, hepatitis, and AIDS, these will further complicate the patient's status. The individual needs of the patient will need critical information to manage and control any of the illnesses the patient may suffer from. Finally, an unhealthy workforce has public policy implications as preventing, identifying, and treating physical and mental disorders can reduce the number of lost working days and health care costs in the country (Konsman, 2002:25).

3.3 PREVENTING CHRONIC DISEASE

From this chapter there has been a high-risk rate of people, living with chronic illnesses such as heart disease, cancer, diabetes, stroke, and chronic lung disease who account for 80% of deaths and 85% of health care costs. These have also received extensive attention in the professional and lay literature (Anderson, 2005:353) providing a basis for general knowledge on these ailments. Although efforts in managing chronic illness typically originate in the health care system, governmental and community-based public health organizations also play an important role in helping people living with chronic illness to maintain optimal health. There has been a programm of helping, in advance, the people living with chronic diseases. The Institute of Medicine, with the sponsorship of the Arthritis Foundation and the Centers for Disease Control and Prevention, has produced a report called "Living Well with Chronic Illness," A Call for Public Health Action (Helmick, 2009:58). The investigations highlighted;

- the consequences of chronic illness,
- the need for enhanced surveillance,
- the state of interventions for chronic illnesses,
- policies to decrease the effects of chronic illness,
- the need for coordinated action in health care, and
- community-based structures to treat and manage chronic illness.

The report from the Institute of Medicine reinforces the idea that the public health needs of the chronically ill are very large, urgent, and growing. Therefore, there are inbuilt implications for governmental public health organizations, including Centers for Disease Control and Prevention (Kung: 2008:56). In the 25 years to come since the creation of Centers for Disease Control and Prevention National Center for Chronic Disease Prevention and Health Promotion, chronic illness prevention programs have become universal in state health departments and have become more common, though not routine, in local health departments (Collins, 2009:6). These programs will focus mostly in cancer screening, although smaller disease-oriented programs for prevention and control of arthritis, diabetes, heart disease, and stroke are now common. Lifestyle programs for tobacco use and control have also flourished.

These Programs will promote healthful eating, healthy weight, and physical activity has been less well funded. ACA's Prevention and Public Health Fund promises to support up to R2 billion per year for chronic illness prevention but balancing the national budget

has been a nightmare (Collins, 2009:6). The underfunded state of chronic illness prevention programs leads to questions on how and from where governmental public health organizations and community-based health service providers will find the funds. It may be important for the government to try and establish a balance or decide on an opportunity on this issue and decide on whether to fund prevention or treatment. One answer is for the government to collaborate more closely with health care organizations and share resources much more than in the past.

3.4 CONSEQUENCES

Anderson (2005:353) highlights both the fatal and nonfatal consequences of chronic illnesses and their impact on the social and economic aspects of the communities. The Institute of Medicine also emphasizes their many nonfatal consequences, suggesting that 8.6 million Americans live with disabilities emanating from arthritis chronic illness or illnesses closely related to arthritis. The consequences of chronic illness include myriad physical, mental, and social consequences that affect patients and their family members, friends, and caregivers. The person living with arthritis may have all these consequences as listed in table 3.2 below.

Table 3.2: Arthritis effects on chronic patient

Condition	Effect
Chronic pain	Continuously have to use pain killers to suppress the pain emanating from this ailment.
Depression	Mental disorder resulting in failure to concentrate and generally becomes emotionally imbalanced.
Inability to work	Handicapped and unable to use one's hands, specifically with the fingers generally swollen and difficult to move.

Source: own construction

Arthritis patients have physical chronic pain which is generally not curable even though it can be treated and managed. Some results indicate also that arthritis patients are likely to suffer from depression over time which is another ailment difficult to treat and is a concern amongst many people. Beyond all these, arthritis may make it difficult for an individual to perform other physical functions where the use of limbs (say hands) may be of primary importance.

There has been a complicating ability to track, treat, and manage chronic illnesses with some illnesses like diabetes causing great concern for care giving. The illnesses like

arthritis affect mobility, employment, and economic with negative economic outcomes (Frieden, 2004:94). The Institute of Medicine has been highlighting the nine chronic illnesses such as arthritis, cancer survivorship, chronic pain, dementia, depression, diabetes, posttraumatic disabling conditions, schizophrenia, and vision and hearing loss (Brault, 2009:58). This list does not indicate the most important chronic illnesses but is a means of illustrating how diverse the consequences can be. Table 3.3 below lists the most common problems.

Table 3.3: Some six chronic illnesses listed by the Institute of Medicine

DISORDER	CAUSES / SOURCES
Arthritis,	There are different types of arthritis and therefore different causes, most types are genetic, previous injury, infection, smoking, type of occupation, age, and many other types of foods including
Cancer survivorship,	There are numerous types of cancer and as such different causes, among others cancer can be genetic, come from wrong diet, smoking or out of old age.
Dementia,	There are many types of dementia among whom are MID causes by strokes, age, medical condition, blood clots, heart failure, cognitive decline, high blood pressure, diabetes, atherosclerosis, smoking, taking of alcohol, poor diet, etc
Depression,	Manifests itself in different forms and is commonly seen as bipolar – generally caused by restlessness, anxiety, long periods of suffering, painful experiences and sometimes it is genetic in which case it becomes a life time disorder.
Diabetes,	Caused by prolonged presence of sugar in the blood system of an individual. Manifests in different forms but is directly as a result of the pancreas failing to produce enough insulin into the blood system to control sugar levels.
schizophrenia, and	The causes (though fragmented) indicate that the disorder is caused by genetics, prenatal development, early environment, neurobiology and psychological processes and based on a neurodevelopmental models.

Source: author's construction based on the Institute of Medicine's publications

Many of these illnesses are commonly found amongst elderly people, with 43% of each adult suffering from at least 3 or more chronic illnesses, 23% have more than 5 chronic illnesses each (Collins, 2009:6). This chapter also notes the disparities in the sources and occurrences of different chronic illnesses based along race, ethnicity, income, and geography. In the United States of America, African Americans are twice as likely as whites to be diagnosed with diabetes. Because these are lifestyle illnesses, the life patterns have a great influence on how things turn out to be in the life of an individual.

3.5 SURVEILLANCE AND INTERVENTIONS

Surveillance for chronic illnesses and their outcomes is critical to identifying needs and disparities, setting priorities for action, and assessing programmatic progress. Research indicates that surveillance uses knowledge and quality of chronic illness management and control. Proper effective surveillance will be multi-level, multi-stage, and longitudinal in its structure and functioning (Kung, 2008:56). The levels of surveillance are listed in the table 3.4 below with the requisite details pertaining to the elements of the surveillance programme.

Table 3.4: Levels of surveillance and interventions

LEVEL	ROLE PLAYED IN SURVEILLANCE
Patient	Must be identified (by diagnosis), informed about the seriousness of the illness and the health condition including consequences if regiment is not strictly observed. Cooperation is required from the patient and regular check-ups have to be observed to allow for effective chronic disorder treatment and management.
Health care system	The facilities and personnel involved in the diagnosis, disease identification, treatment and subsequent management need to be; well trained, well-staffed, be provided with appropriate equipment, and be conveniently place close to the patients.
Population	General education of the population on primary health care (preventative education) possibly as a school program will assist. General information should be readily available to the community before they develop chronic disorders. Lifestyle that cause these diseases must be clearly identified and defined for the convenience of the general population through awareness campaigns.
Policy	Government policy plays a critical role, for instance, the primary health care education could be introduced as part of the school syllabus. Bringing back Physical Education and extended sports competition will

	encourage physical exercises that will assist in cutting down on these chronic disorders.

Source: own construction by author

The different levels suggested by the Institute of Medicine may appear too farfetched, but if consideration is made of the preventative nature of these programs, they may work out to be cost effect on government expenditure on treatment of chronic diseases. Education policy may dictate that the population be educated on the effects of most of the preferred life styles which result in the chronic illnesses in the future of the patients. "Prevention is better than cure" as a strategy can be practiced through the stages listed as precursors of chronic illness. Bringing awareness at the early learning stages and constantly reminding people through education and other social and government programmes may intensify awareness leading to change in the life styles. The different stages that may be followed are listed below in table 3.5.

Table 3.5: Precursors of chronic illnesses

STAGES	DESCRIPTION
Social determinants	The lifestyle of the population before they become patients is important in the control of these ailments. These include among other things the diet (fast foods, too much fat and sugar) without exercising to cut down on extra fats and sugars.
Biological risk factors,	For the chronic illnesses that may be passed to other people (TB, hepatitis, lung cancer, etc) it is important that individual citizens be aware on how these diseases are contracted to avoid any associations that may result in these.
Lifestyles,	The general style of life for most citizens is not in anywhere informed by the likelihood of developing future health problems. Besides possible use of unhealthy foods (meats, alcohol, smoking) there is a need to educate citizens on matters of intemperance in general.
Preventive interventions;	The most effective panacea for chronic diseases treatment is preventative activities. Best from education and state sponsored deliberate awareness programmes specifying the effects of some of the life styles.

Illness occurrence	Regular medical check-up may assist in the early detection in the development of any of these chronic illnesses. This would assist in controlling, management and treatment before the ailments reach critical irreversible stages.
Illness manifestations,	By the time the symptoms are noticed, too often the disease has already taken root in the patient. Of particular concern is the time it takes, specifically low-income people who depend on public health facilities and cannot afford private health care.
Illness consequences	The delayed detection, delayed treatment complicated by defaulting creates an untenable situation for the disease, too often beyond repair. The general consequences of all chronic diseases are; life-long-drug-dependence, disability and even early death.

Source: own construction

These stages are critical for the continued surveillance of chronic illness development within the population at large. Longitudinal surveillance of chronically ill people will allow better assessment of both community-based and health care interventions, enabling more sophisticated analyses of what works (Frieden, 2004:94). Supplementing of current population surveys with information from electronic health records should produce more precise assessments of trends in improving quality of life for people living with chronic illness. Adequate early education of preventative methods and the type of lifestyle habits and practices that may lead to diseases, much would be saved in terms of costs and lives. The intervention section reinforces the preventive needs of people with chronic illnesses. In general, or globally, people who are chronically ill need all of the preventive services recommended for people who are not chronically ill, such as;

i.   Disease screening;

ii.   Immunizations;

iii. Lifestyle to promote healthful eating;

iv. Physical activity;

v.   Smoking cessation;

vi. Weight maintenance;

Frieden (2009:94) suggests that preventive interventions for certain illnesses are paramount. For example, physical activity is important for people with arthritis to maximize their mobility and diminish disabling symptoms. Among lifestyle interventions, the benefits of physical activity for people with chronic illness are best documented. The Institute of Medicine has reported and cited that physical activity trials have shown decreased symptoms, improved functioning, or both in people with arthritis, cancer, depression, and diabetes (Brault, 2009:58). Public health programs and health systems need to promote community-based care, including chronic illness self-management and professionally driven disease management, cognitive training, and complementary and tentative medicine. Frieden (2009:94) posits that though there has been investigation of the community-based-care-methods, which appear to be promising, more needs-based investigation is required. There is a need to know how to adapt to illnesses while meeting broad community goals cost-effectively. The availability of both effective preventive interventions and effective community-based care will take the program to the next level of scaling up effective interventions to all people. In the South African scenario, 71% of the black population is chronically poor (Jowah, 2013:) and is under serviced generally. This may explain the reason why service delivery protests have escalated in the country in general. The Metro District has had its own share of violent service delivery strikes because community expectations have not been met across all aspects. Therefore, public policies of chronic illness will be critical if the system seeks to optimize the independence of the chronically ill (Brault, 2009:58). These disorders unfortunately are found in people of different classes amongst both the poor and the rich citizens of the country.

3.6 CONCLUSION

Patients too often expect more individualized care by the clinicians which may not be possible in the practice with large numbers of patients. Public health systems in the metro have added disadvantages of no-fee paying patients who are chronically poor and not able to resort to any other means of supplying their chronic medicines. Consequently, large numbers of people descend on the public facilities and wait in the cure for long periods before they can get the assistance. This is further complicated by the under-staffing in the public facilities, especially if the patient needs to have a check-up before they go for their chronic medicine. Too often the public complain of poor service when it is actually staff and facility shortages, the clinicians have to deliver under these uncomfortable conditions. The most difficult part therefore is seeing patients, especially the elderly, stand for long hours sometimes without food

(specifically for diabetics) until they get their check-up and or medicine. The socio-economic conditions of the patients must be considered as important in the delivery of this service.

The answer to chronic management may lie more in the proper coordination of both public health care and community-based settings. Most care for chronic illness occurs in health care settings which are generally understaffed with very few medical practitioners. Nurses may not perform certain tests and conduct or provide certain prescriptions, putting a lot of pressure on the medical doctors. The absence of community infrastructure on primary health care and lifestyle and community-based interventions is of great concern. There is a need for the realignment of the current model which should provide dispensing of medicines in the community itself and not far from the customers who are the patients.

CHAPTER 4
RESEARCH DESIGN AND THE RESEARCH METHODOLOGY
4.1 INTRODUCTION

This chapter covers the research methodology by distinguishing the research design from the research methodology and then exploring how these interrelated functions were carried out during the survey. The population, sampling techniques, population size, data collection and analysis are all covered in greater detail.

4.2 RESEARCH DESIGN AND RESEARCH METHODOLOGY

Jowah (2014:76) distinguishes between research design and research methodology and suggests that these two are too often wrongly used interchangeably. He defines research design as; a blueprint or program that clearly outlines what should be done and at what stage or level. The research design is essentially a list of activities of what is expected to be done during the research process. This explains the logical sequence to be followed during that process from the beginning up to the end. Consequently, the research design assists with the identification of what needs to be done, the identification and allocation of resources, deciding on the time lines and type of activities. Clearly indicating what is to be done.

Research methodology is defined as an explanation on how the activities identified in the research design (the road map) will be executed. Techniques and tools are needed to operationalize the activities that have been identified in the design, and the first part of the how is whether qualitative or quantitative research methodologies will be followed. Superficially the difference is simply that qualitative is not quantifiable and relates largely to perceptions and opinions. Whereas quantitative is quantifiable and is generally referred to as natural science-research-type. Qualitative is the generic research approach in research in social research to which research takes its departure point as the insider perspective on social action (Babbie and Mouton, 2001 :55). This paradigm aims at understanding people rather than explaining them, people are conceived not primarily as biological organisms but as conscious self –directing and symbolic human beings. The two, research design and research methodology are constantly interchangeably used. The essentially differences between the two are illustrated in table 4.1 below.

Table 4.1: Differences between research design and research methodology

Research design	Research methodology
Strategic master plan	Operational or execution plan
Emphasises the road to be walked	Emphasises how the walking is done

Emphasis on what results are expected	Emphasis on tools/techniques for results
Guided by research problem / question	Guided by the tasks and work packages
Focuses on rationality of research	Focuses on procedures and processes
Focuses on the "what should be done?"	Focuses on "how should it be done?"

Source: Jowah (2014:77)

The author states that the research methodology is "derived from the stipulates of the research design," meaning therefore that the methodology is the next step after setting up the design. The methodology is the design in operation or in action. The study will assess the accessibility, appropriateness, flexibility and adaptability of this treatment service. It is argued that the strength of interpretive approaches lies in the;

- prolonged engagement of the evaluator with the programme,
- the breath of information that is considered to be relevant to the evaluation,
- the ability of the evaluator to focus on issues relevant to the programme, and
- the flexibility to incorporate issues into the evaluation design that emerge from the contact between the evaluator and different programme stakeholders (Wong, 2008:365).

Therefore, the researcher is going to use qualitative research methods. Qualitative research is the study of people in their natural environment, it tries to understand how people live, how they talk and behave. Qualitative research is the gathering of information intended to explain human behaviour (Robb, et al 2011:20). The researcher is going to use a combination of qualitative and quantitative methods of data collection. The decision to use the different methods together (in one research) was to try and benefit from the merits of both systems because of the nature of the research required. The differences between the two research methodologies are outlined in table 4.2 below.

Table 4.2: Differences between qualitative and quantitative approach

Quantitative [positivist approach]	Qualitative [anti-positivist]
1.Focus on observable behaviour	1.Focus on laws of relationships
2.Focus on universal relationship laws	2.Focus on human experience
3.Focus on causes of phenomenon	3.Focus on experience of phenomena

4.Uses the natural science model	4.Uses the experiential model
5.Is aided by firm checks and balances	5.Does not have firm checks and balances
6.emphasis measurement and analysis	6.emphasise investigating processes
7. have natural science-built structures	7.have socially built nature of reality
8. emphasizes causal relationships and the variables	8. focuses on relationship of object to researcher
9. ideal for objective data with numbers	9.uses subjective data from opinions
10. uses rigidly structured methods	10. uses flexible exploratory methods
11.tries to understand from outside	11.tries to be involved with subjects
12. needs a static environment	12. work with non-static realities
13. uses of particularistic approach	13. uses holistic [wide data] approach
14. uses large samples	14. Uses small samples

Source: Jowah (2014:23)

The mixed methods approach here will capture the benefits of the two different research methods. A relationship between the type of service provided and the response from the patients seen in their behaviour. Contrasts opinions with objective data while involving the subjects in a flexible way.

4.3 TARGET POPULATION

The target population comprised of the chronic medicine recipients at the Metro District hospital and clinics who have a record of defaulting. The District has a total of 58 clinics (receiving points) with just over 17 500 chronic medicine patients on the District's records. The population studied was the chronic medicine recipients waiting to get their medication on the days when the survey was conducted. On a regular basis these patients' files are separated (kept separately) in a pattern that shows the defaulting patients. Defaulting patients may have to see a clinician even though they may not have been due for check-up, because of defaulting, their condition may have deteriorated. Chronic patients require close control and management of their medicine regiment, for this reason therefore defaulters need to be examined again, in case.

4.4 SAMPLING FRAME

It was difficult to determine the accuracy of the people on the hospital records for a number of reasons – firstly, some had defaulted for a period exceeding three months, thereby causing concern if;

- they had travelled and were outside the district receiving from other districts since there are no inter-district records,

- they had infect passed away and no information on their passing away had been communicated to the district,

- they had discontinued because they had opted for alternative treatments – buying directly from pharmacies, or

- simply discouraged / resigned because of the incurable nature of the illness and were tired of taking medicines.

The number 17 500 was therefore merely the records the different clinics and the hospitals kept since there is no follow up of the movement or relocation of the patients. Some patients relocate for certain periods without reporting that they will not be coming for their medication, some may continue (without defaulting on the oral intake but from a different location – out of the district). The records therefore make reference to defaulting as it refers to the service points where they are registered, this makes defining of defaulting a bit more complicated. However, 17 500 files were considered as the official sample frame purely based on how many files were at the different service points.

4.5 SAMPLING METHODS USED

At the pharmacy the medicine was sorted out in groups (on the day of collection) according to the type of illnesses, the list of those with defaulting history had been provided by the pharmacists who helped with the research. The first practical problem encountered was the fact that "not all recipients turn up" on the prescribed day, sometimes the day fell on a weekend. Secondly; some of the recipients sent "helpers" to collect for them, especially where they had no appointment to see the doctor. Thirdly; there was no way of knowing who was coming to the service point on what day, making it difficult to decide on the sampling method. The sampling method was assisted by the pharmacists in that, all people coming in for their medicines have their files ready for collection any day. The patients waiting to collect their medication for that day will therefore report (take their file from the hospital administrators) and take them to the pharmacy. These patients (present on the days when the research was conducted)

were selected to fill in the questionnaires. Those who were not able to read and or write for themselves were assisted in filling in the questionnaires. There was no racial stratification used as the respondents in the Metro District are exclusively blacks staying in the Khayelitsha area. The sampling technique used was the non -probability sampling technique, purposive or judgmental sampling, this was based on the researcher's knowledge of what the prospective respondents could contribute towards the research study (Banerjee 2007:16). Essentially only the defaulters contributed to the research since the files of defaulters were separated from those who regularly collected their medicine. The possibility that a particular element of the population will be selected was unknown and could not be determined because no one knew which patients were coming and on what day. The selection of the participants was therefore subjective to a degree.

4.6 SAMPLE SIZE

Because the respondents can be found at one place when they come to collect their medicines, large numbers of respondents can be accessed at very little cost (Banerjee 2007:16). Besides, the higher the number of respondents the greater the possibility of reducing the margins of era. Just over 2000 (2036) respondents filled in the questionnaires. This constitutes 12% of the sample frame, every one of the 58 outlets responded to the request to provide questionnaires to the patients. Blomberg (2008:178) suggests that a sample must bear some proportional relationship with the population, the bigger the sample the better the results.

4.7 DATA COLLECTION METHODS USED

Questionnaires were administered (by trained pharmacy assistance at the medicine dispatch points) to the recipients who had defaulted previously (the pharmacists keep the forms separately), the last month or months. After guiding the respondents on how to fill in the forms, the questionnaires were collected, cleaned, edited, coded and the data was captured with the help of the hospital admin staff. Whatever was incorrectly filled in was discarded (close on 200 questionnaires) and data from the questionnaires that were properly filled in (2036) was captured. The questionnaires were filled in under supervision to reduce the number of faulty responses (Babbie &Mouton, 2007:166).

4.8 DATA COLLECTION INSTRUMENT

A set of questions logically and purposely put together was used as the research instrument. This questionnaire was divided into three (3) sections, namely; Section A which covered the biography – deemed necessary to make sure that the respondent qualifies. The respondent had to be a chronic patient registered to collect medicines

within the district. Section B covered largely Likert scale responses where the patient (defaulter) had to rank in order of importance the causes of their problems or reasons why they are not always able to collect their medicines regularly. Section C was exclusively semi-structured open-ended questions which allowed the respondent the opportunity to discuss freely their problems. The last part constituted largely the qualitative analysis.

4.9 DATA ANALYSIS

The Excel Spreadsheet was used for analysis because of its effectiveness and user-friendly qualities. Welman and Kruger (2002:194) state that the collected data will be processed into information by converting it to charts, graphs and tables for easy reading and comparison where necessary. Each chart, graph or table will be explained in detail to provide a comprehensive analysis of the data and information (Babbie and Mouton, 2007:174-175). The target population was chronic patients who had defaulted at least once as be hospital records in the pharmacy and the doctors where these patients were (if) expected to see the clinician. The target population was scattered in different service points.

4.10   CONCLUSION

The study had numerous challenges in that the researcher and those assisting did not have control over the sampling specifically because of the unpredictable nature of the research objects. However, the number of people interviewed was increased, benefit of availability and the many people (pharmacist assistance as well as the subjects under study). The large sample collected gave a degree of reliability and validity of this research to the extent that it has been fairly easy to make generalisations on the findings. There were various steps for research methodology adopted for this study which have been outlined in this chapter and evidence of which is in the next chapter. The problem statement and the research questions are adequately dealt with in the findings as is detailed in the next chapter. The next chapter presents the summarized findings by descriptive analysis followed by the discussion of the primary findings in keeping with the objectives.

CHAPTER 5
DATA ANALYSIS AND INTERPRETATION

5.1 INTRODUCTION

This chapter analyses and discusses the findings of the research, which are illustrated as graphs, bar charts, pie charts and tables. The primary objective of the research was to identify probable causal factors for the defaulting on chronic medicine by chronic patients who are otherwise known to be at risk from a medical perspective. The setting for the research should be understood from both the economic as well as the social aspect of the communities in this Metro District. The population exclusively black emanating largely from the remnants of the apartheid years characterised by high levels of semi-literacy, unskilled and largely unemployable. The majority of whom stay is self-built make shift accommodation made from zinc sheets, planks and cardboard, with barely enough money for other luxurious needs and comforts. Because the bulk of the residents are classified as indigenes, the government provides to them free medical services provided through public health centres. There are different types of these centres, starting with the clinics that accepts the patients in earlier stages and pass them to hospitals for any complicated issues that may need specialised diagnosis. All those identified as suffering from chronic ailments are therefore referred back to the clinics from whence the treatment and management of the treatment regiment is managed. At the clinics, generally nearest to the patient's residents, the chronic patients report at regular intervals for both check-up and collection of chronic medicine. It was at these numerous outlets that the survey on possible causes for defaulting was conducted.

5.2 THE EMPIRICAL INVESTIGATION AND OBJECTIVES

Our study showed that chronic disease patients have a first contact with health care professionals at the primary health care level in the study area. The main barriers mentioned by both the health professionals, care workers and chronic disease patients are lack of knowledge on chronic diseases, shortage of medication and shortage of resources in the clinics which causes patients to wait for a long period in a clinic. Health care workers are poorly trained on the management of chronic diseases. Lack of supervision by the district and provincial health managers together with poor dissemination of guidelines has been found to be a contributing factor to lack of knowledge in nurses among the clinics within the study area. Both patients and nurses mentioned the need to involve traditional healers and integrate their services to early detect and manage chronic diseases in the community.

5.3 DATA ANALYSIS

Freedman (2004:4) states that data analysis is a process undertaken to convert the raw data into usable information by converting the data to illustratable diagrams from which relationships of the variables are identified. The collected data was edited, cleaned, coded and then captured onto an excel spread sheet from whence the charts (bar, pie), graphs, histograms, and frequencies distribution tables were constructed. The following is a detailed report on the relationships identified between the variables and the ensuing explanation of the illustrations.

5.4 THE METHOD USED TO REPORT

The reporting format has been deliberately structured to provide specific information for specific questions in the order in which they appear in the research instrument. The need for adopting this method was specifically to avoid overshadowing other questions and responses and the reporting. The intention is that all the high points will therefore be covered under conclusions and recommendations which appear in the last chapter. The format therefore involves the question or statement to be ranked, as it appears in the research instrument, this is followed by a response on a question by question basis. Since the questionnaire was divided into three sections namely; section A – Biography, Section B- Likert scale and Section C – open ended questions, this format is followed in the reporting. The findings are reported under responses with each response followed by an illustration as constructed from the research data.

5.4.1 Section A: Biography

This section focussed on the biographical information used to qualify the respondents and determine those that may not be ideal for the research. This section dealt specifically with the biography of the respondents, primary to investigate the suitability of the candidates for the survey. The target was for the chronic patient that they default their medication**.** The section therefore sought to establish the suitability of such candidates for this survey.

Question 1. What is your racial group?

It was deemed necessary and important that the racial group of the recipients be clarified which led the researcher to draft this question.

Response; Though the district is classified as an African only district because of the previous (apartheid) residential systems, it was thought necessary to check if there were any other people classifying themselves as otherwise, would be using the same facilities. The separation by race as it is now being purely historic, there are numerous coloureds living in the vicinity of the Metro District and there are no restrictions limiting

people from living or collecting from whatever place is most convenient for them. The response is illustrated in figure 5.1

Figure 5.1: Racial groups participating in the survey
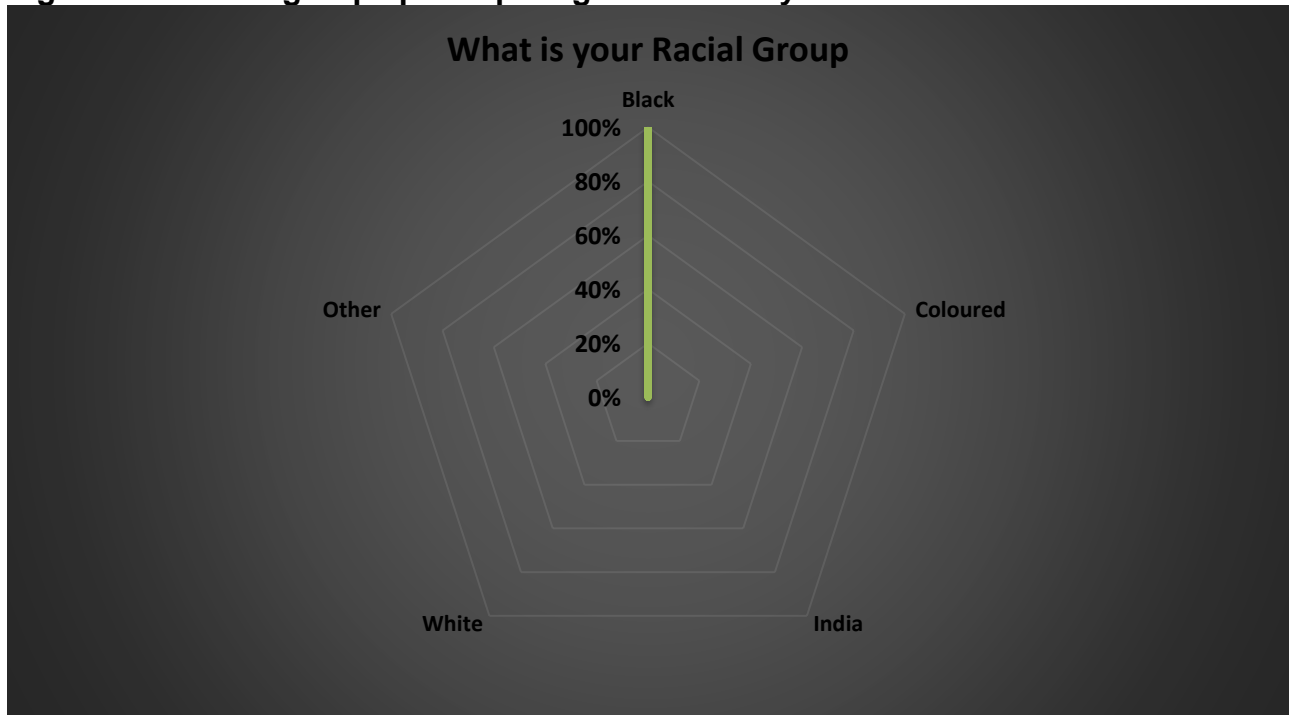
Source: Author's construction

As indicated above, all the respondents who participated in this research were blacks (100%). This therefore reduces the complexities of differing cultural issues around the subject. It is assumed that the blacks staying in this district will be largely if not exclusively Xhosa. The language in the district is Xhosa and assumptions are made that all would understand and therefore adapt to Xhosa culture and practices.

Question 2: If other please specify in dotted line ahead

Response; Understanding that South Africa is a country with different races, the researcher realised the importance. It was estimated important that the racial group of the recipients be clarified which led the researcher to draft this question. The assumption that amongst the targeted group for the research some of them could not fall under the given scope led to this follow up question. From the results obtained from the research conducted by the researcher, all the participants were black.

Question 3: Indicate your age group in the boxes below

Response; This question was asked with the belief that prevailing information in medical circles indicates that chronic diseases tend to increase with the increase in age. In most instances young people suffering from chronic diseases are far apart, though there was no specification as to which chronic ailment the individual had. Figure 5.2 below shows the results obtained from the research conducted.

Figure 5.2: Age group

INDICATE YOUR AGE GROUP

50+ 7%
<20 10%
41-50 15%
20-30 36%
30-40 32%
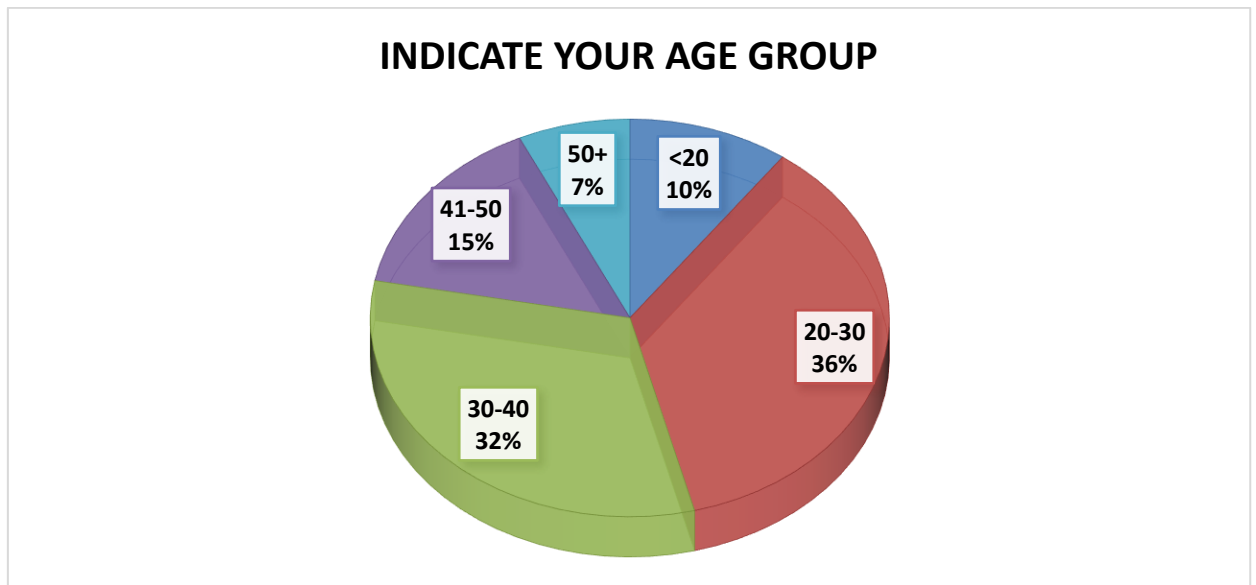
Source: Author's construction

Most of the respondents were aged between 20-30 (36%), followed by the defaulters between the ages of 30-40 (32%), followed by age group 40-50 (15%), followed by age group <20=10% and the least being the age of 50+ at 7%. Figure 2 also shows that the hospital does not have many older defaulters as shown in the age groups 50+ years. The findings disagree with the known facts on the ground and the hospital records, this led to an assumption that some of the people may have been present here to collect medicine on behalf of patients who could not come.

Question 4: Please indicate your gender

Response; It was deemed important that the gender distribution of the recipients be clarified, and hence this question was asked. The perception that most defaulters of chronic medicine recipients (patients) in the Metro District of the Western Cape are females was the pushing factor which made the researcher to ask this question. The expectations from the research were that it would indicate that more women are defaulters; the respondents' answers are illustrated in figure 5.3 below.

Figure 5.3 The gender of defaulting respondents

Indicate your gender

	Female	Male	Others
	57%	41%	2%
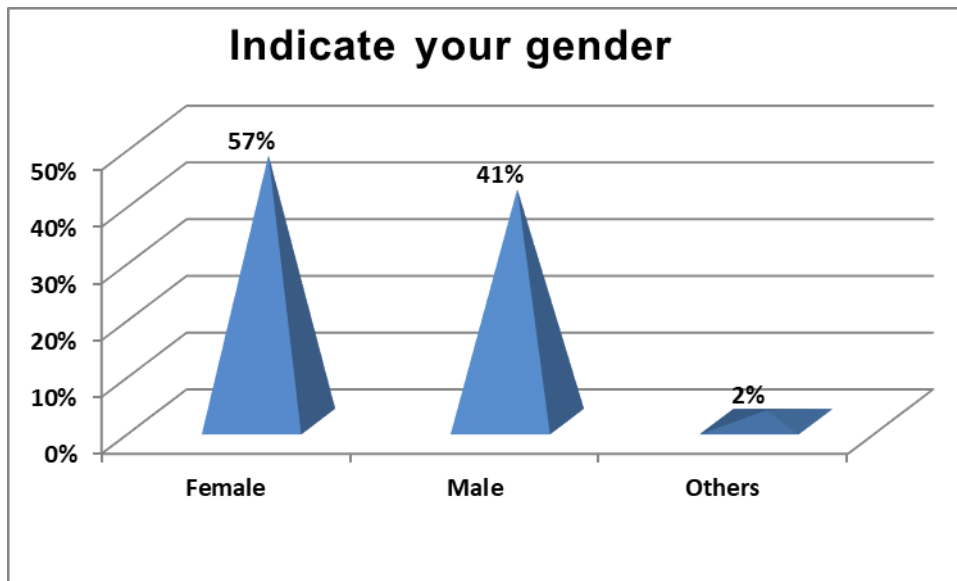
Response; Source: Author's construction

As illustrated in Figure 5.3, the results show that 57% of those responding were women with 41% being male. There is a remainder of 2% that filled in for other, this may be simply by omission or by indicating, other. The researcher's perception seems to have been proved correct as shown by the results in the diagram above. It can be generalised therefore that more women default that males for the collection of their chronic medicine.

Question 5: If other please indicate below.
Response; Since South Africa recognizes the existence of homosexuality and lesbianism, some respondents would classify themselves as such, hence the question. As shown in figure 5.3 above, there was 2% who responded that they were other.

Question 6: What is your marital status, please indicate below
Response; An assumption that most chronic patients for diseases like schizophrenia and depression would be single or divorcees led to this question. This question was drafted due to the researcher's assumption that most of the defaulters at the hospital under study were divorcees or widows. The results obtained are presented below in figure 5.4 below.

Figure 5.4: Marital status

Marital status

Category	Value
Common law partners	1%
Widowed	4%
Divorced	8%
Married	39%
Never maried	48%
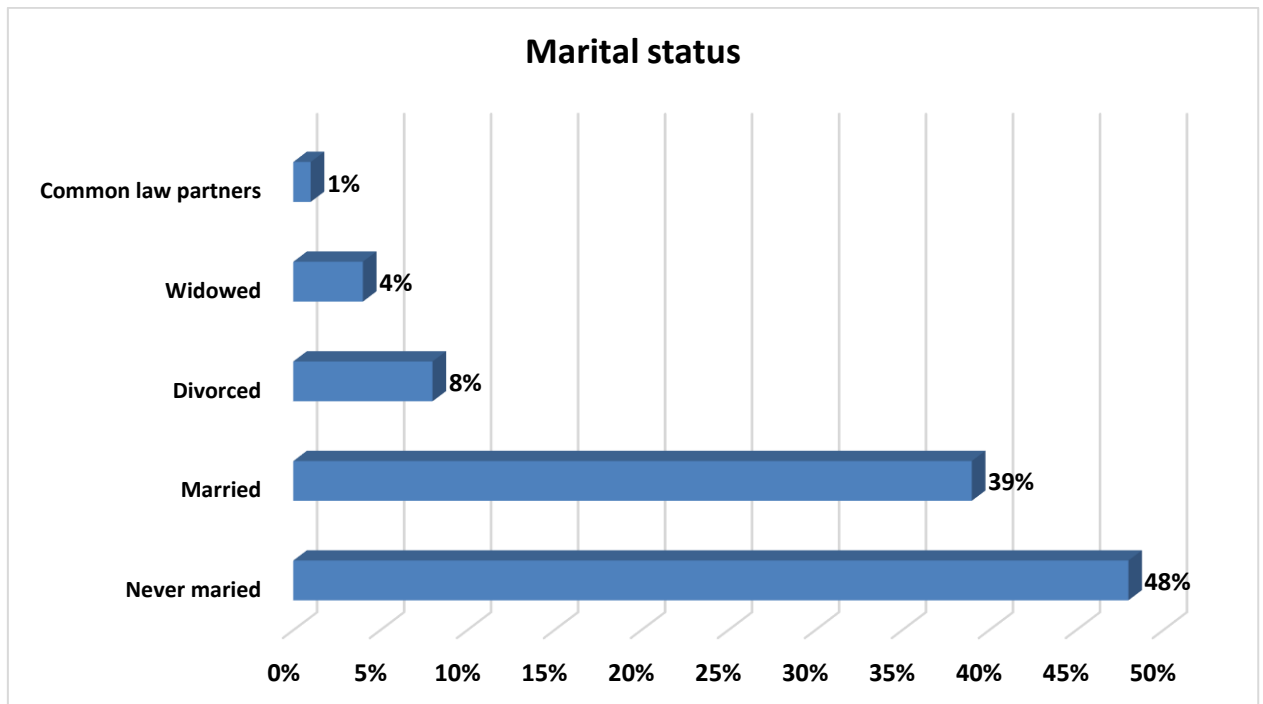
Source: Author's construction

Figure 5.4 above shows that most of the respondents have never been married (48%), followed by married people (39%), the divorced (8%) followed by widows (4%) with common law partners at 1%. No generalisations made be made except to say that the never married, the divorced and the widows (60%) do not stay with partners. Meaning therefore that there may be a relationship between staying single and have a chronic disorder.

Question 7: Please indicate your family status in relation to how you stay

Response; Most of the respondents were perceived to be single parents by the researcher. Through asking this question, the researcher had in mind that most defaulters were single parents or divorcees who stayed alone. Figure 5.5 below depicts the results obtained.

Figure   5.5: Family status in relation.

Please indicate your family status in relation where you stay

Single parent 33%	Parent + Spouse 24%	Live with family at home 29%	Live alone 14%
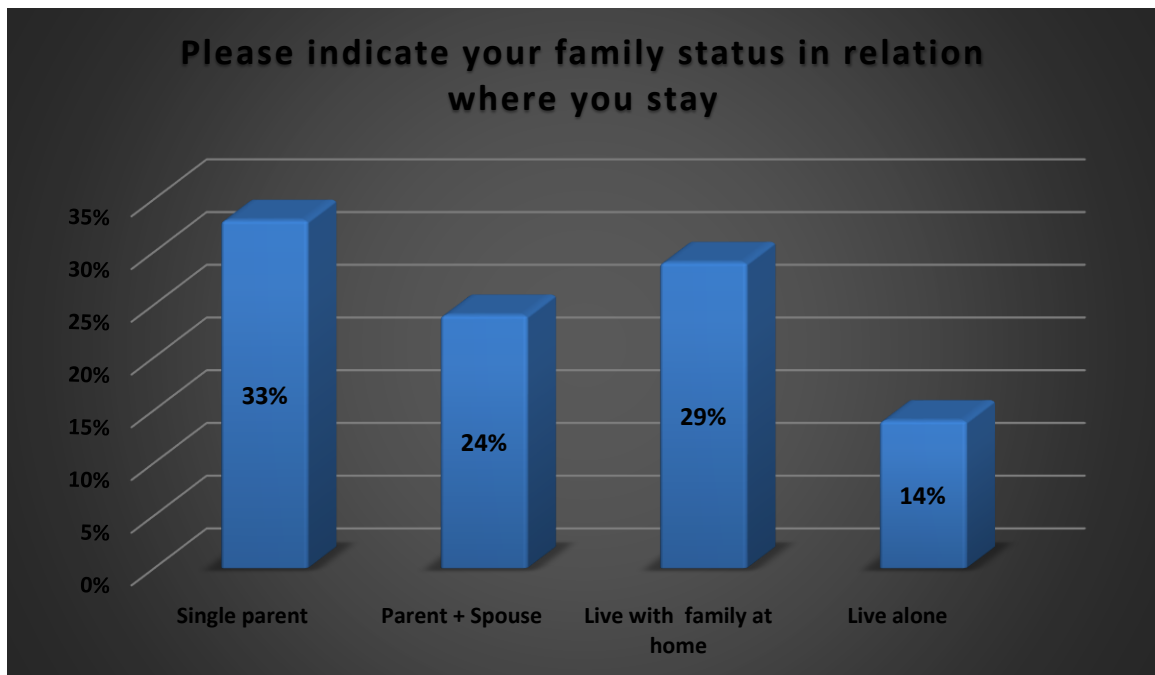
Source: Author's construction

Many respondents were single parents (33%), followed by those who lived with family at home (29%), followed by parent + spouse (24%) and the least are those who live alone at 14%. These results proved or clarified the researcher's perception. If those who are single parents mean the same as without spouse, living alone and living with family, this would total 86% who are not with spouses. Another generalization may be made that more people who do not have spouses seem to have higher levels of chronic diseases.

Question 8: What is your highest educational qualification?
Response; An estimated 57% of South Africans do not have a matric certificate, immediately flashing the light on the levels of literacy, let alone employability. This question tried to establish the levels of employability and thus dependency on government public facilities for their chronic medicines. The level of education would also assist in judging the level of understanding of the type of illness and the causes. Figure 5.6 illustrates the responses.

Figure 5.6. Qualifications of the respondents
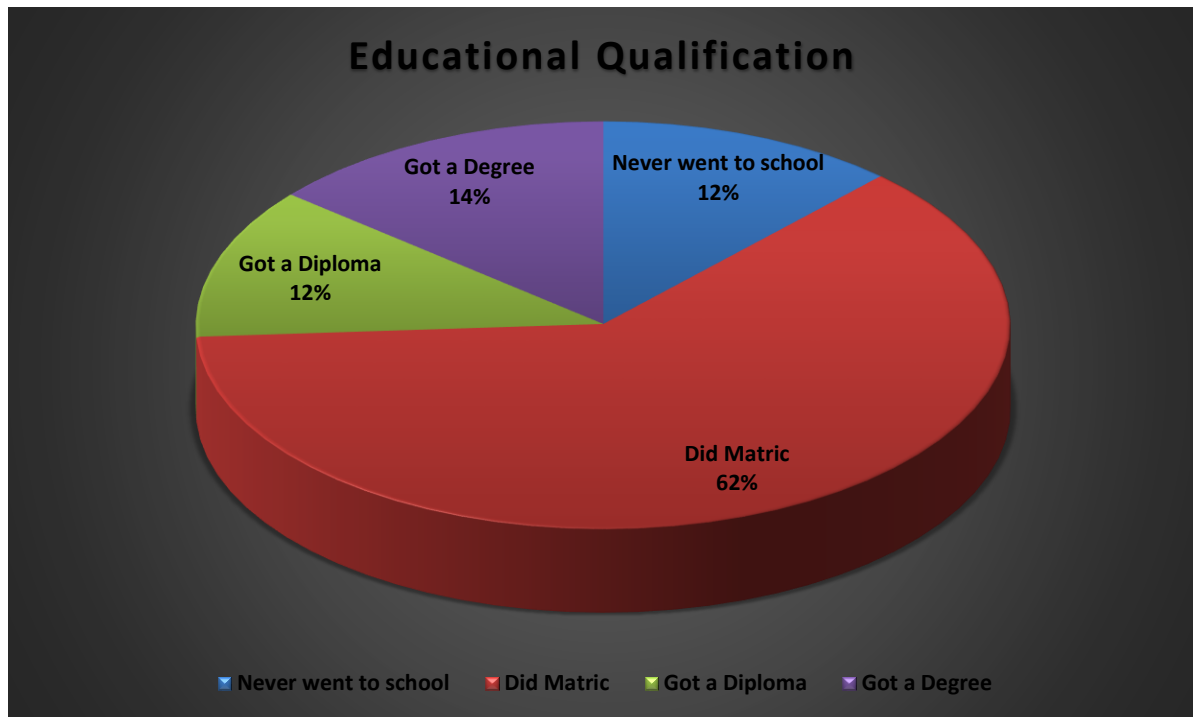
Source: Author's construction

The question had not explicitly required the respondents to state if they had passed matric, but the indication is that 62% did or got up to matric. It can be generalized that the majority had some secondary school education, the disappointing figures are to do with those that have tertiary education at 26% (12% diploma and 14% degree). This gives a ratio of one graduate in every five citizens in the district (1:5). This is disturbingly low and may create a serious problem in educating the community on primary health issues.

5.4.2 Section B: (Likert scale)

Pre-statement or prescribed statements were used constructed based on the literature review on defaulting of chronic patients. These statements were to be ranked by the respondents on a 1-5 scale; 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. This section was divided into sections and the statements to be ranked focused on the specific areas and subjects for which evaluations were required.

Statement 1: I live alone and have no one to remind me

Response; It was perceived that most of the defaulters stayed alone and therefore would have no one to remind them to go for their chronic treatment on the correct

dates. This however had been addressed partially in the first section above. The results are shown below in figure 5.7.

Figure 5.7: Respondents staying alone

I live alone

- Strongly disagree: 39%
- Disagree: 16%
- Neutral: 10%
- Agree: 16%
- Strongly agree: 19%
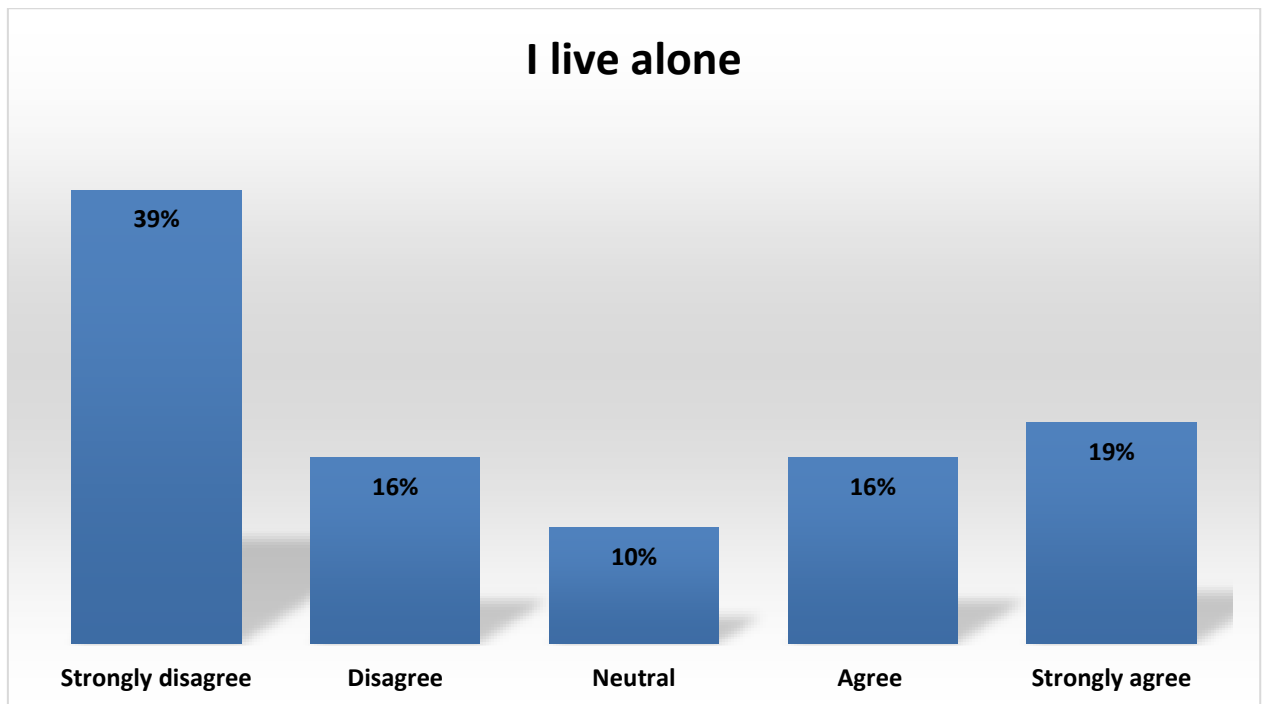
Source: Author's construction

Though the question had not specifically asked who they stay with, 55% of the respondents disagreed (39% strongly disagreed and 16% disagreed). It can be generalized here that most (55%) do not stay alone even though it is not stated here who they stay with. The remainder comprises of 10% of those who don't seem to know their status whilst there are 35% (16% agree and 19% strongly agree) who agreed that they stay "alone."

Statement 2: I never really forget but am always busy
Response; Some of the recipients may have other activities to attend to, chief among them is they may be working, this may make it difficult for them to get time off. Employees are given a certain number of days "paid sick leave" which may be paid for if one presence a sick note from the clinician. Whether the "will be busy" was in reference to those who work, or to other commitments, this was never asked for. The results obtained are presented below in graphical format as figure 5.8.

Figure 5.8: Always busy

I never really forget but am always busy

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Number	66	36	20	38	40	200
Percentage	33%	18%	10%	19%	20%	100%
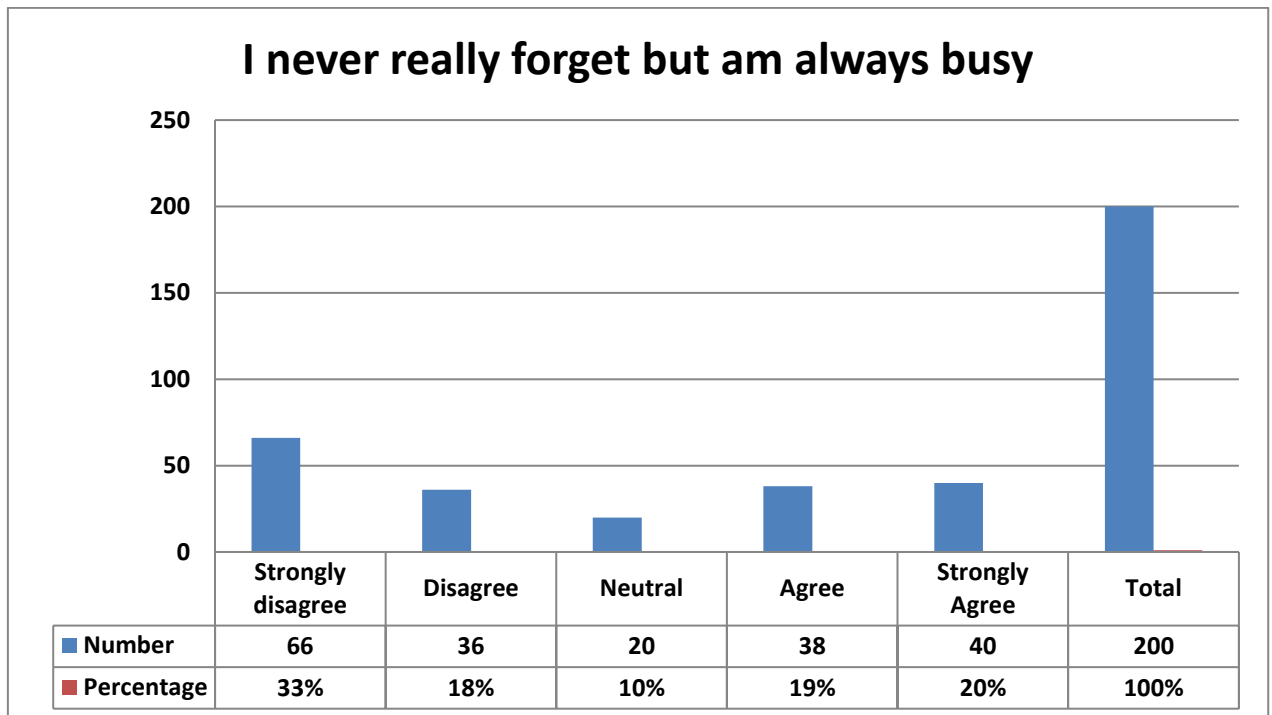
Source: Author's construction

Figure 5.8 above shows that 33% strongly disagree and 18% disagree (51%) with the ambivalent at 10%. The statement itself sounds confusing since it has two variables that could have been independent of each other, the likelihood is that statement may not be reliable and may not be valid. The remainder of 39% in total say that they don't forget but they will be busy.

Statement 3: I know I must go but I always mix up on dates
Response; The assumption was made that some patients would mix up their dates, and hence the earlier question on whether they stayed with someone who would remind them. The responses are given in the pie format below as figure 5.9.

Figure 5.9: Always mix up on dates

I know I must go but I always mix up on dates

- Strongly agree 15%
- Agree 16%
- Neutral 15%
- Disagree 13%
- Strongly disagree 41%
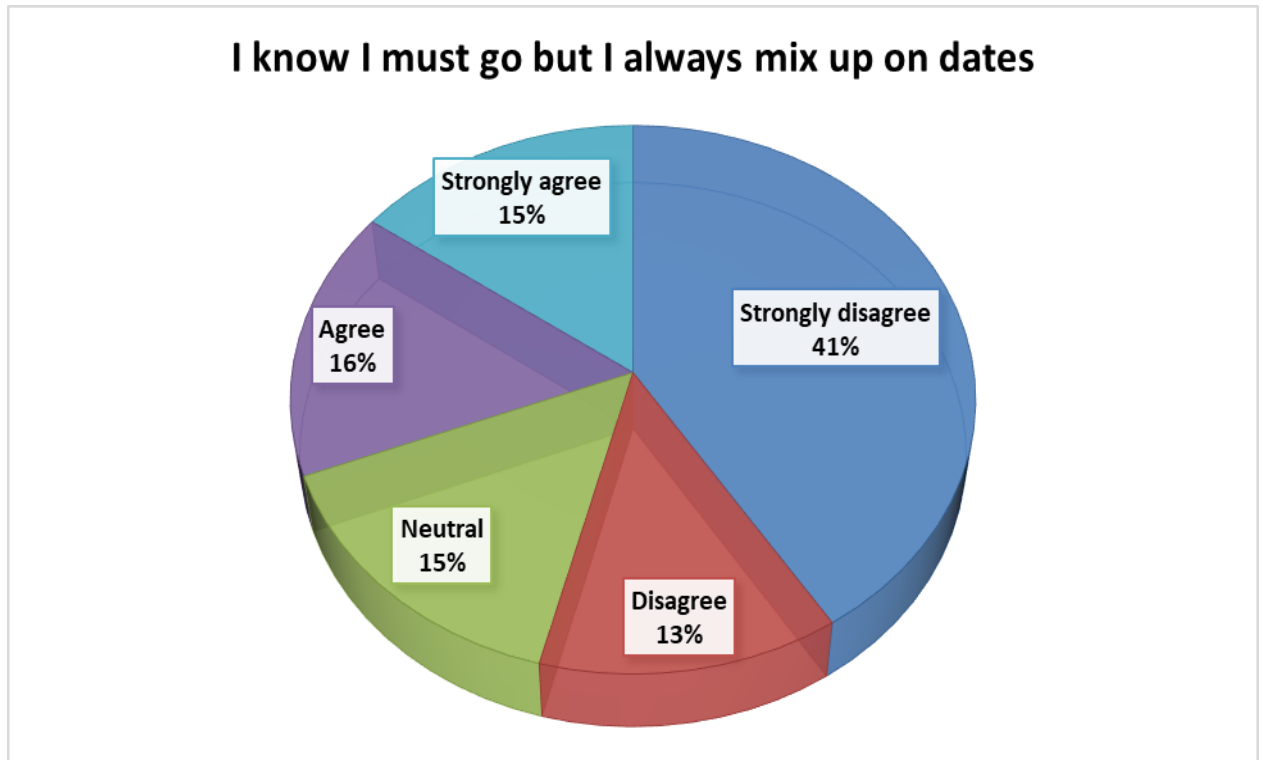
Source: Author's construction

For the first time neutral has increased by 5% to 15%, with those disagreeing with the statement (disagree – 15% and strongly disagree – 41%) totalling 54%. It can be generalized that most of the respondents neither forget nor mix up their dates, it is not clear if they ever default and at what frequency. Only a total of 31% agreed that they sometimes mix-up their treatment dates.

Statement 4: I live very far and find it difficult to go up to the clinic
Response; The researcher perceived that most of the respondents stayed far from the clinics or points of medication collection. Having an assumption that most of the participants stayed far from the clinics, the researcher scribed the statement under discussion so that clarity can be provided. What the researcher obtained from the research is presented in graphical format in figure 5.10.

Figure 5.10: Respondents' distance from collection points

I live very far and find it difficult to go up to the clinic
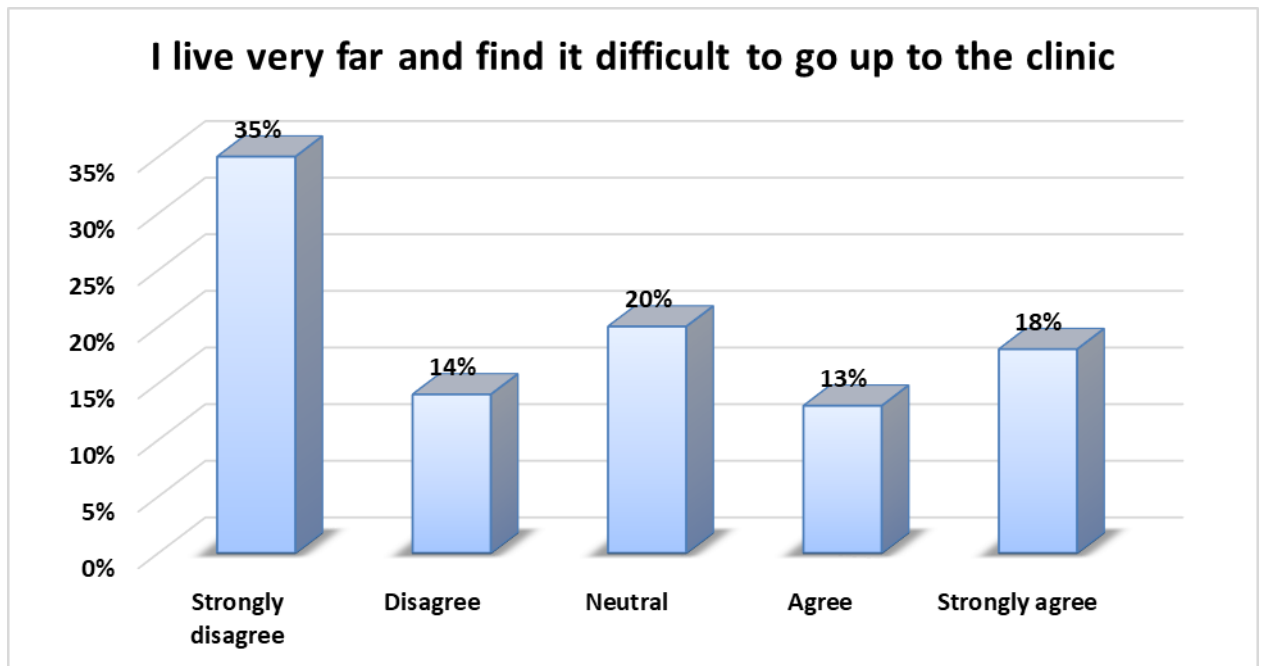
Source: Author's construction

As shown in figure 5.10 above, most of the respondents (35%) strongly disagreed, 14% of the respondents disagreed giving a total of 49%. Neutral is at an all-time high at 20%, with those agreeing a combined 31%. No generalization can be made even though those disagreeing (at 49%) are just below the half mark that would have allowed generalization. It can be concluded that a sizeable number of the recipients stay not very near to the collection points.

Statement 5: I only go to the clinic when I am not well

Response; It was assumed that most of the chronic patients do not go to collect medication if they feel that they are fine. Bearing in mind that most people go to the clinic or hospital when they are not feeling well or when they are ill, the statement sought to establish the probable reasons why a patient would not call on for treatment. Results of the findings are given below as figure 5.11.

Figure 5.11: Going to clinic when ill

I only go to the clinic when I am not well

Strongly agree 22%
Strongly disagree 31%
Agree 15%
Disagree 17%
Neutral 15%
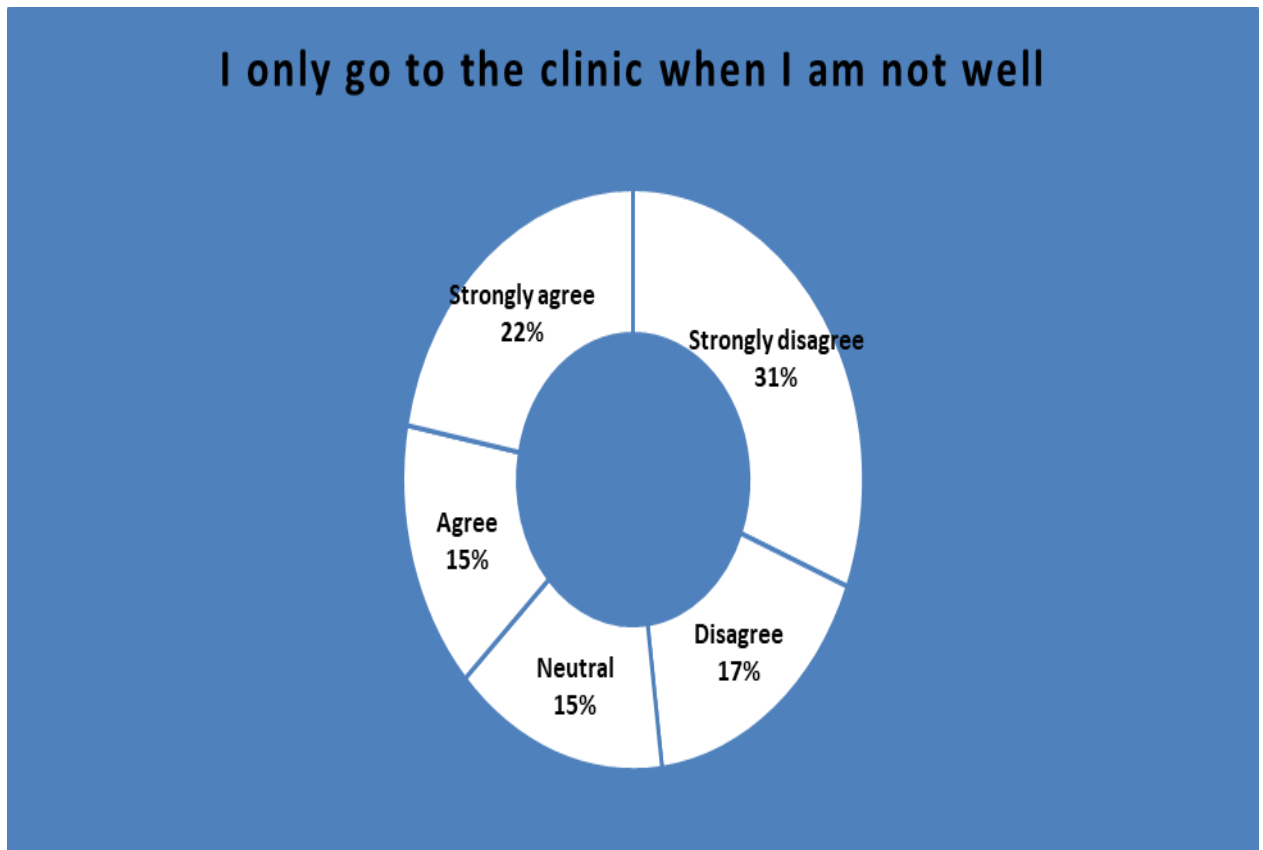
Source: Author's construction

Only 37% go to the clinic when they are ill (strongly agree – 22% and agree – 15%) , this may not be a positive sign because these patients do not some to know the need for regular treatment. An encouraging 48% (17% - disagree and 31% - strongly disagree) give the impression that they may know the critical nature of chronic illness and do not wait for symptoms for them to go for their treatment. The numbers are disappointing, possible more information sessions may be necessary. It is not clear again why 15% of the respondents are neutral on such a clear and important issue.

REGULARITY OF MEDICINE

The failure to differentiate between acute and chronic ailments may be sending messages to chronic patients that there is something wrong with them. They may not understand why one patient will go with a specific illness and not long thereafter they are cured. They compare that with their incurable illness, and may begin to lose hope or develop other beliefs around their illness. Because chronic illness cannot be cured, it means treatment has to last for much long than treating and eventual curing of acute illnesses.

Statement 6: I don't always feel sick

Response; Effective and efficient treatment and management of chronic illness may give the impression to the patient that the patient has been cured. Every clinician would

love to know that the treatment is effective when the patient doesn't always feel sick, the hope is this should not be interpreted as a disease cured but rather a treatment well managed. Figure 5.12 below shows the perceptions or the state of the patients' feelings.

Figure 5.12: The effectiveness of the chronic medicine according to the patient
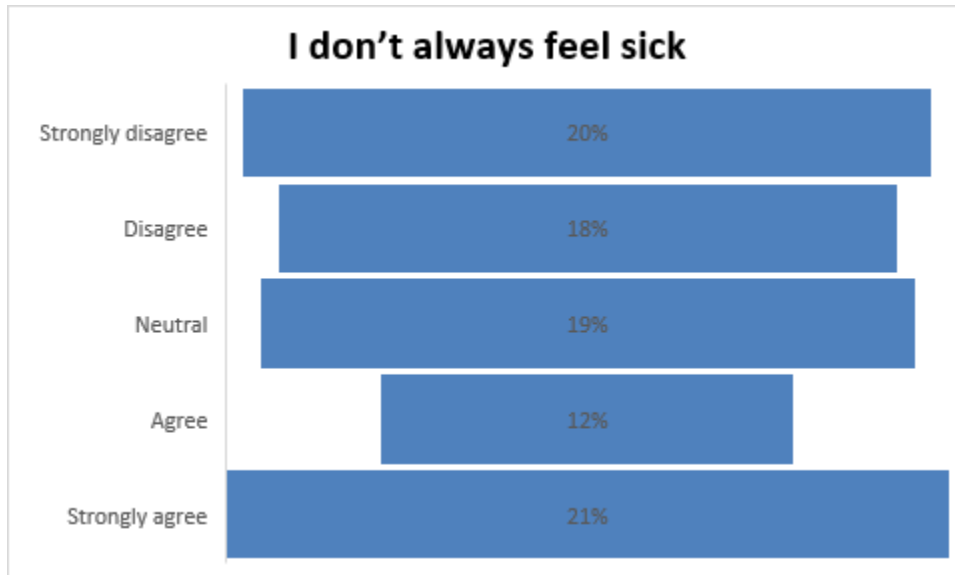
Source: Author's construction

Neutral has escalated to 19% with those disagreeing at a total of 38% (20% - strongly disagree and 18% - disagree). No generalization can be made on this issue, with those agreeing (benefiting somewhat from the treatment) standing at a combined 33% (strongly agree – 21% and agree – 12%), meaning that less people seem to be getting the full comfort of the treatment regiments. It should be cause for concern since there are no decisive "happenings" to allow for generalisations.

Statement 7: I think I am better now than before.
Response; It was perceived that those patients who consistently took their medication could have improved their health status. Since the researcher assumed that the patients or recipients of the chronic diseases' medication consistently took their medication, it was anticipated that most of the recipients would have been much better by now. It should be emphasized however that chronic illness needs life treatment and controlling. Figure 5.13 below clearly shows the results.

Figure 5.13: Improvement
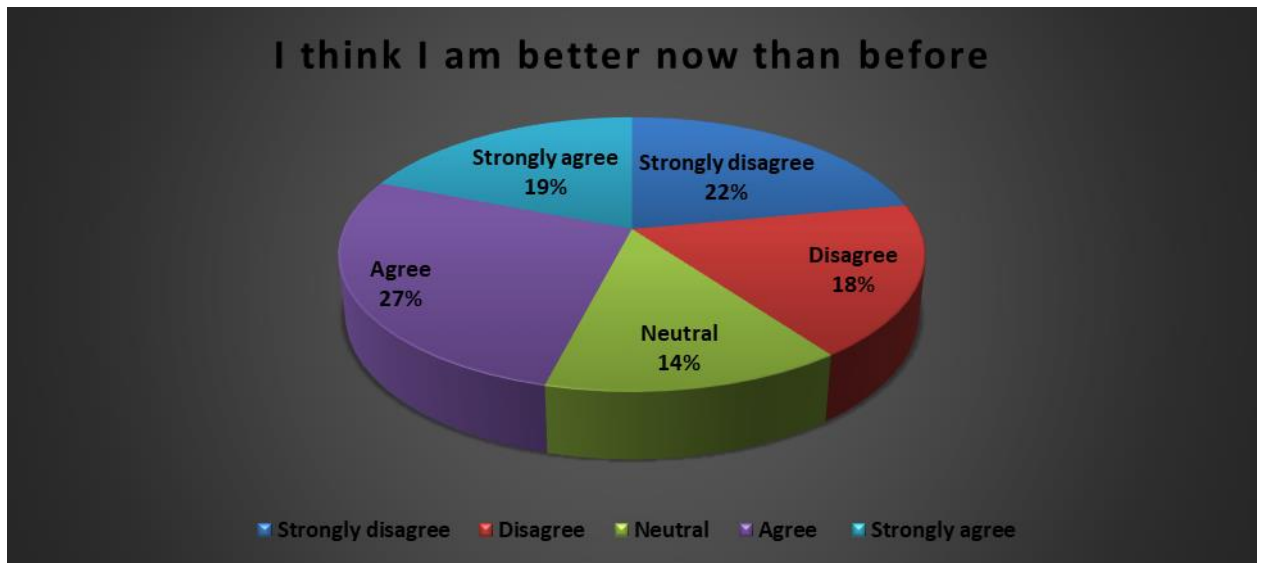
Source: Author's construction

Another statement where there is no certainty and neutral stays in the two-digit space at 14% whilst strongly agree (19%) and agree (27%) total 46% which is below the threshold of 51%. Strongly disagree (22%) and disagree (18%) total 40%, just below those agreeing. Again, there is no clear position suggesting that there may be failures with the treatment regiments, either because of drug inefficacy or purely because the patients may not be adhering on to the expectations in the management and controlling of the treatment process.

Statement 8: I only use the tablets when I am not well
Response; This statement meant to try and gauge the extent to which the patients were possibly tired of taking the medication and only resorted to it in response to symptoms. In as much as patients take medicine, it is not generally a pleasurable pass time for any one, only coming to it because one once to control or eliminate an uncomfortable symptom. One of the researcher's suspicion was that the patients were not taking their medication regularly as they could only take it when they are not feeling well. The results that the researcher obtained are given below in figure 5.14.

Figure 5.14: Using tablets
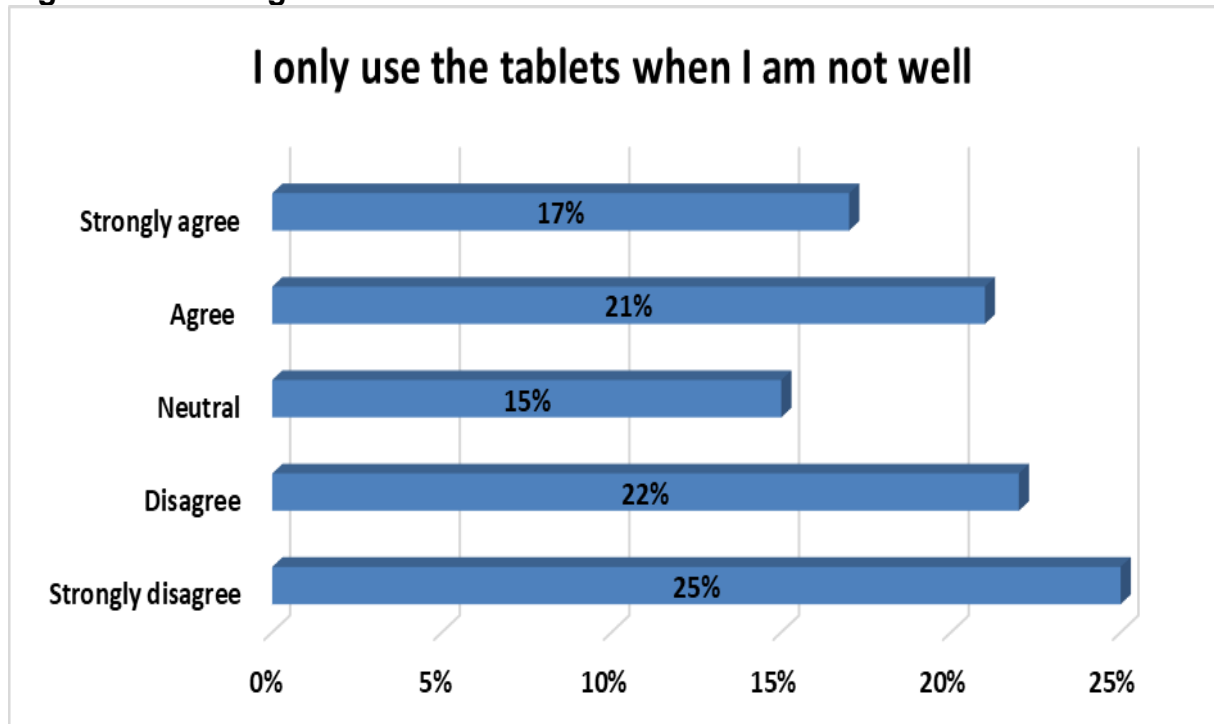
Source: Author's construction

As indicated in figure 5.14 above, one can deduce that most of the respondents (25%) strongly disagreed, 22% of the respondents disagreed (47%), 15% of the respondents chose to be neutral, 21% of the respondents agreed with the statement and 17% of the respondents strongly agreed to the statement that (total 38%), "I only use the tablets when I am not well." Again, there is ambivalence over the perceptions of the respondents in general. More training may be necessary to get the patients to adhere to the requirements of chronic medicine treatment.

Statement 9: I sometimes go for weeks without pain and I am healed
Response; It was perceived that some patients take long without taking their medication because they may feel healed. The statement under discussion came as a result of the assumption that the respondents were not taking medication more often as long as they did not feel ill. This might have been the cause for the defaulting by some of the patients as they always felt healed and did not need to continue with the drugs daily. The responses are illustrated in figure 5.15.

Figure 5.15: Taking long without taking medication
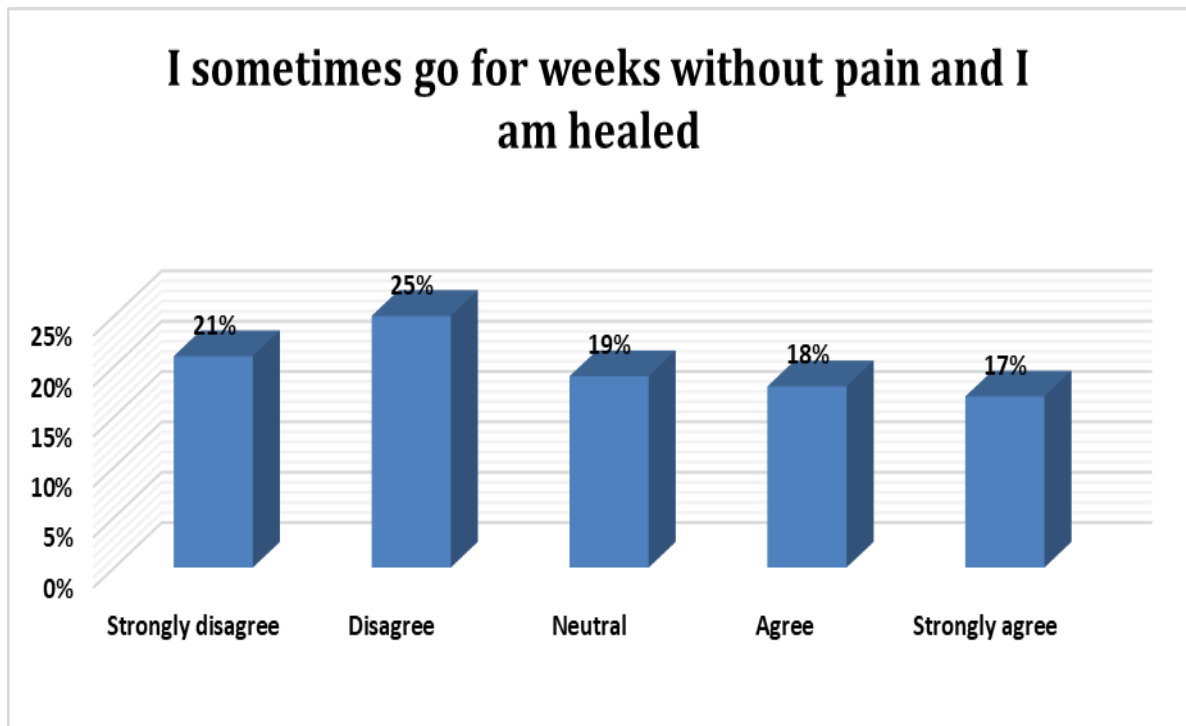
Source: Author's construction

According to the figure 5.15 above, 25% disagreed with the statement and 21% strongly disagreed totalling 46%. There is surprisingly a near tie between those ambivalent (19%), those agreeing (18%) and those strongly agreeing at 17% giving a total of only 35% agreeing. It is encouraging that there is 46% who seem to take their medication regardless of the feeling of pain or not. This may be an indication that they know the importance of managing and controlling chronic illness by faithfully keeping on to the guidelines for the treatment regimen. The effectiveness of any chronic treatment is determined by the extent to which the cooperation between the patient and the clinicians is maximized to the benefit of both.

Statement 10: Very often I skip my medication because I am well
Response; It was perceived that the patients skip medication when they are well. The researcher assumed that the respondents or the patients did not consistently take medication especially when they felt that they had recovered. It is amongst the causes of the continual illness of the patients as they are not consistent with their medication. Besides, this was expected, if accepted by respondents, to be a possible reason for defaulting by the patients. The responses are clearly illustrated in figure 5.16.

Figure 5.16: Rate of skipping medication because of "feeling well."

Very often I skip my medication because I am well
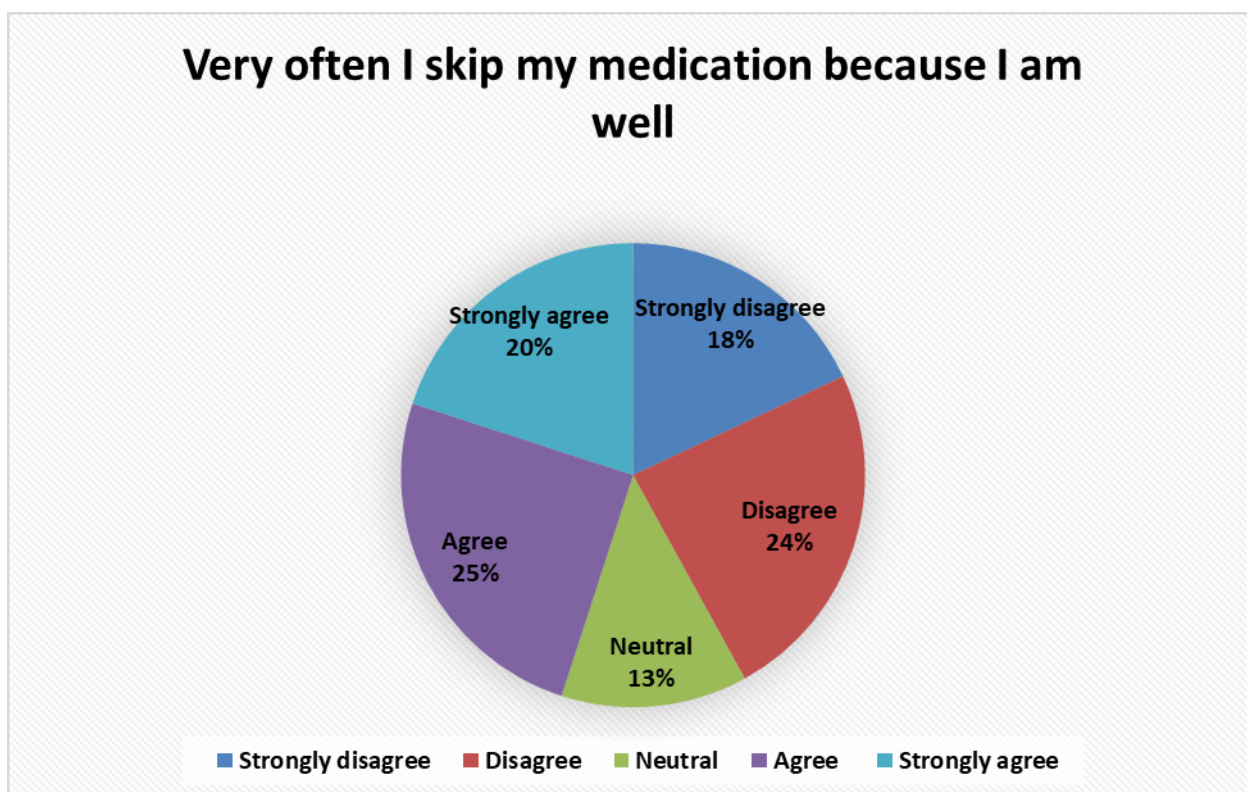
Source: Own construction

A close range between agreeing at total 45% (25% - agree and 20% strongly agree) and disagreeing at total 42% (18% - strongly disagree and 24% - disagree) showing one more time the absence of clear position of respondents on this issue. These are critical for the behaviour of the chronic patients as they help and not help in the controlling and management of the chronic disorders. It is still disturbing that neutral is at 13%, not sure why these respondents do not know what they do or feel. Again, posing the thought that it could be people sent to collect medicine on behalf of the patients. No generalisations of any form can be made on these issues except to suggest that more information to the patients may assist in controlling chronic illness.

THE DISTANCE AND MY MEDICATION

The length of the distance between residence and collecting point may be determined in a number of ways. The transport mode, if one would drive to the point, the distance may be considered to be short because of the time it takes. Use of public transport, if the patient has the taxi fare, may also mean that the distance may not be considered "very far." For those who may not have the taxi fare (common amongst the poor in the district), they may need to walk. This too is compounded by the age, they type of illness and the weather.

Statement 11: I live very far from the clinic and have no transport.
Response; It was perceived that most of the patients of the chronic medicine stayed far from the clinics or hospitals where they could get medication. With the assumption that amongst the reasons why chronic patients do not go to get medication was distance from where they stay and their medication collection point. What the patients said about this is reported in figure 5.17 below.

Figure 5.17: No transport
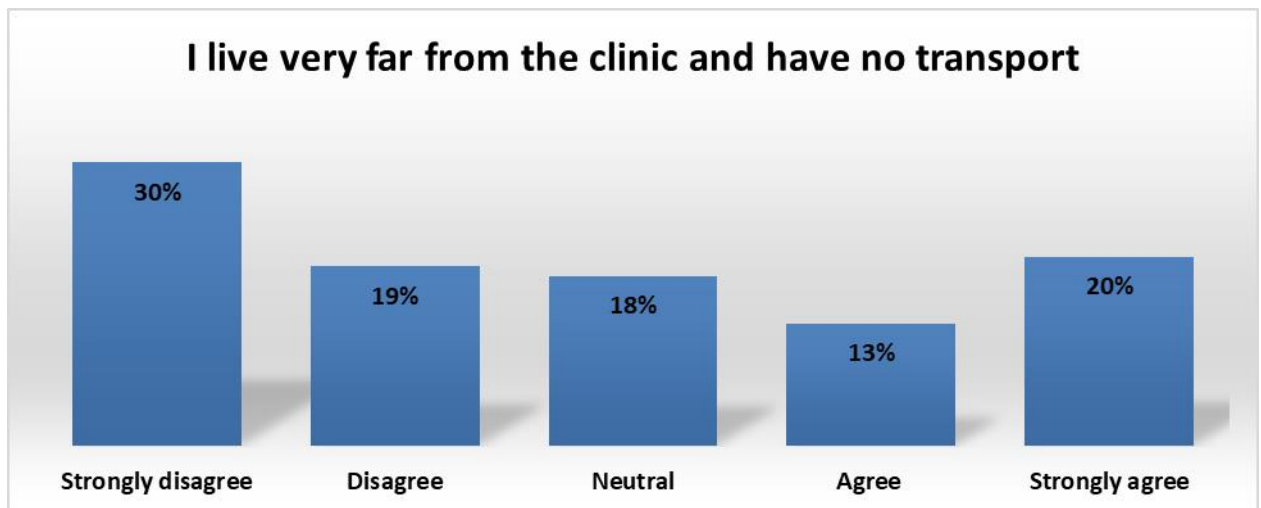
Source: Own construction

Only 33% of the respondents agreed (13% - agreeing and 20% - strongly agreeing) that they live far away from the collection points and that they do not have transport or transport money to go and collect their medication. In as much as it is true that some struggle to get to the collection point, it may be important to emphasise to them the importance of this medication to their lives. Neutral goes up slightly to 18% with a total of 49% disagreeing that they stay too far and that they do not always have money. Again, no generalization, but there is hope that these may not default because of distance.

Statement 12: I only come if there is someone to escort me.
Response; Some chronic ailments may need the patient to be assisted, chief amongst these would be severe arthritis, dementia and other such illnesses that may threaten the life of the patient. Having in mind the patients' history of not coming to collect medication, the researcher sort to find out what the reason behind was and decided to ask this question. Figure 5.18 shows the results.

Figure 5.18: Need for escorts

I only come if there is someone to escort me

(Bar chart showing:)
- Strongly disagree: 25%
- Disagree: 25%
- Neutral: 17%
- Agree: 19%
- Strongly agree: 14%
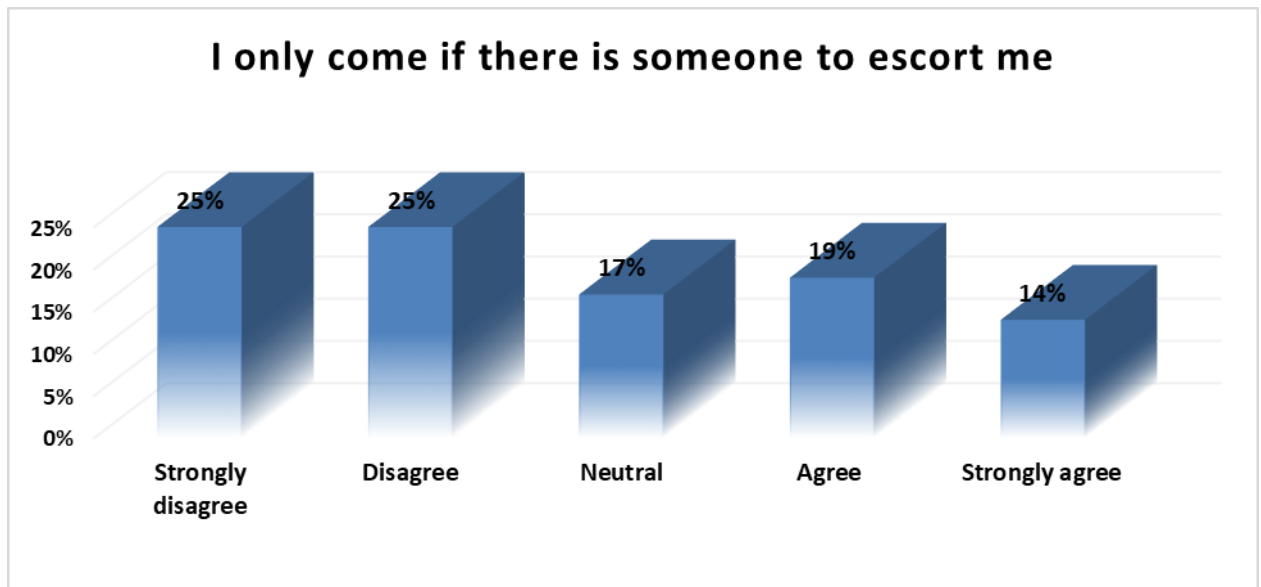
Source: Own construction

Those disagreeing have total 50% (25% apiece) allowing for a generalization with 17% neutral and 33% claiming that they need someone to escort them. From figure 5.18 above, one can see that majority of the respondents (25%) strongly disagreed and 25% disagreed with the same statement. 17% of the respondents remained neutral, 19% of the respondents agreed and 14% of the responded strongly disagreed to the posed statement meaning that the patients did not need anyone to escort them as they were fully aware of what they should do.

Statement 13: I am not that strong to be walking this distance for medicine Response; Because there is a relationship between age and the increase in the occurrence of divers types of chronic illnesses, the assumption made was that most of the respondents would be advanced in age. Besides, as alluded to earlier, some of the chronic ailments may result in disability and or impaired vision or mobility. The findings are recorded in the figure 5.19 below.

Figure 5.19: Not strong to walk

I am not that strong to be walking this distance for medicine

Strongly agree 14%
Strongly disagree 27%
Agree 23%
Disagree 20%
Neutral 16%

Legend: Strongly disagree · Disagree · Neutral · Agree · Strongly agree
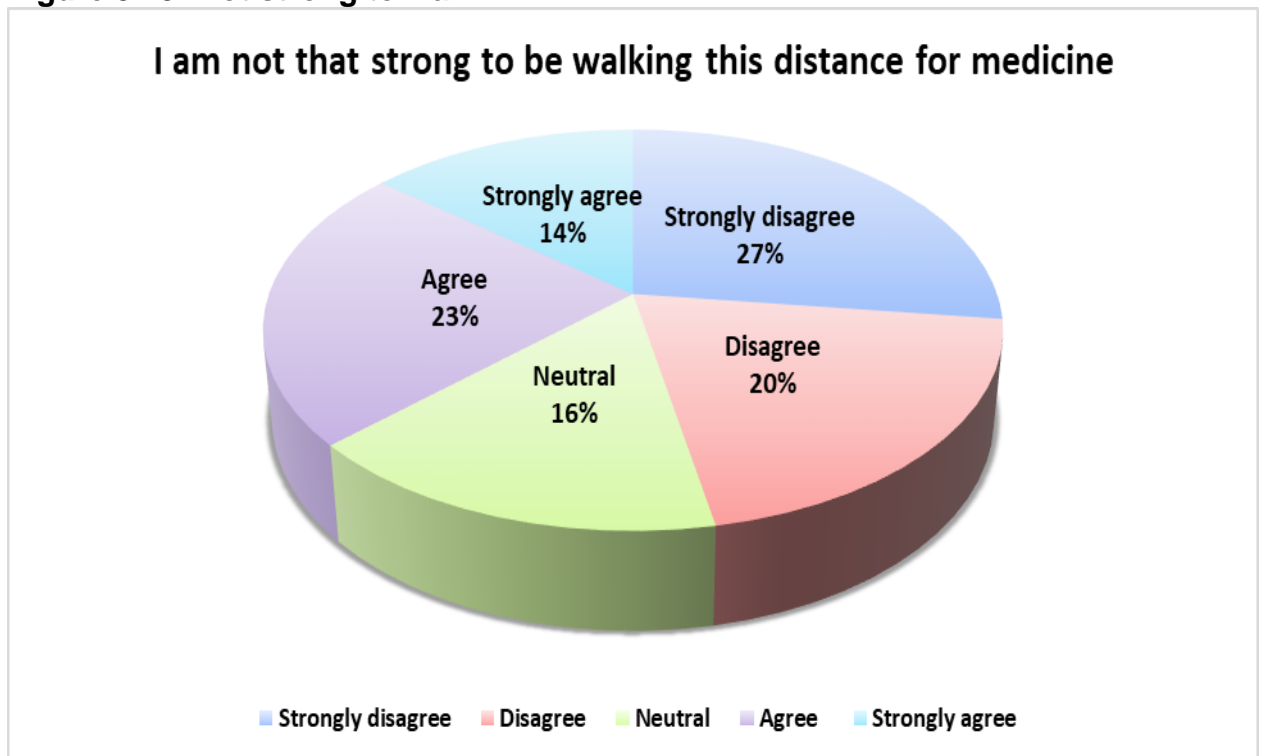
Source: Own construction

Figure 5.19 above illustrate that a total of 37% of the respondents (agree – 23% and strongly agree – 14%) are in agreement with the statement meaning that they may be a sizeable number that may be struggling to get to collection points. Yet a large part of the respondents (27% strongly disagree and 20% disagree) totalling 47% claim that they are strong enough to go to the collection points. The ambivalent are at 16%. But, as usual, it is difficult to generalize as there is none above the 51% threshold that may be used to determine the majority.

Statement 14: I need someone to wake me up early every time.
Response; The age and the type of illness including the extent to which the individual had deteriorated were questioned in this statement in that the researcher sought to identify how many of the respondents may be needing that help. That would have been expected of patients in terminal conditions of illness. Figure 5.20 below shows the results obtained from the research on this statement.

Figure 5.20: Needing someone to wake the patient up early
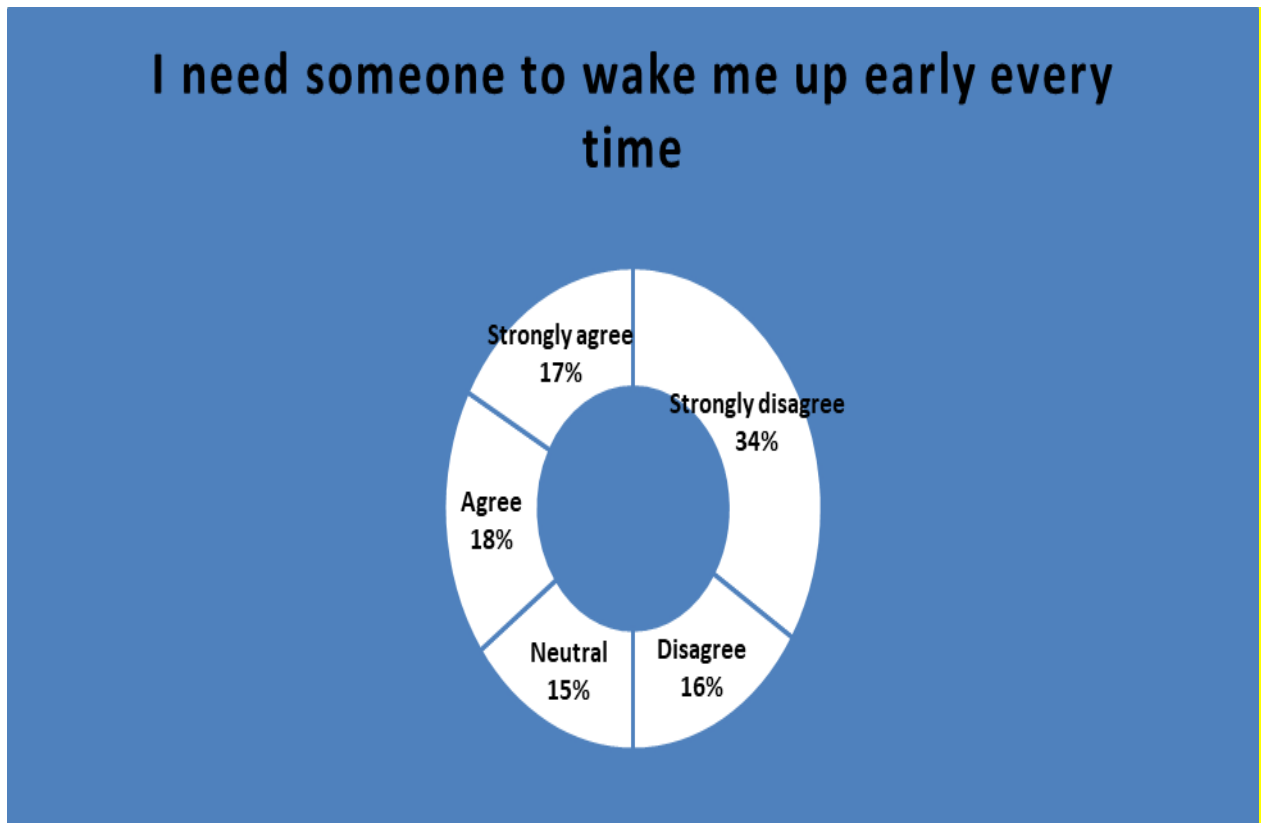
Source: Own construction

As indicated in figure 5.20 above, most of the respondents (34%) strongly disagreed, 16% of the respondents disagreed (total of 50%), 15% of the respondents remained neutral, 18% of the respondents agreed and 17% of the respondents strongly agreed (totalling 35%). It can be generalized therefore that 50% of the patients were not in critical conditions and did not need anyone to wake them up in the morning.

Statement 15: I live very close to the clinic but am lazy to come regularly.
Response; The chronic patients are generally regarded weakened and laid back because of their health conditions. Having the assumption that these chronic illnesses are demoralizing would make the patients appear lazy. Checking therefore to the extent to which they are weakened by the ailment, they may be reluctant to come every time to collect medication. Especially if there is a feeling that the treatment is taking too long to cure them of their illness. The response obtained by the researcher on this statement is given below in figure 5.21.

Figure 5.21: Staying close to the clinic

I live very close to the clinic but am lazy to come regularly

[Bar chart showing:
- Strongly disagree: 32%
- Disagree: 14%
- Neutral: 17%
- Agree: 19%
- Strongly agree: 18%]
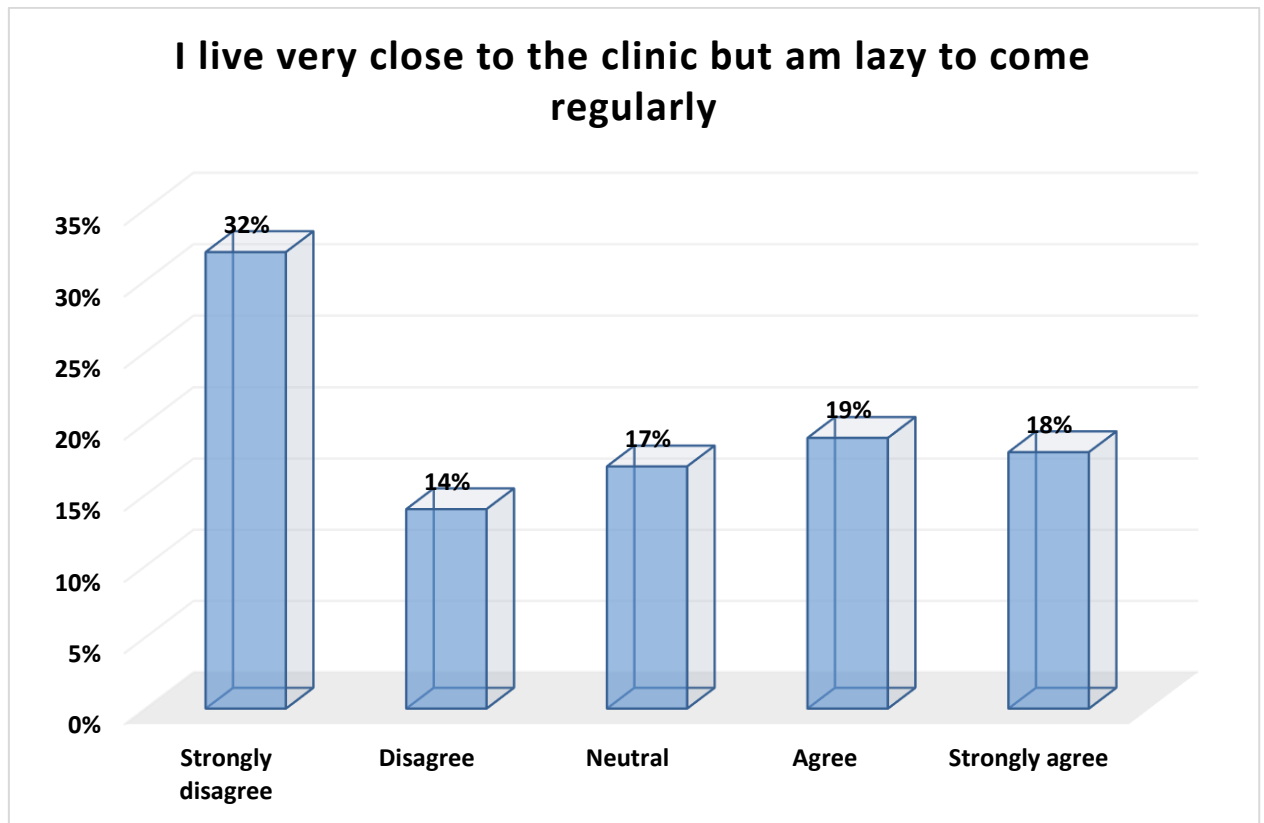
Source: Own construction

According to the figure 5.21 above, 32% strongly disagreed to the given statement whilst 14% of the respondents disagreed giving a total of 46%, this compared to 37% (19% agreed and 18% strongly agreed) that they are lazy to collect their medication regularly. That there is a 46% who will regularly collect their chronic medication is an encouragement indeed. There was 17% of the respondents who chose to be neutral, it is not clear why they would be indifferent to such a clear statement.

SERVICE AT THE CLINIC

Customer service is a critical element in the satisfaction of any client, and in many businesses customer service is considered highly to allow for repeat sales. In the absence of customer satisfaction, there is always a marked decline in repeat sales to the business. The public health facilities are under resourced with personnel working long hours. Poor service may make the patient dread the day they are supposed to go and collect their medication. Those able to pay prefer to go to private doctors instead. This section focuses on the patients' experience at the clinic of drug distribution point.

Statement 16: Even if I get here early I wait for the whole day.
Response; Long ques are characteristic of public health facilities in the Metro District resulting in many patients getting to the ques as early as 05.00 hrs in the morning to

be in time for the clinic that opens at 08.00 hrs. Such a service every month (regularity of chronic medicine collection) would definitely impact on the zeal for the patients to want to go for their chronic medicine. This assertion is tested in figure 5.22 below.

Figure 5.22: Waiting time at the clinic
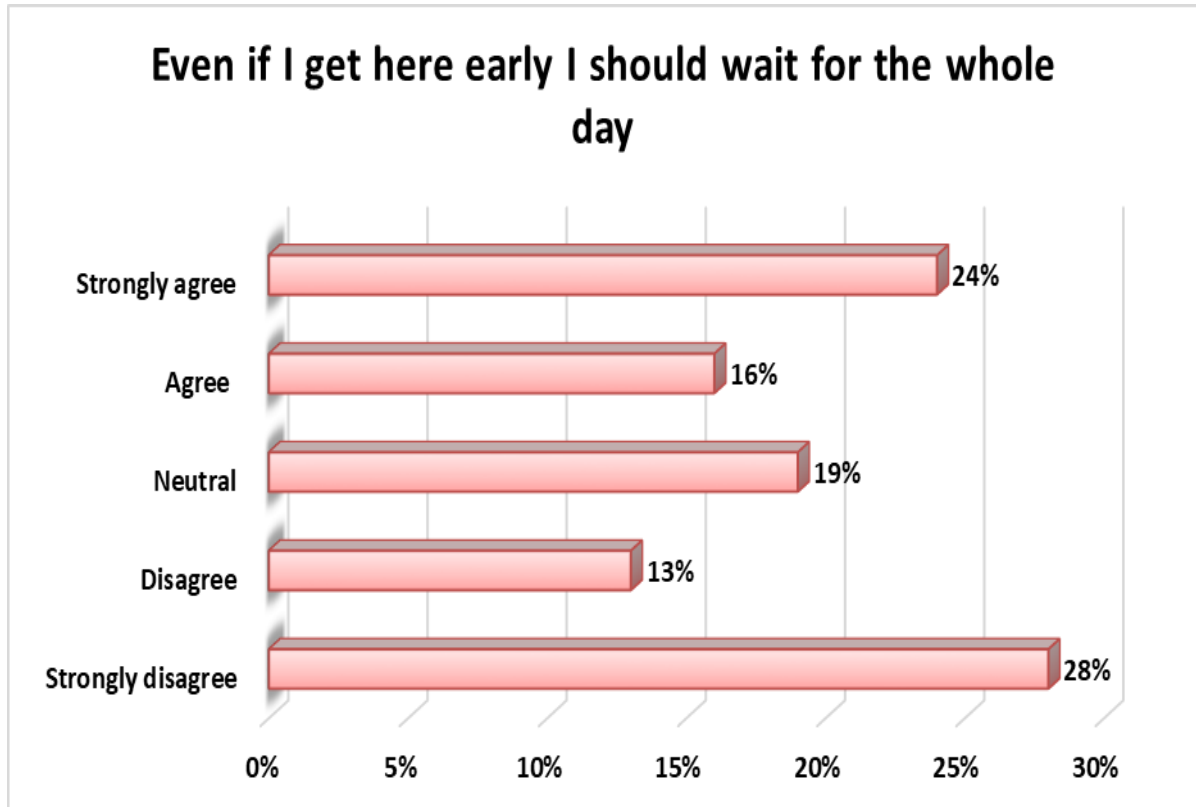
Source: Own construction

Again, there is no room to generalize as those agreeing stand at 40% (16% agreeing and 24% strongly agreeing). Neutral stands at 19% leaving a remainder of 41% (13% disagreeing and 28% strongly disagreeing). It is not clear why those who think there isn't good service would be the same number with those who see good service. This may have to do with different service qualities at different delivery points.

Statement 17: The process used to give us the medicine is too slow.
Response; The long ques at the pharmacy shop are disheartening with patients queuing for long hours to get their prescriptions attended to. The ques include among others other patients other than the chronic patients coming for their regular drug doses and check-up. This assertion was tested as recorded in figure 5.23.

Figure 5.23: Slowness of the medication process

The process used to give us the medicine is too slow
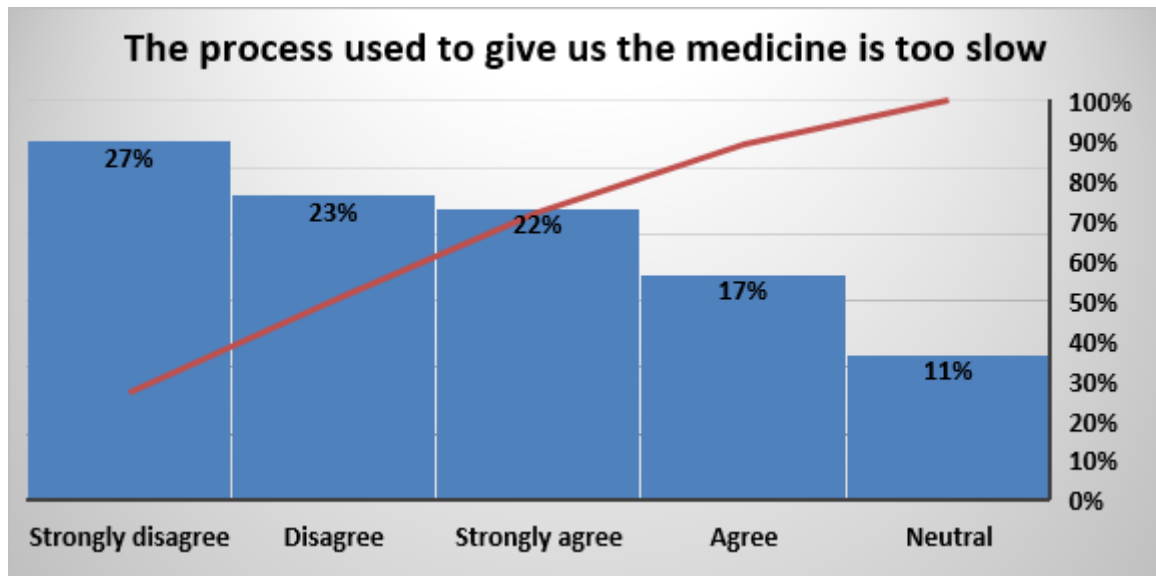
Source: Own construction

As indicated in figure 5.23 above, 27% strongly disagreed with 23% disagreeing (total of 50%) with the assertion whilst neutral is at 11%. Only 39% agreed (22% strongly agreeing and 17% agreeing). This enables a generalization, weak though it is, it can be stated therefore that the system used to distribute or dispense the medicines is considered to be slow. It may be necessary for other methods to be used to encourage the patients to turn up regularly for their medicines.

Statement 18: If you get here early you can be served within an hour

Response; It was assumed that the earlier you get to the clinic you could be served early as the ques may be shorter. Cognizance is taken of the reality that the clinicians do not know who is coming until the patients arrive and subject or collect their files, only those in the front may have quick service. The response obtained from the survey conducted is given below in figure 5.24.

Figure 5.24: Quick service when not full

If you get here early you can be served within an hour

Legend: ■ Increase ■ Decrease ■ Total

Strongly disagree: 39%
Disagree: 15%
Neutral: 17%
Agree: 18%
Strongly agree: 11%
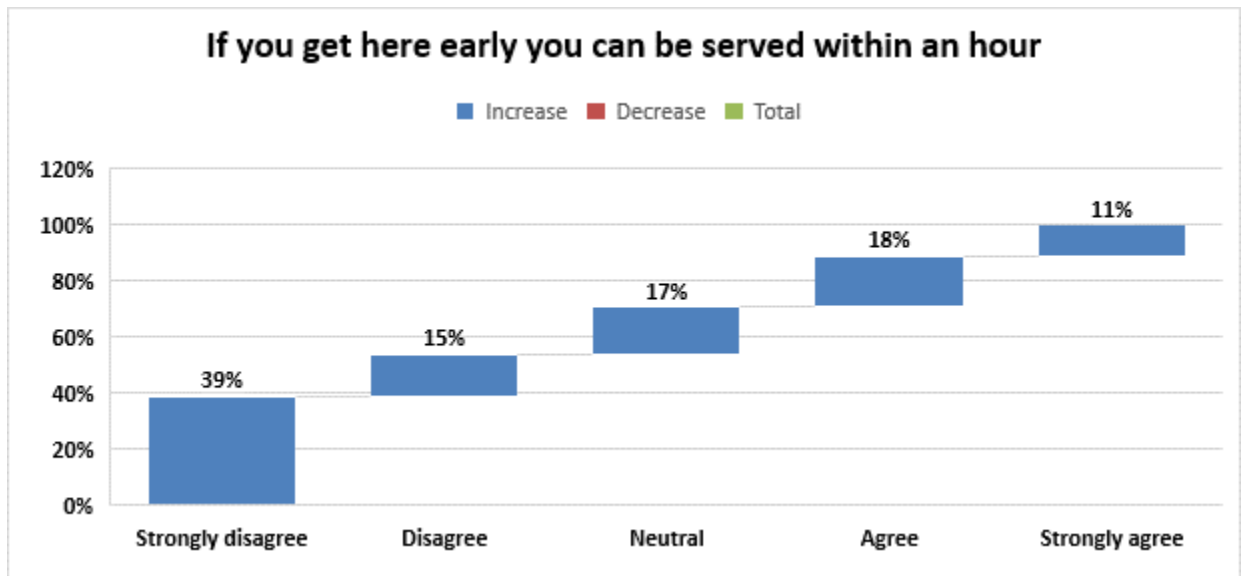
Source: Own construction

As recorded in 5.24 above, 39% strongly disagreed with 15% disagreeing giving a total of 54% of those indicating that coming early does not mean quick service for you. The remainder was shared between 17% indifferent or not sure about what happens and a total of 29% (18% agreeing and 11% strongly agreeing) of the respondents in the affirmative. This is a clear indication of poor service, and it can be generalized here that getting to the point early is not a guarantee that you will be served early.

Statement 19: The pharmacist sorts out medicines only if we are present.

Response; The pharmacists do not know the patients who will be attending clinic on that particular day even though there are dates set specifically for the collection. The files are collected only after the patients have reported for their check-up, done with the doctors, only then will they proceed to the pharmacy to collect their medicines. The respondents' understanding is measured in figure 5.25 below.

Figure 5.25: Pharmacist on giving medication

The pharmacist sorts out medicines only if we are present

Response	Percentage
Strongly agree	19%
Agree	16%
Neutral	18%
Disagree	14%
Strongly disagree	33%
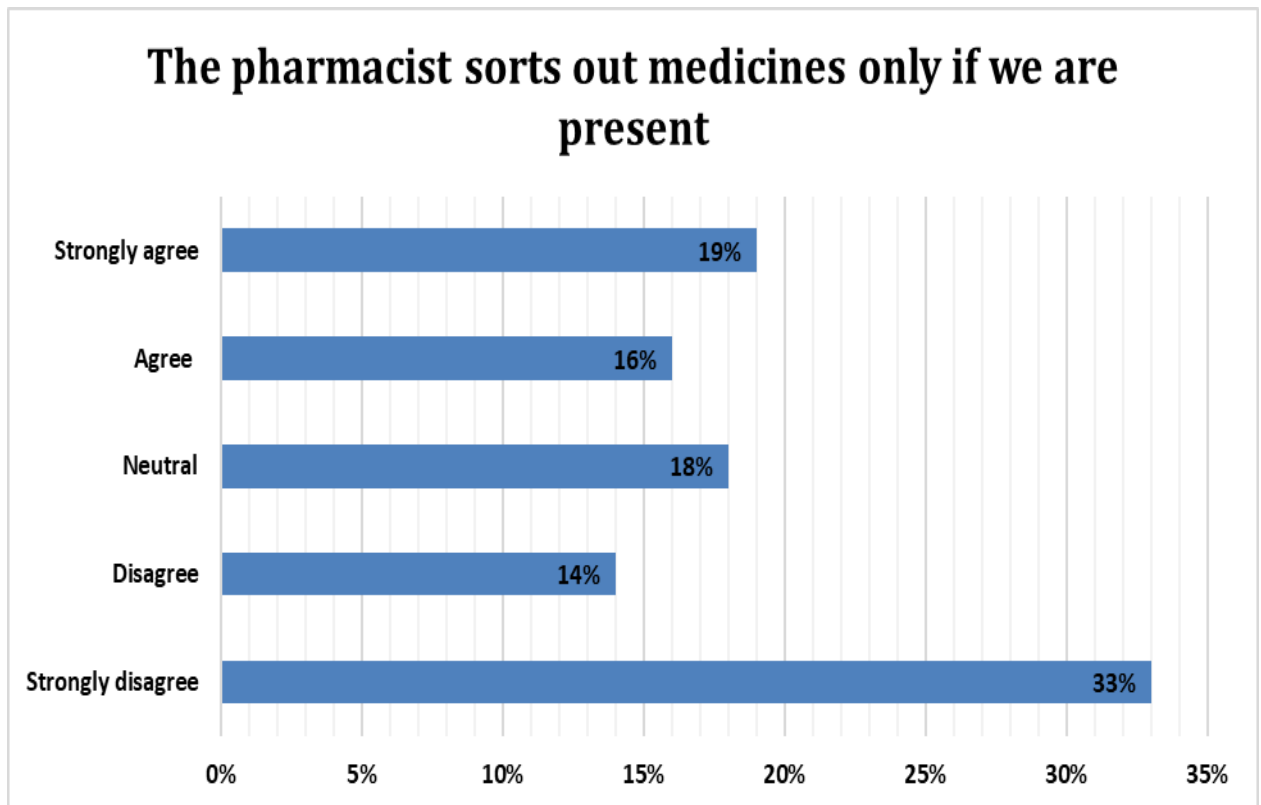
Source: Own construction

It would appear that the patients do not understand the processes that take place when they go to collect their medication. Because theirs is a chronic illness, at regular intervals, may be not necessarily every month, the patients must be examined by the practitioner to ascertain that the treatment regiment is potent. After the check-up, only then, will the file indicate whether there is a continuation or change of the treatment depending on the results of the diagnosis. However, 47% in total think that their medicine is prepared before they arrive, 35% know that the medicine is prepared only when they are present, with 18% not sure.

Statement 20: The clinic managers never worry about how long we wait.
Response; Clinic or hospital staff are perceived to be inconsiderate and have little care for patients in that they are perceived to take their time. This assumption is tested here by use of the statement – what exactly does the patient know about the processes inside? Figure 5.26 responds to that.

Figure 5.26: Clinic management's behaviour towards patients

The clinic managers never worry about how long we wait

Strongly agree 22%
Strongly disagree 30%
Agree 20%
Neutral 13%
Disagree 15%

■ Strongly disagree   ■ Disagree   ■ Neutral   ■ Agree   ■ Strongly agree
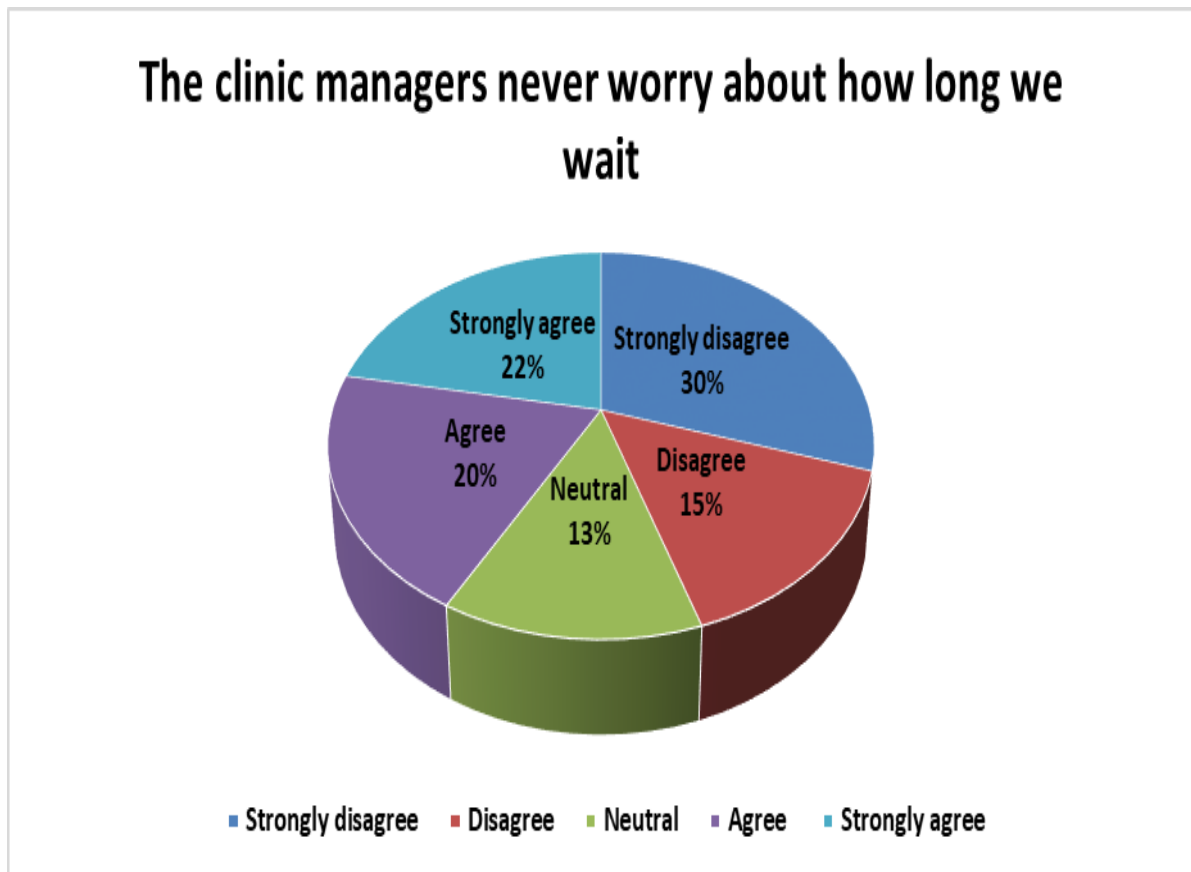
Source: Own construction

Another of those instances where the answers on the perceptions of the patients are deeply divided. Those that disagree with the assertion stand at 45% with 30% strongly disagreeing and 15% disagreeing. On the contrary are the 42% who have 22% strongly agreeing and 20% agreeing with the hypothesis. No generalization is possible until the 13% neutral decide on what they want.

PERSONAL ATTITUDES AND PERCEPTIONS

It is definitely not easy for an individual to depend on the drugs when all others live a normal healthy life. Many things and thoughts may come into the minds of these patients, as they see themselves as unfortunate compared to their peers. Most may not want to accept responsibility for some of the illnesses they have though these could have been prevented. The perceptions and thoughts are measured in this section by checking on the thinking of the patients about their illnesses.

Statement 21: I am tired of this treatment and I take because I should
Response; Chronic patients cannot live outside of their drugs and because they cannot be cured, their life is therefore purely drug dependent. They may not afford to forget to take their medication as it has negative repercussions which may be fatal. But

the extent to which these recipients of chronic regiments have been affected psychologically and socially, it is them to state. The findings are recorded in figure 5.27 below.

Figure 5.27: Motivation to take medication
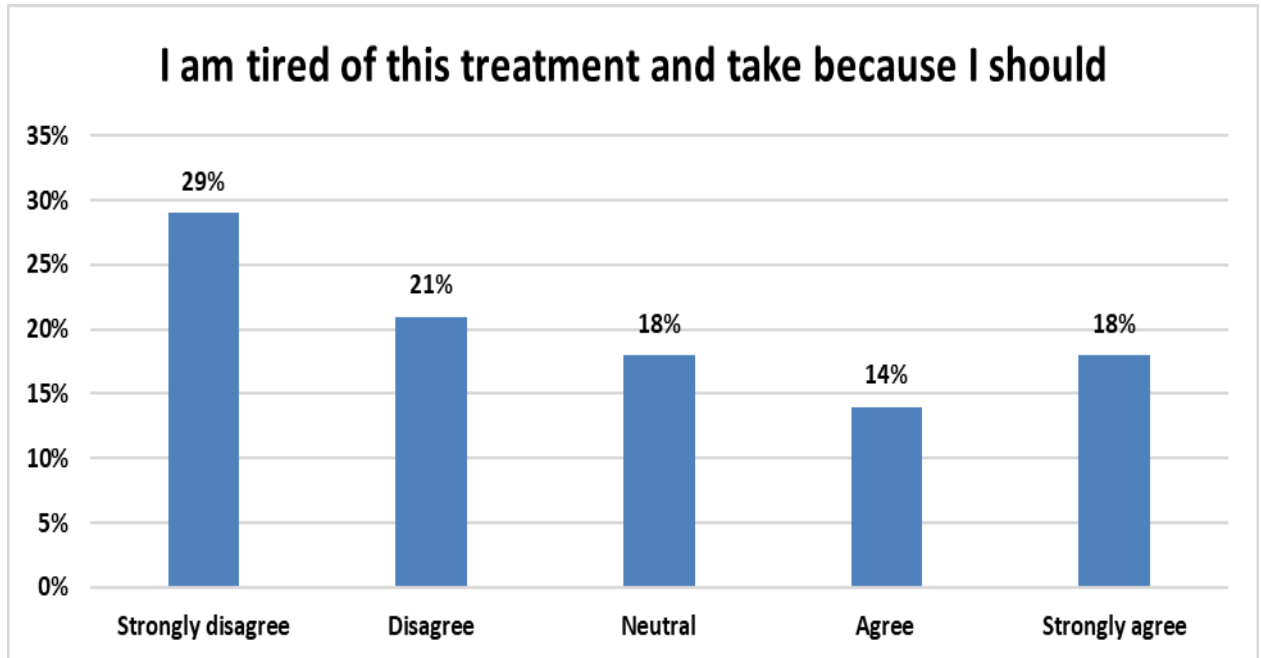
Source: Own construction

It is interesting to know that 50% of the patients (strongly disagreeing and 21% disagreeing) have not thrown in the towel. Regardless of this new life they live in, they are willing to persevere, but there is the traditional 18% that remains neutral, not sure what they want. Only 32% in total think that or rather are tired of using these drugs all the time. It can be generalized that most of the patients are raring to go on with their treatment to sustain their lives.

Statement 22: My health is not improving that's why I skip sometimes

Response; When there is no evident change in the health condition after an individual has received treatment, there is a tendency to try to look elsewhere or to simply "resign" to the thought of changing one's life for the better. It was therefore hypothesized that if the patient saw no benefits or changes in the way they feel, they may forfeit the treatment or default because they see no much difference with or without. Figure 5.28 below illustrates the respondents' feeling about this aspect.

Figure 5.28: Health improvement

My health is not improving that's why I skip sometimes
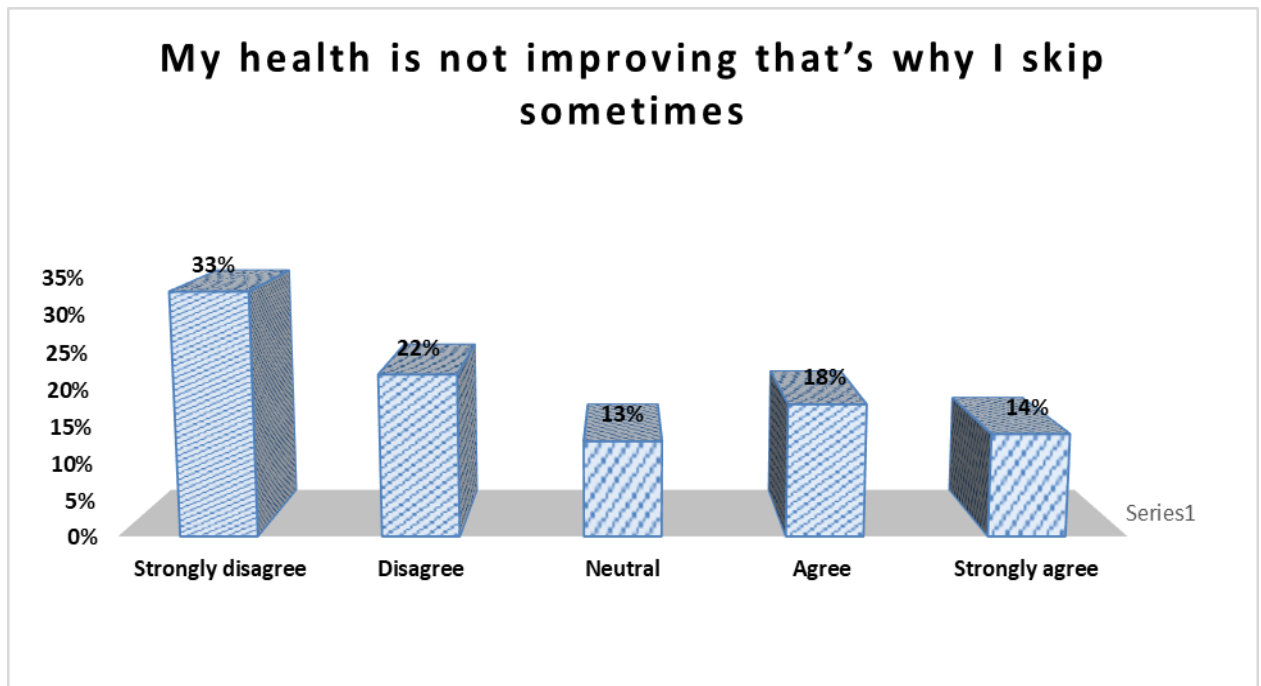
Source: Own construction

A total of 55% (33% strongly disagreeing and 22% disagreeing) believe that their health is improving or that they never skip because the medicine is not helping. This suggests therefore that a large portion (can be generalized) of the recipients are grateful that they are on chronic. Ambivalence is at 13% with 32% total (18% agreeing and 14% strongly agreeing) that the medication is not working for them.

Statement 23: I feel no difference whether I take the medication or not
Response; The common practice is that when people are not sick they do not look for a physician, except for the well informed who may need a regular check-up. On the other hand, if the medication that an individual is using does not heal the individual, or at the least treatment the ailment. It is most likely that they may change the medicine or the source of the desired treatment. Figure 5.29 below gives details top the findings.

Figure 5.29: Impact of medication

I feel no difference whether I take the medication or not

Strongly agree 14%
Strongly disagree 34%
Agree 20%
Neutral 13%
Disagree 19%
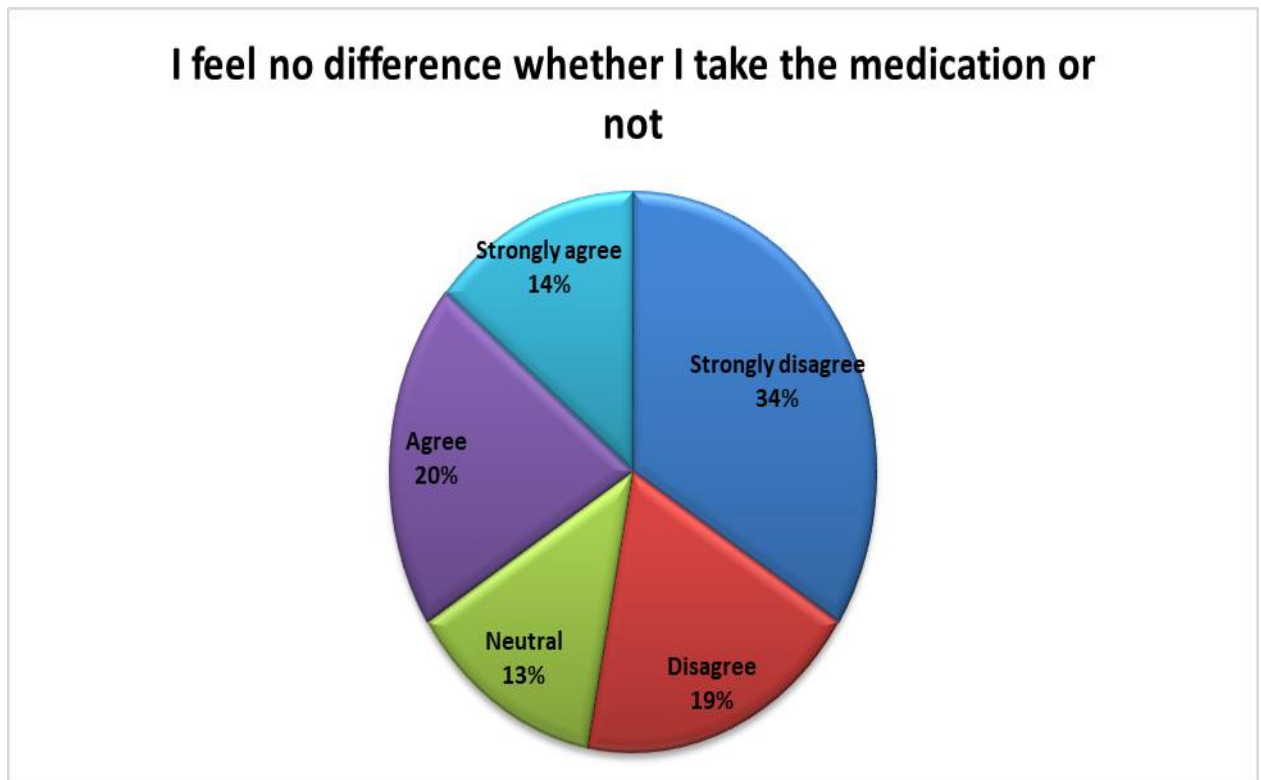
Source: Own construction

Figure 5.29 above illustrates that 34% strongly disagreed and 19% disagreed with the assertion giving a total of 53% of the respondents who feel a difference because of the medicine. There is the usual 13% ambivalence, it is difficult to understand why they do not know if there is a change when they take the medicine. The remaining 34% are made of the 14% that strongly agree and the 20% who agree that there is no help from them taking the medicine. It can be generalized that there are many people benefiting from taking their chronic treatment.

Statement 24: It does not always work so I supplement with other medicines.
Response; Too often when drug regiments are prescribed, the patients have their own expectations in terms of the effectiveness of the medication. In many instances, the patients may not follow correctly the guidelines or may continue the same life style or behaviours that might have caused the ailment. The expectation is that the drugs must heal the patient quickly so that the patient can go back to their "normal life." If this expectation is not met, there is a likelihood that the patients may try other alternatives, either abandon the chronic treatment or supplement it with other medicines. To this statement, the respondents stated their attitudes and practices as indicated in figure 5.30.

Figure 5.30: Effectiveness of the medication

It does not always work so I supplement with other medicines

- Strongly disagree: 31%
- Disagree: 24%
- Neutral: 22%
- Agree: 13%
- Strongly agree: 10%
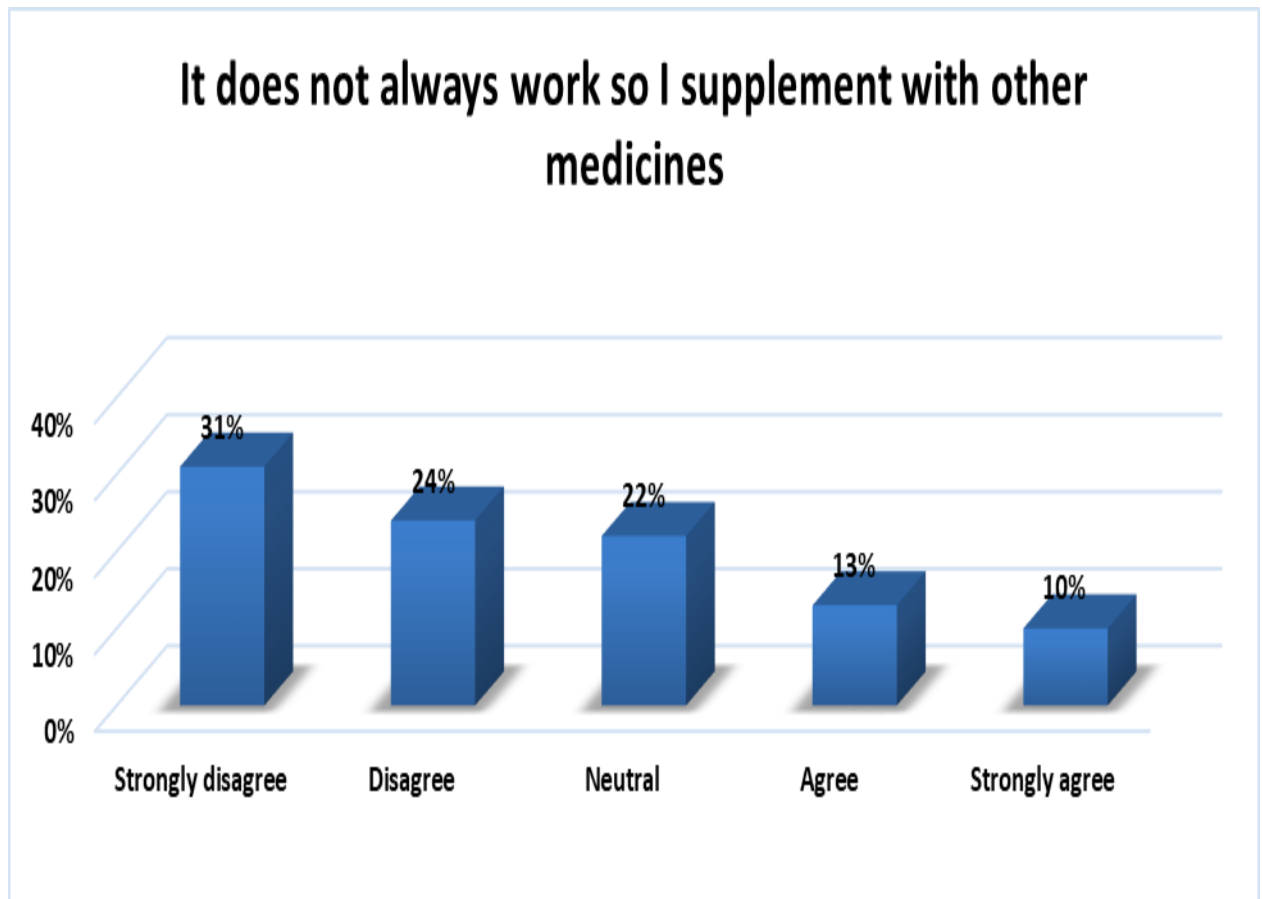
Source: Own construction

A generalization can be made here with 31% respondents strongly disagreeing, and 24% disagreeing with the assertions – this total 55%. These respondents were positing that they do not supplement the chronic medication with anything else, this number corresponds to the number that was satisfied with the treatment as given in figure 5. 29. Neutrality went up to 22% with only 23% agreeing with the statement that they use other medicines to complement the chronic medicine they are on.

Statement 25: My illness was caused by problems which need to be corrected.
Response; The cultural norm, though it may be waning is that illnesses come because one has been bewitched by an enemy. Too often the patients, and indeed their relatives, do not hold themselves responsible for most of the illnesses, specifically the illnesses for which there is no cure. It is scientific knowledge however that most of the illnesses, specifically those of a chronic nature can be traced to origins, be it life style, infection or age. The thinking of the respondents is illustrated diagrammatically in figure 5.31,

Figure 5.31: Cause of the illness

My illness was caused by problems which need to be corrected

Strongly agree: 13%
Agree: 14%
Neutral: 18%
Disagree: 20%
Strongly disagree: 35%
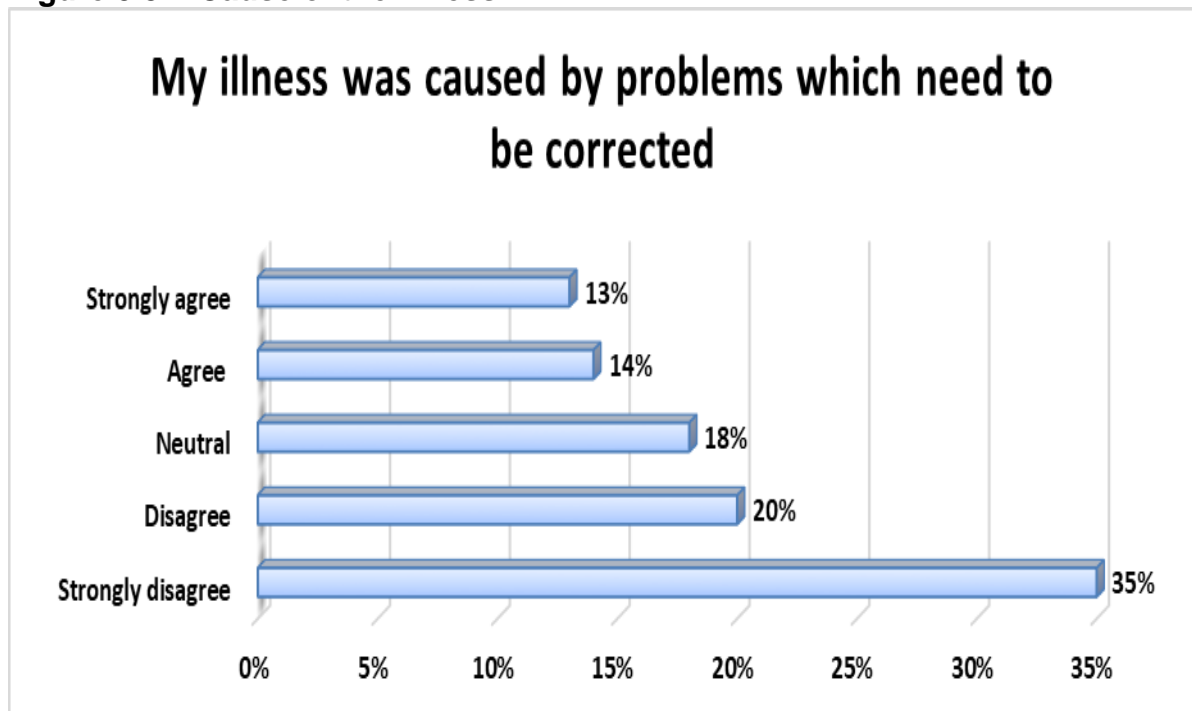
Source: Own construction

Surprisingly 35% strongly disagree with 20% disagreeing that they may be responsible for their illness, there is a state of denial and lack of accountability. This gives a total of 55% of people who may believe that their illness is a result of someone else doing it or simply that they are not able to correct this. Depending on the type of chronic illness, some of these illnesses demand that there be a change of life habits to control and manage the chronic condition effectively. Only 27% agree or take some form of responsibility for this, with 18% not sure of what they want.

MY WORK/LIFE AND MY CHRONIC MEDICINE

Employed patients have to contend with work demands as well as keep themselves in good health enough to remain at work. It is scientific knowledge that an ill employee may not be as productive as they would have been if they were not ill. On the other hand, because they are chronic patients, there is continued concern about regularly asking for time off to visit the doctor. The LRA gives guidelines used by organisations to stipulate the number of paid sick leave days an employee can have. The major concern is how does this, the chronic illness and the need to regularly attend check-up clinics, impact on the work life for the patient.

Statement 26: I am so committed and I don't have time to collect medicine.
Response; The defaulting rate has given clinicians the thinking that most of the chronic diseases patients do not take seriously the importance of taking their medication and

having regular check-ups to check on the efficacy of the treatment they are getting. Many reasons could be given including those examined above, to this statement the respondents answered as illustrated in figure 5.32 below.

Figure 5.32: Time to collect medicine
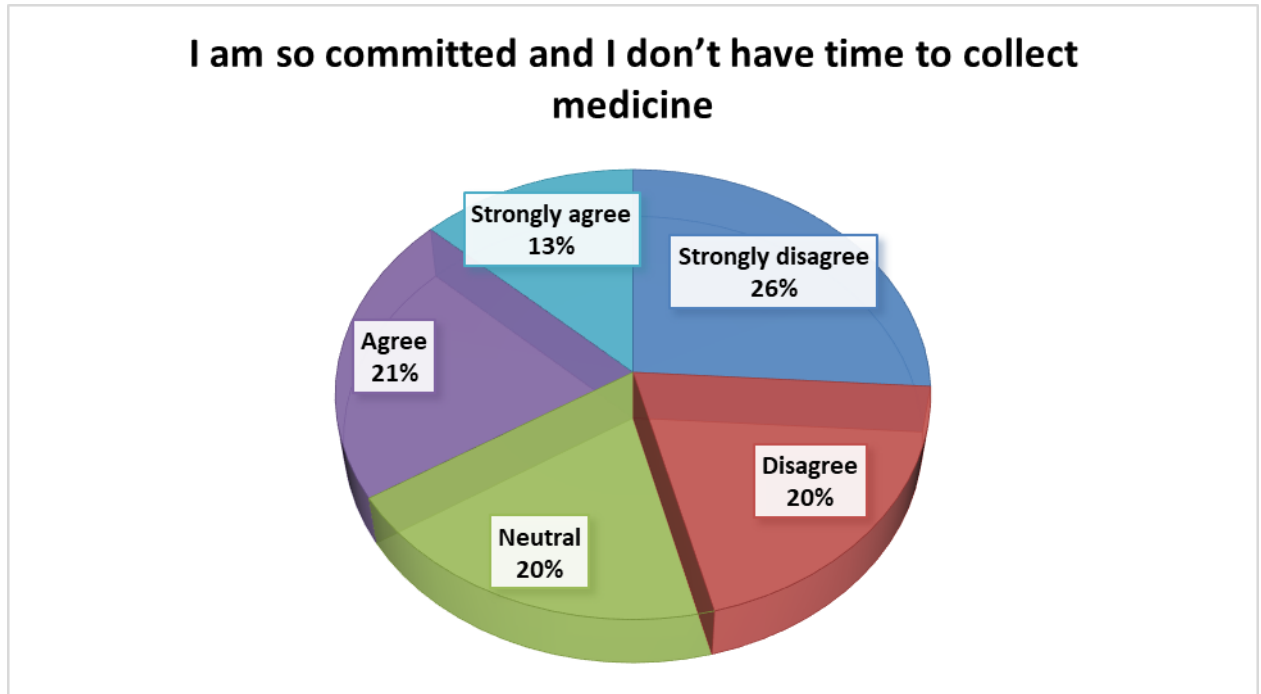
Source: Own construction

The findings above in figure 5.32 show that 26% strongly disagreed supported by 20% who disagreed, this gives a total of 46% claiming that they are not too committed with other activities that they cannot collect their chronic medicine. It may be thought of as a way of balancing priorities, and the indifferent go up to 20%, with the remainder of 34% agreeing that they are too busy with other things that they are not able to collect their chronic medicines.

Statement 27: My work conditions don't allow me to be off for a full day

Response; With these high levels of unemployment, and specifically for people who do not have a specialized profession, it is easy for them to be replaced. Not all employers or managers have concern for the welfare of their subordinates, most are focused on their returns more the people who work for those profits. Consequently, some managers may refuse permission for an employee to spend a day off at the clinic waiting for medicine. This may cause defaulting. Below (figure 5.33) is the response from the participants.

Figure 5.33: Working hours

My conditions don't allow me to be off for a full day

Strongly agree 12%
Strongly disagree 26%
Agree 21%
Disagree 24%
Neutral 17%
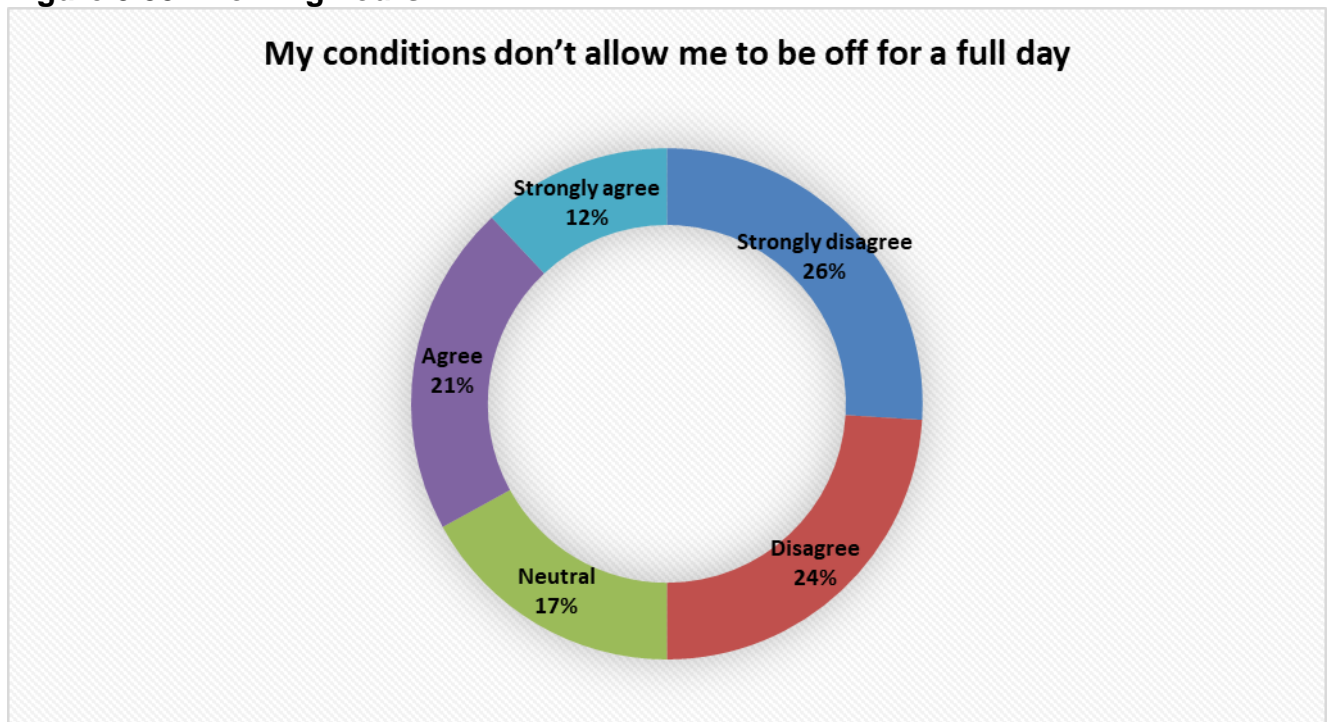
Source: Own construction

From figure 5.33 above, it shows that 26% strongly disagreed whilst 24% of the respondents disagreed with a total of 50%. Neutral was 17% with 38% agreeing with the statement that their work conditions do not allow the patients to take time off regularly for their chronic check-up and collection of medicines to treat the ailment. It can be generalized that most (50%) do not have problems with employers and managers. It is not clear however who of the patients are employed and who are not, this was not asked for from the beginning.

Statement 28: I sometimes share with friends the same problems
Response; There was an assumption that most clients like privacy regarding their health status hence the intention to measure the extent to which the patients share with friends and family. This was asked precisely because it is assumed that in interaction they may be getting the information they use to make judgement on issues pertaining to their health problems. The patient we see at the clinic is a "mixture" of many ideas and advices both positive and negative. Hence the statement; "I sometimes share with my friends." The response is given below in figure 5.34

Figure 5.34: Sharing same problem

I sometimes share with friends the same problems
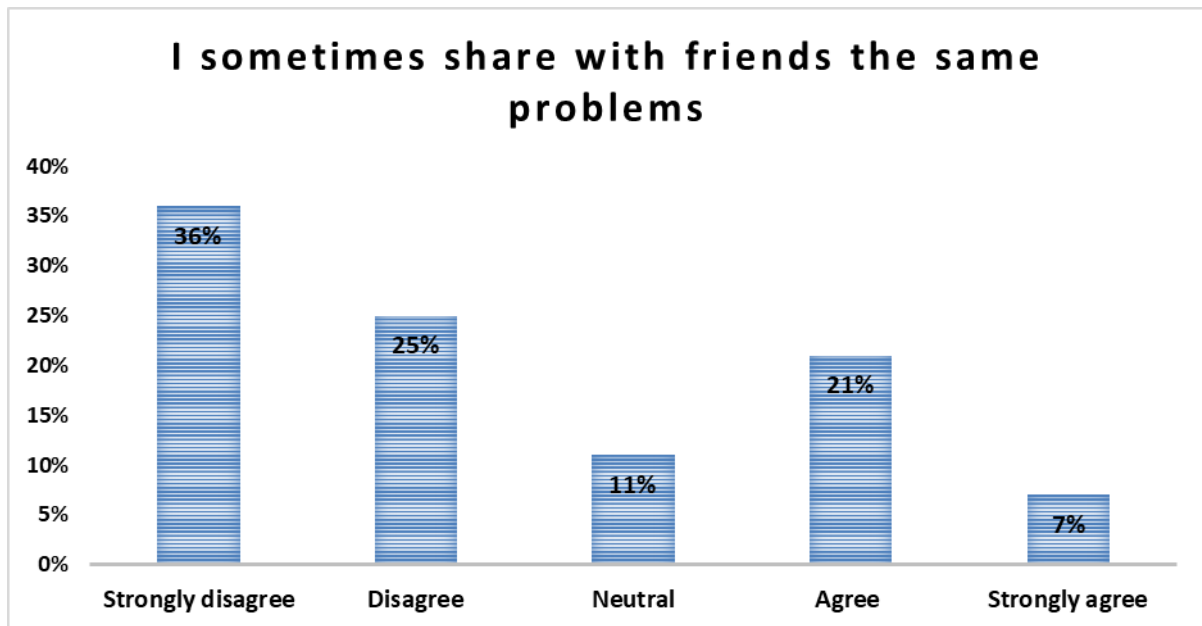
Source: Own construction

It was expected that since the majority of the patients interviewed were women, then there would have been a higher percentage of patients sharing with friends. Figure 5.34 above illustrate that 36% of the respondents strongly disagreed, while 25% of them disagreed giving a total of those disagreeing to 61%. It can be generalized that the patients normally do not share their health secrets with friends, 11% were neutral with 28% claiming that they share with the friends.

Statement 29: I spend time pushing these negatives away from my mind
Response; When people have problems or conditions they are not comfortable about, many things come into their minds. Too often there is a focus on the negatives as they are perceived as threats and risks which instil fear in an individual. Most chronic patients know that the end result is an early death or disability from the illness, and these should be occupying the mind of the patient. It is these that the research wanted to identify as a means of measuring the degree to which fears come to the minds of the patients. Further information regarding the findings is given below in figure 5.35.

Figure 5.35: Removing negativity in your mind

I spend time pushing these negatives away from my mind

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
28%	23%	16%	21%	12%
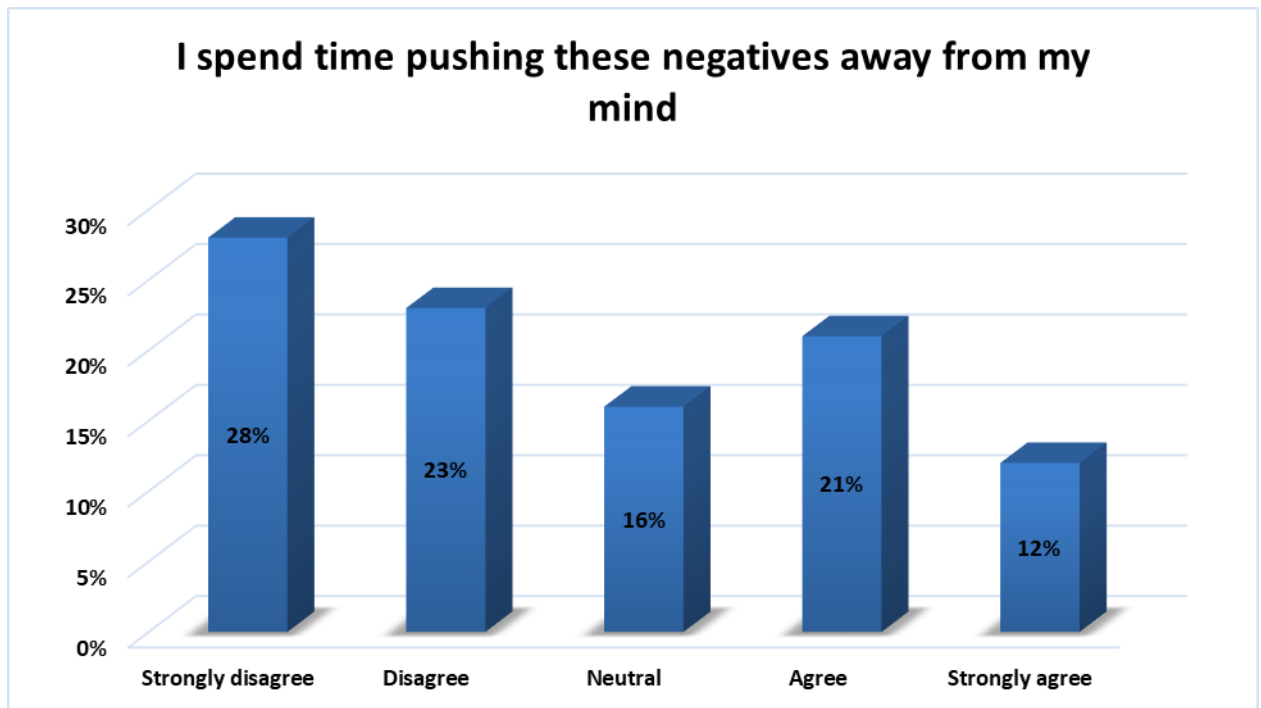
Source: Own construction

As shown in figure 5.35 above 28% of the respondents strongly disagreed, aided by 23% of the respondents disagreeing making a total of 51%. On the other hand 33% of the respondents (21% agreed and 12% strongly agreed) with 16% of the patients not taking sides. It can be generalized that most of the patients do not habour negative thoughts about their illnesses. May be a good sign in that the positive attitude may enable them to faithfully keep visiting the clinicians to both get checked up and collect their treatment.

Statement 30: The church prays for me and sometimes the pain disappears

Response; Many Christian believers have claimed that they have been healed because of prayer, this is the supernatural and no one intends to contest that. But the research is trying to identify reasons why people default, whether people default because they believe in prayer and therefore do not need to go to the clinic if they are healed. What we know however is that there was a balm in Gilead to heal the wounded and sick of Israel. The response is recorded below in figure 5.36.

Figure 5.36: Intercession from the church

The church prays for me and sometimes the pain disappears

- Strongly agree 10%
- Agree 17%
- Neutral 14%
- Disagree 16%
- Strongly disagree 43%
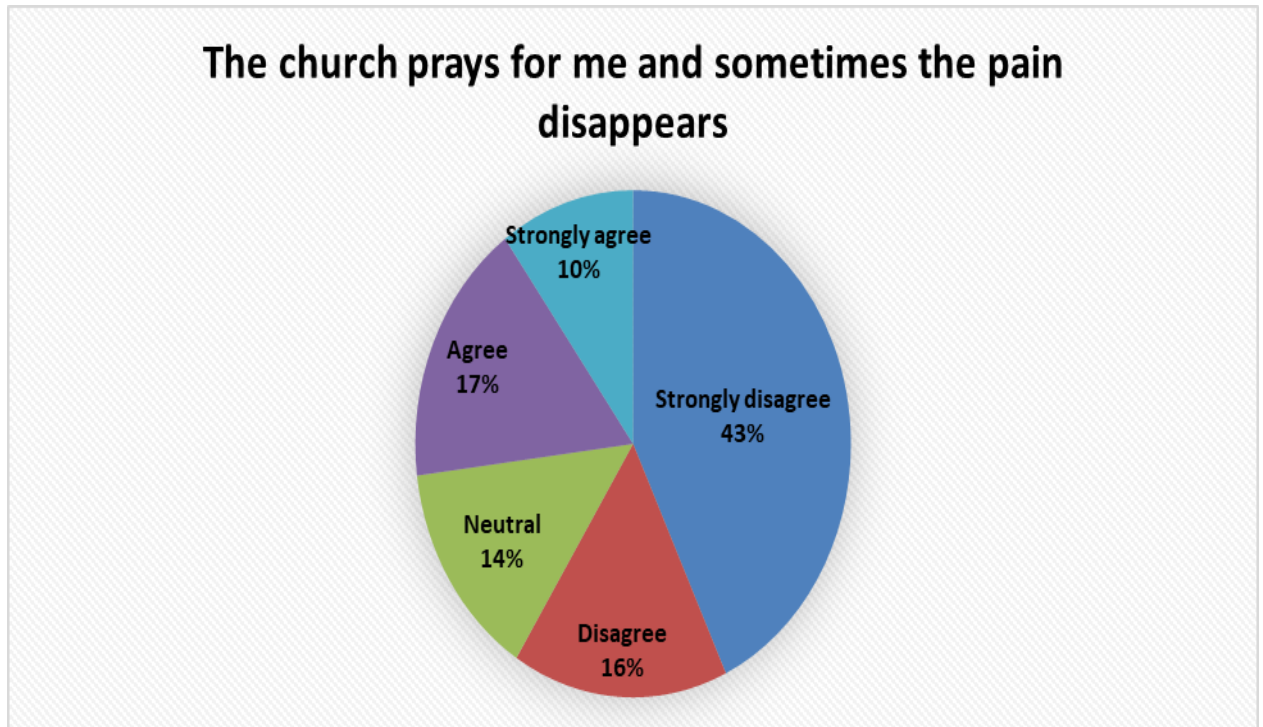
Source: Own construction

The figure 5.36 above shows that 59% (made up of 43% who strongly disagreed and the 16% of the respondents disagreed) and 14% of the respondents remained neutral. The remainder of 27% (made up of 17% of the respondents agreeing and 10% of the respondents strongly agreeing). It can be generalized here that the patients do not rely on prayers for the treatment or healing of their sickness.

Statement 31: I can't reverse this, so I don't worry much about the medicine Response; Many patients may have resigned to the idea of finding a solution or getting healed from the illness, thus they do not worry. This may have both negative and positive impacts on the thinking and consequently behaviour of the patients, in that some may not see the need of getting medication, especially the moment they do not have pain or discomfort. This statement tries to capture the attitude of the patients towards their condition and the possibility of them staying on drugs for the rest of their lives. Some may think of it as be-witchment for which there will be no remedy and thus consider themselves destined to die anywhere. Their responses are recorded in figure 5.37 below.

Figure 5.37: Patients' attitude

I can't reverse this, so I don't worry much about the medicine
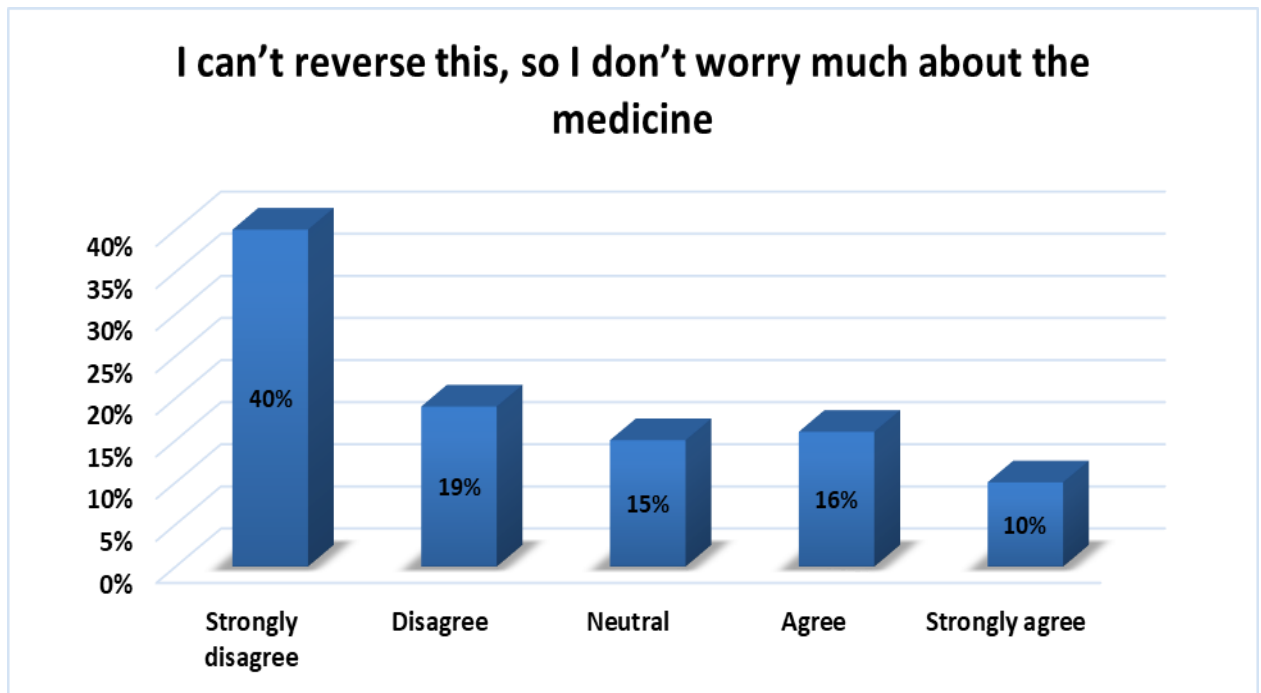
Source: Own construction

The results as recorded in figure 5.37 above show that 59% of the patients (made up of 40% strongly disagreeing and 16% disagreeing) have not lost hope. Only 26%, total of those agreeing (16% and 10% agreeing and strongly agreeing respectively) of the participants show loss of hope and agree with the statement. Those not sure of what they want remained neutral at 15%. It can be generalized therefore that the majority (59%) of the patients still have trust and hope in the medication they receive.

Statement 32: On occasion, I became serious and had to be rushed to hospital. Response; The chronic diseases dealt with in this research are varied and have different levels of progression. But, as alluded to in earlier chapters, almost all chronic diseases have adverse ending including death. This statement sought to try to understand in general the state of the illnesses that these chronic patients live with, and the likely critical extend to which the diseases may have developed. It is also assmed that some of those who have lost hope may only respond (through the relatives forcing or taking them to) when they get to a critical life-threatening condition. The results obtained are shown below in figure 5.38 below.

Figure 5.38: Seriousness of the illness

On occasion, I became acute had to be rushed to the clinic/doctor

- Strongly agree 9%
- Strongly disagree 42%
- Disagree 14%
- Neutral 20%
- Agree 15%
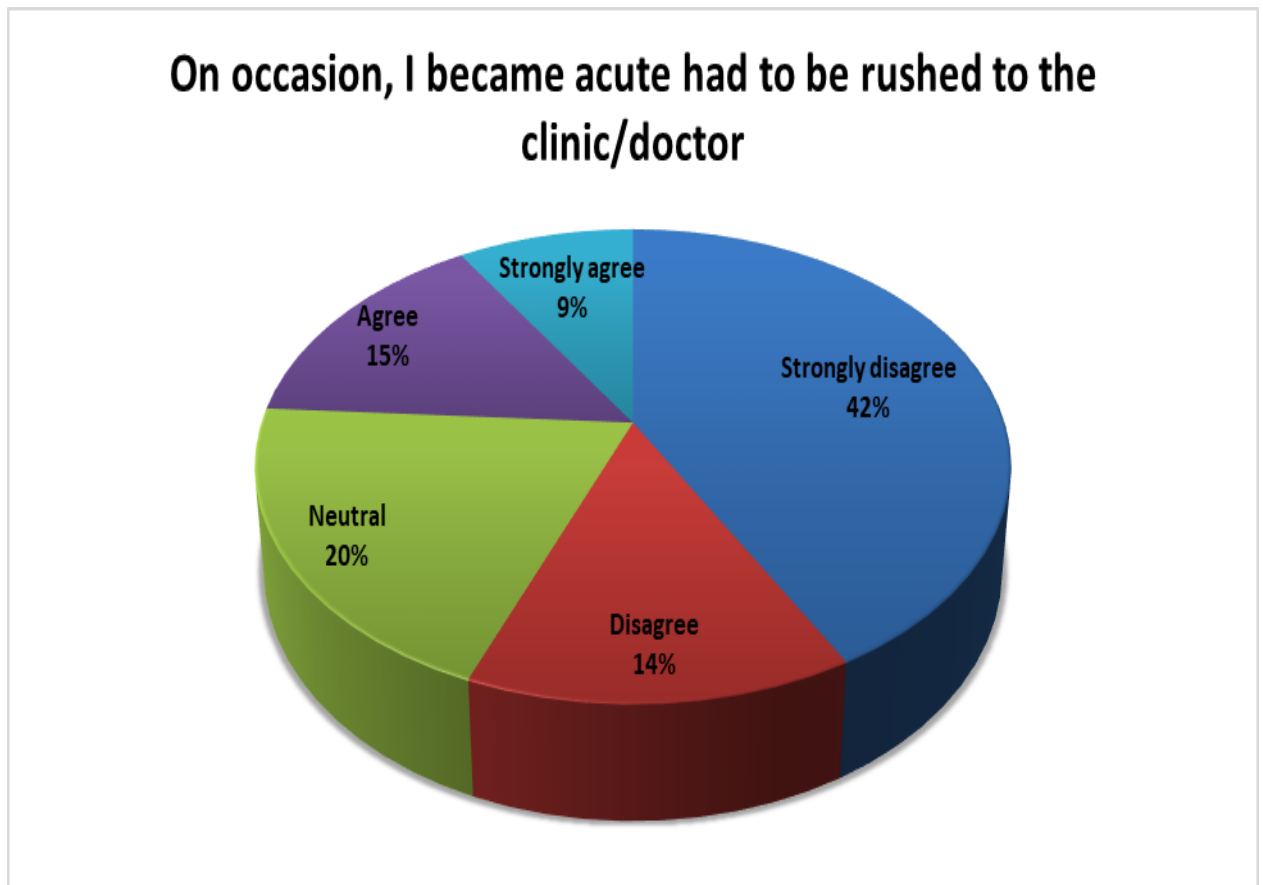
Source: Own construction

Whilst the ambivalent remain high at 20%, the patients who agree to have been taken to hospital because of severe conditions comprise of 24% of the respondents coming from 9% strongly agreeing and 15% agreeing. Of particular interest is the 56% comprised of 42% strongly agreeing and 14% agreeing. This allows for a generalization that most of the patients never waited until they were critical enough to be taken to the hospital as emergency cases.

OPEN ENDED QUESTIONS

This section was deliberately provided for as open-ended section to allow for views and opinions of the respondents in regards to certain aspects of this research. The respondents were requested to indicate the knowledge they had about how the system works and how their records are kept. Furthermore, they were requested to express their opinions in view of the policies that controlled and managed the chronic care proactive. The responses to all these were grouped and are reported below. There is

no particular screening of the information and everything that was said is recorded below.

5.4.3 Section C Open ended

Knowledge about policies and procedure in chronic illness and disorder.
An overwhelming number of 91% alleged that they were aware of the policies around chronic illness, treatment systems and how to maximize use of the drugs.

A small number of 7.5% denied that there were policies that govern the whole system of dispensing of chronic medicine and alleged that there was never communication from the clinicians.

Only 1.5% of the respondents did not know what to say or were not decided on what they wanted to saying in relation to this.

OPEN QUESTION: Policy on recording of chronic patients' records for check-up and treatment

Most of the respondents (93%) are aware that the patients' observation must be recorded in the Cerner and the patients' observation sheet.
The remaining (7%) stated did not know nor did they think it important to have clinicians managing their attendance or none-attendance and recording that.

OPEN QUESTION: General view of electronic investigation in chronic illness and disorder. The responses to this question were summarized as follows:

Advantages – these were stated as reasons why the use of computers was necessary at the hospital

➢ This is the best system to be used to collect the data and it's easy to retrieve the information and better off than paper system.

➢ It is clear, brief, concise, understandable, accessible, convenient, and easy to use and the data is kept safe.

➢ Documentation is standardized, illegibility avoided, saves space and time, it is a comfortable and excellent method and not time consuming.

➢ Patient confidentiality maintained, perfect, user friendly, settles disputes quickly because they always have the information with them.

Disadvantages - these emerged as disadvantages as listed by the respondents

➢ Computers take a lot of time away from patients, meant for minimizing paperwork but too much time spent on and affect the health staff helping patients.

➤ When the system breaks down one has to go back to the paper system and if there are not enough computers to be able to complete work in a timely manner.

➤ Hardware does not support health professional staff and the system can be available to all staff members with an effective training system it can be effective in health institutions.

5.5 CONCLUSION

As alluded to in earlier chapters, defaulting is taken serious because of the costs incurred by the government in the treatment and overall support of chronic illnesses. It has negative economic and social implications in that the government spends large amounts of finance to provide for citizens. After which defaulters may develop complications that may need the government to spend more money. The employers also suffer in that there is reduced production when an employee is not feeling well, and during the days when the employee takes sick leave, etc. The findings are somewhat disturbing because of the high percentages of respondents deciding not to share their opinions on what was thought to be simple but important issues. The Likert scale responses were fairly close between those agreeing and those disagreeing, making difficult to make "marked generalisations." To extract the required information on the defaulting, specific aspects of the patients' life were included, sub headed as, namely; social and family, regularity of medicine intake, -- the distance from the nearest health care centre, service at the clinic, personal attitudes and perceptions, the patient's work and health, and the respondents' chronic medicine and its effectiveness. No special mention was made of particular chronic disorders and thus no conclusion can be made on which chronic disorder has the highest defaulting. What stands out in the findings is the fact that many respondents appreciate the opportunity to get treatment regularly and keep themselves both economically and socially active.

CHAPTER 6
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS
6.1 INTRODUCTION

The study process started with the construction of the proposal which was a result of extensive literature review. The chapter included the introduction of the subject, the literature reviewed in order to develop a study gap that become the problem statement. There after the research objectives and research questions were developed to try and provide guidance in looking for a solution to the problem posed by the problem statement. The target population, sample and sampling methods were discussed and the methods of data collection and classification were settled. The second chapter looked at chronic disorder in general and identified the types and those that are considered more common. The causes of the different chronic disorders together with the need for preventive health practices to help reduce the incidents of these disorders in the community. Gender and age are also covered as some of the risk factors for these ailments. Chapter three addressed both the economic and social impact of the disorders extending this to the management and controlling of the chronic disease and the treatment regiments. Chapter 4 addressed the research design, methodology, target population, sample frame, sampling procedure, sample size, the research instrument, questionnaire, data collection, data analysis, data collection methods, and data analysis. Chapter then provided details by interpreting the findings as illustrated in the different diagrams constructed to show the relationships between the variables under study. The current chapter (chapter 6) is now a summary of the findings from the research, conclusions reached in view of the findings, as well as limitations and recommendations.

6.2 THE FINDINGS

This chapter identifies those findings of significance and makes conclusions and provides recommendations for the reader. The study shows that the first contact with the clinicians or between the patient and the clinician is at the primary health care level. After the data was collected, cleaned, edited, coded, it was then captured onto a software programme that helped with the construction of the illustrations. These illustrations were therefore interpreted and reported, this results report is therefore summarised herewith.

6.2.1 SECTION A - BIOGRAPHY

QUESTION 1: What is your age group?

It was of particular interest to find that the age group 20-40 made up the majority at 69%, when the group of older people (41+) known to be prone to chronic ailments accounted for 22% of those in attendance.

Conclusion; It is definitely confusing if this is compared to the literature reviewed on chronic illnesses worldwide. The likelihood is that people who come to collect may not be the same people who are the registered patients.

Recommendation: There is no immediate answer to this anomaly, except to suggest that it would be prudent to cross check always whether the patients come on their own to collect, or that they may be sending some people to collect on their behalf.

QUESTION 2: Please indicate your gender

There were 57% females and 41% males which is close to the country's women to men ratio at 46 males to 54 women. But, even then the number of women is slightly higher than the country statistics.

Conclusion: It can be concluded that there are slightly more women suffering from chronic diseases as compared to men in the Metro District.

Recommendation: It is recommended that the type of chronic disorders prevalent amongst women be identified and programmes be put in place to remedy the situation.

QUESTION 3: If other please indicate below.
Conclusion: The constitution recognizes the presence of three genders, namely male and female, it can be concluded here that only 2% of the respondents participated.

Recommendation: It is hereby recommended that clinicians recognize the existence of homosexuality and lesbianism, and that there be no discrimination in helping patients.

QUESTION 4: What is your marital status, please indicate below
Conclusion: The majority of patients living alone is much higher than expected at 60%, it is there concluded that there may be a relationship staying alone (without a partner) and the chronic illness incidents.

Recommendations: Research should be carried to establish if there are particular illnesses that are exacerbated or caused by having no partner and or living with other people.

QUESTION 5: Please indicate your family status in relation to how you stay

Conclusion – If those who are single parents without spouses and those single but living with family are put together – it can be concluded that there is a relationship between getting ill and how people live.

Recommendation: Research should be conducted to try and establish the essence of family (including having spouses) and the health of the individual. The research may assist in helping people understand the advantages or disadvantages of family.

QUESTION 6: What is your highest educational qualification?
Conclusion: Approximately 62% of the people attending or with chronic illness are or can be classified as semi-literate. This is in agreement with the statistics by government that 57% of South Africans do not have matriculation.

Recommendation: Broad grassroots work needs to be undertaken to educate the communities both for the sake of their health and for the benefit of the nation in that a skilled population is an employable population.

6.2.2 SECTION B (LIKERT SCALE)

Prescribed statements were constructed based on the literature review on defaulting of chronic patients. These statements ranked by the respondents In the Likert scale, the respondents ranked the statements provided to them on a scale of 1-5, 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. The findings of the Likert scale have been group (as they appeared in the questionnaire) under sub-topics and thus reported like such.

STATEMENT 1: I live alone and have no one to remind me
Conclusion: There are 55% of the population of these patients that stay with other people and have someone to remind them if need be. It can be concluded therefore that the larger part of the respondents opines that they have adequate support and people around them to enable them to remember going for their chronic medicine.

Recommendation: The remainder of 35%, again another $^1/_3$ who may forget their dates to collect their medication. It is recommended that the clinicians assist these patients to set reminders on their cell phones (assumption is that everyone has a mobile phone). Alternatively, the hospital or clinic may have a contact phone data base where in they can send sms or WhatsApp as a reminder to all the patients.

STATEMENT 2: I never really forget but am always busy
Conclusion: Another encouraging finding though it should have been higher being that 51% of the respondent's assert that they are never too busy to go for their medication. A disturbing 39% (above $^1/_3$) agree that they are sometimes too busy and may forget to go and collect their chronic medicine. It can be concluded that these patients think of a chronic disease as just another illness and do not think of it as a fatal illness.

Recommendation: This is disturbingly too high and it is recommended that the clinicians and the public health management teams must make concerted effort to

reach out to the communities. It is recommended that there should be cooperation between the Ministry of Health and the Ministry of Education in deciding on including health sciences as part of the curriculum throughout the system.

STATEMENT 3: I know I must go but I always mix up on dates
Conclusion: A majority of respondents (54%) has recorded that they do not mix up their dates with any other activities. It can be concluded therefore that these have the ability to prioritise and collect their medication promptly. It can also be concluded that 31% need help or a reminder.

Recommendation: There is a one third that seems to have problems mixing up the dates to the extent that they may default on their medication collection. It is recommended that these patients identify relates that can assist by reminding them of when they should go for their medication. Very little can be done if they suffer from dementia of other such disorders which make them forget.

STATEMENT 4: I live very far and find it difficult to go up to the clinic
Conclusion: The patients report says that 49% of the patients do not live far from their collection points, there it is concluded that for many of the patients, getting to the hospital or clinic is not a big problem.

Recommendation: The remainder of 31% (excluding the indifferent at 20%) claim that they stay far. That is $1/3$ of the population which is significantly high considering the effects of defaulting. It is recommended that in the interim these must be encourage by educating them on the importance of the chronic illness check-up. But the department should plan to build reception centres nearer to the patients' residence.

STATEMENT 5: I only go to the clinic when I am not well
Conclusion: An indication that only 48% go to the hospital even if they are not feeling well gives the impression of chronic patients that understand the need for following the treatment programme as it is. It can be concluded that there is a good number of patients who understand the nature of their illness.

Recommendation: It is recommended that patients should know and understand that the "feeling well" they experience is not an indication that they have been healed. The 37% who do not go to the clinic for regular check-up and medicine needs to be informed that this practice is not good for their health. They should be educated on this one thought that chronic illness may be with them for the rest of their lives.

REGULARITY OF TAKING MEDICINE

The failure to differentiate between acute and chronic ailments may be sending messages to chronic patients that there is something wrong with them. They may not

understand why one patient will go with a specific illness and not long thereafter they are cured. They compare that with their incurable illness, and may begin to lose hope or develop other beliefs around their illness. Because chronic illness cannot be cured, it means treatment has to last for much long than treating and eventual curing of acute illnesses.

STATEMENT 6: I don't always feel sick
Conclusion: Only 33% of the respondents say that they do not feel sick always leading to the conclusion that some people have their bodies responding properly or they are faith to their drug intake. It can also be concluded that 38% of the patients continue to have the symptoms.

Recommendations: A regular follow up on the patients and records of regular attendance are needed to address this situation. Individual chronic illness history and attendance records should be required for all patients coming through for their medication.

STATEMENT 7: I think I am better now than before.
Conclusion: A total 46% agreed and 40% disagreed showing that there is no general position by the patients. It can be concluded here that the patients who agreed with the statement are those that followed the instructions from the clinicians faithfully. It is encouraging to note that the medicine is working for some of the patients.

Recommendation: It is hereby recommended that the 40% who do not feel recovered or improved should have the check-up done frequently. However, no one knows who they are, it may be compulsory that patients undergo check-up before medication to determine if the chronic medicine is working for them.

STATEMENT 8: I only use the tablets when I am not well
Conclusion: The findings indicate that 39% (compared to 47%) of the respondents only take the chronic medicine when they are not well. It is hereby concluded that these patients do not understand the nature of chronic illness.

Recommendation: Since more than $1/3$ of the patients do not take medication when they are feeling well, it is recommended that these patients should be "*workshoped*" on what is chronic illness, where it comes from, why people don't get well and the fatal end of not following the regimen correctly.

STATEMENT 9: I sometimes go for weeks without pain and I am healed
Conclusion: It is not impressive that only 46% of the patients continue to take their medication even if they do not have pain. The other 35% and add to it those neutral (19%) are likely not to take medication when they do not feel any pain or discomfort.

Clearly, they do not understand the nature of chronic illness and how it can be controlled and managed.

Recommendation: It is recommended that there is no substitute for education of patients on the issues of chronic disorder management and controlling. It may be necessary to include this in the school syllabus and demystify this chronic illness for all generations to come.

STATEMENT 10: Very often I skip my medication because I am well

Conclusion: If 45% of the respondents (as indicated here) admit that they skip medication when they feel well. It can be concluded here that there is an indication that the patients are informed about their illness and the repercussions if the treatment regimen is not followed closely.

Recommendation: There is a need for educating the patients around chronic diseases in general and focus should be on the causal factors, the current state and the likely end result if these patients skip treatment. Counselling of these patients should be an ongoing process if defaulting is to be reduced if not eradicated.

THE DISTANCE AND MY MEDICATION

The length of the distance between residence and collecting point may be determined in a number of ways. The transport mode, if one would drive to the point, the distance may be considered to be short because of the time it takes. Use of public transport, if the patient has the taxi fare, may also mean that the distance may not be considered "very far." For those who may not have the taxi fare (common amongst the poor in the district), they may need to walk. This too is compounded by the age; they type of illness.

STATEMENT 11: I live very far from the clinic and have no transport.

Conclusion: Though the number of those claiming to have no transport is low at 33%, this number is significant in regards to defaulting. Though 49% do not need the transport. It can be concluded therefore that there has been no consideration from the planners on how to bring services to the community and avoid defaulting.

Recommendation: Facilities need to be brought as close to the people as possible since this is service to the community. It is highly recommended that the department plan to get closer to the community at large.

STATEMENT 12: I only come if there is someone to escort me.

Conclusion: With 50% patients claiming that they don't need escorts to the points, it can be concluded that there is another 33% that needs the escort facility failure which they will default.

Recommendation: Long term planning is necessary to bring the facilities and services as close to the community as possible. If people know that it is easy to access the facilities and that less time is consumed, that will discourage defaulting.

STATEMENT 13: I am not that strong to be walking this distance for medicine

Conclusion: There is 37% of the patients who claim they are not strong enough to walk the distance to collect medication – it can be concluded that some of these patients struggle to walk and may be too poor to afford a taxi to the clinic.

Recommendation: The Department of Public Health needs to consider bringing the collection points closer to the patients to avoid defaulting and also improve on their service delivery to the community.

STATEMENT 14: I need someone to wake me up early every time.

Conclusion: It can be concluded that most (50%) of the patients do not need help or to be woken up every time they go over to collect. It can also be concluded that the larger part of the patients is not in critical conditions that may need that type of attention.

Recommendation: It may be necessary to check with those patients who may need someone to wake them up to ascertain whether this problem is due to their illness or other factors not of a medical nature. It could be patients with dementia for instance.

STATEMENT 15: I live very close to the clinic but am lazy to come regularly.

Conclusion: The split between those living far from the collection point and those claiming that they do not live far is close at 46% and 37% respectively. It can be concluded that not all patients are within easy reach of the collection points.

Recommendations: As the population of the patients grows, there will be definitely a need for more collection centres – it may be advisable for the depart to start constructing in centres where there are no adequate public health facilities.

SERVICE AT THE CLINIC

Customer service is a critical element in the satisfaction of any client, and in many businesses customer service is considered highly to allow for repeat sales. In the absence of customer satisfaction, there is always a marked decline in repeat sales to the business. The public health facilities are under resourced with personnel working long hours. Poor service may make the patient dread the day they are supposed to go and collect their medication. Those able to pay prefer to go to private doctors instead. This section focuses on the patients' experience at the clinic of drug distribution point.

STATEMENT 16: Even if I get here early I wait for the whole day.

Conclusion: Those agreeing and those disagreeing are neck in neck (40% and 41% respectively) a clear indication that there is a misunderstanding, possibly depended on

the type of illness and how often the patients need to see the doctors when they get there.

Recommendation: It is recommended that if necessary more dispensing outlets be provided for by the department. The population of the district and equally the number of patients will always be increasing and opening such centres now will be more economical – it won't be cheaper 10 years down the line.

STATEMENT 17: The process used to give us the medicine is too slow.
Conclusion: It can be concluded that the patients are divided on whether or not the process is slow, with 50% believing that the process is not slow. This may be concluded as evidence that some patients may be "hurrying" to work ot some other commitments hence they perceive this to be very slow.

Recommendation: There appears to be a need to educate the patients about the processes and the limited resources (doctors who are supposed to do the check-up) and thus the seeming delay. Patients must be educated on why they need to see the doctor regularly before they get their share of the drugs.

STATEMENT 18: If you get here early you can be served within an hour
Conclusion: It can be concluded as per results that it takes more than an hour for one to "come in and collect" as perceived by the patients. It is also concluded that the patients do not understand the modus operandi at the dispensing outlets, but 54% of the patients have confirmed that it takes much longer than the hour.

Recommendation: All the groups need to be informed about the limitations the pharmacy staff have before they dispense; they need a file signed by the doctor. Too often there aren't enough doctors with some attending to emergencies in the wards. Educating the patience is of the essence.

STATEMENT 19: The pharmacist sorts out medicines only if we are present.
Conclusion: It can be concluded here that the patients, though at 47% think that their medicine is prepared for them before they come. It is also concluded that the patients have no idea about the processes followed before they get their medicine.

Recommendations: The patients again need to be educated on these issues, the clinicians do not know who is coming to collect, and only if the doctors have indicated (after patient check-up) what drug the patient should be given. Only then do the pharmacy staff start preparing the medicines for those waiting in the ques.

STATEMENT 20: The clinic managers never worry about how long we wait.
Conclusion: The results indicate that there is no general understanding and or belief that the hospital and or clinic managers do not worry about the service. It can be

concluded that since some, though not the majority, feel that the clinicians do not seem to care.

Recommendation: It may be necessary to educate patients on the structure and processes followed when they report to collect their medicine. Helping the patients to understand that may result in sympathy and patience from the patients. The health department should also provide adequate resources and training of the staff if there will be a reduction in defaulting.

PERSONAL ATTITUEDS AND PERCEPTIONS

It is definitely not easy for an individual to depend on the drugs when all others live a normal healthy life. Many things and thoughts may come into the minds of these patients, as they see themselves as unfortunate compared to their peers. Most may not want to accept responsibility for some of the illnesses they have though these could have been prevented. The perceptions and thoughts are measured in this section by checking on the thinking of the patients about their illnesses.

STATEMENT 21: I am tired of this treatment and I take because I should
Conclusion: It is concluded from the results that 50% of the respondents are not tired of the treatment, they benefit from the treatment. It is also concluded that because they benefit from this, they are also preparing to continue with the treatments to improve their life.

Recommendations: The other 50% comprising of the ambivalent and those who are "tired" of the treatment are a concern. Educating them is recommended, but special programmes are needed for the purpose considering the high levels of semi-illiteracy in that community. It might be necessary to carry out research and identify the type of chronic patients that have lost hope and why.

STATEMENT 22: My health is not improving that's why I skip sometimes
Conclusion: The majority of the respondents (55%) assert the view that they their health is improving or their condition is better using the treatment thus leading to the conclusion that the prescriptions are effective and the patients benefit.

Recommendation: There is concern over the other 45% who either were indifferent or indicated that the medication was not effective and not helping. It is recommended that the responsible clinicians conduct regular check-ups and identify those who are not getting treated with the drugs. These patients need to be assisted to understand the nature of their illness and how it came to be.

STATEMENT 23: I feel no difference whether I take the medication or not

Conclusion: A majority of patients (53%) feel the difference when they use the chronic medicine, meaning it is working for them. What this means therefore is that such patients may follow their treatment faithfully and avoid defaulting.

Recommendations: The remainder of 47% of great concern – it is recommended here that there should be instituted strict and compulsory monitoring to avoid the risk of patients not responding correctly to the treatment for many other reasons.

STATEMENT 24: It does not always work so I supplement with other medicines.
Conclusion: A conclusion is hereby reached that most patients (55%) depend strictly on the chronic medicine they get from the health checkpoints and do not supplement with other medicines. It can therefore be supposed that these patients faithfully sticking on to their chronic medication may benefit better.

Recommendations: There is a definite need to explain to the patients the difference between the other medicine that they may use to supplement and satisfy themselves that it is scientifically administered. The problem with other sources is that there is no diagnosis, there no known concentrations to be used, let alone knowledge of the active ingredients.

STATEMENT 25: My illness was caused by problems which need to be corrected.
Conclusion: It can be concluded here that the majority of respondents (55%) believe that their illness may be caused by other factors outside of their control. Consequently, the patients may not want to change their behaviour which may have caused the illness, and this may perpetuate the illness.

Recommendation: There is a need for concerted efforts to educate the patients to understand how they arrived at where they are now with the illness. It may be necessary to expose the patients to some basic principles in the process of treatment and why they may not be cured of the ailment.

MY WORK/LIFE AND MY CHRONIC MEDICINE

STATEMENT 26: I am so committed and I don't have time to collect medicine.
Conclusion: It can be concluded here that because none of the answers exceeded the half mark (50%) no generalization can be made. This gives the impression that generally the patients can put off going to collect their medication for another time because they will be busy. This is dangerous for their health since they have to follow strictly the requirements for the treatment.

Recommendation: The 46% that will not skip collecting their medication should be encouraged, and the others need extensive education of the negative effects resulting from skipping the taking of the medicine. It should be made clear that failure to adhere

to the prescription will make it difficult for the effective management and controlling of the ailment leading to more serious conditions.

STATEMENT 27: My work conditions don't allow me to be off for a full day
Conclusion: It can be concluded that the respondents do not have to get a day off from work (for those who work) and it can be concluded therefore that most patients (50%) do not interrupt their work for a full day to get medication.

Recommendation: It may be necessary and be more effective if patients could collect their medicine from other places out of the district – places nearest their workplaces. This may reduce defaulting and enable the patients to report for work.

STATEMENT 28: I sometimes share with friends the same problems
Conclusion: Though sharing with friends and relatives is generally a common phenomenon with human beings, it has always been thought of as a "woman thing." It is concluded that the majority of patients (61%) do not discuss their illness with friends.

Recommendation: It is recommended that the system finds a way of enriching the knowledge base of these patients, to enable them to understand and where necessary discuss with their friends and family from an informed base.

STATEMENT 29: I spend time pushing these negatives away from my mind
Conclusion: It can be concluded here that just over 50% (51%) of the patients do not have negative thoughts about their chronic disorders. Whilst there is the possibility of generalization, the number of those negative or not sure is too high and unsafe (49%).

Recommendations: It may be necessary for the clinicians to provide more education, but specifically counselling to these patients as part of the treatment. This may help them change negative attitudes about their conditions and may help reduce defaulting.

STATEMENT 30: The church prays for me and sometimes the pain disappears
Conclusion: Though the patients may believe in the power of prayer, it is evident and can be concluded that these patients take their medication faithfully. An indication that some of the education on chronic illness has been heeded.

Recommendation: It may be ideal for the government to focus on the 27% who believe that prayer is the solution to their problem. Making them understand how they get to the level of chronic disease may assist them to follow their treatment religiously.

STATEMENT 31: I can't reverse this, so I don't worry much about the medicine
Conclusion: it is evident that most patients (59%) believe that they are able to reverse or assist in the maintenance of their chronic disorders. This may be due to adequate education on chronic illness, but the patients are informed.

Recommendation: It is important that the government embark on continuous chronic illness awareness and introduce it early in the life of the citizens. Prevention is better than cure, in this case there is no cure for the chronic illnesses.

STATEMENT 32: Sometimes, I became serious and have to be rushed to hospital.

Conclusion; 56% of respondents have not been rushed to hospital, this may mean that they follow up their treatment faithfully. This is encouraging and it is hereby concluded that some of the patients (most) take seriously their treatment.

Recommendation: The high level of the ambivalent and those waiting to get critical need education on their health, it is recommended that primary health care programmes should be intensified.

6.2.3 OPEN ENDED QUESTIONS

This section was deliberately provided for as open ended section to allow for views and opinions of the respondents in regards to certain aspects of this research. The respondents were requested to indicate the knowledge they had about how the system works and how their records are kept. Furthermore, they were requested to express their opinions in view of the policies that controlled and managed the chronic care proactive. The responses to all these were grouped and are reported below. There is no particular screening of the information and everything that was said is recorded below.

REQUIREMENT 1: Knowledge about policies and procedure in chronic illness.

1. An overwhelming number of 91% alleged that they were aware of the policies around chronic illness, treatment systems and how to maximize use of the drugs.

2. A small number of 7.5% denied that there were policies that govern the whole system of dispensing of chronic medicine and alleged that there was never communication from the clinicians.

3. Only 1.5% of the respondents did not know what to say or were not decided on what they wanted to saying in relation to this.

REQUIREMENT 2: Policy on recording of chronic patients' records for check-up and treatment

1. Most of the respondents (93%) are aware that the patients' observation must be recorded in the Cerner and the patients' observation sheet.

2. The remaining (7%) stated did not know nor did they think it important to have clinicians managing their attendance or none-attendance and recording that.

REQUIREMENT 3: General view of electronic investigation in chronic illness and disorder. The responses to this question were summarized as follows:

3.1 Advantages – these were stated as reasons why the use of computers was necessary at the hospital

- This is the best system to be used to collect the data and it's easy to retrieve the information and better off than paper system.
- It is clear, brief, concise, understandable, accessible, convenient, and easy to use and the data is kept safe.
- Documentation is standardized, illegibility avoided, saves space and time, it is a comfortable and excellent method and not time consuming.
- Patient confidentiality maintained, perfect, user friendly, settles disputes quickly because they always have the information with them.

3.2 Disadvantages - these emerged as disadvantages as listed by the respondents

- Computers take a lot of time away from patients, meant for minimizing paperwork but too much time spent on and affect the health staff helping patients.

- When the system breaks down one has to go back to the paper system and if there are not enough computers to be able to complete work in a timely manner.

- Hardware does not support health professional staff and the system can be available to all staff members with an effective training system it can be effective in health institutions.

6.3 CHAPTER SUMMARY

The researcher makes the overall conclusion that there are many patients who are well informed or who simply abide by the principles. No specific reason can be given for these patient's religious determination to get their health back. It is not clear also what their level of education is, what their gender is and whether this has to do with their closeness to the facilities. It may also be because of the illness and their total dependency on drugs in which case they find relief from adhering to the treatment regimen. It is disturbing that the numbers of such positive patience always range between 30% - 59%, not a very satisfactory number. It is hereby concluded and recommended that extensive education and counselling be planned to enable the patients to understand the economic and social ramifications of their failure to follow their treatment religiously. Meanwhile it would be of tremendous economic benefit to

the public health service if the education on health and specifically chronic and infectious diseases was introduced into the school curriculum to prepare the young to prevent this fatal illness. The rates of defaulters in chronic disease have serious implications for people with chronic disease and for the health system. This review has shown that several health-system factors affect attendance which leads to defaulting. These factors include among others the lack of accessibility to services (e.g. hours of operation, long wait times and distance to the clinic), clerical error and inefficient booking systems. The accessibility may be improved through more flexible hours of operation and exploring alternative ways to provide education through technology or other means, particularly patients who live at a distance from the clinic. A range of strategies are also needed to address the myriad of patient-related and health-system factors to improve attendance and ultimately improve health outcomes.

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QUESTIONNAIRE

TITLE; An investigation of the reasons for defaulting by Chronic medicine recipients (patients) in the Metro District of the Western Cape.
Filling in of this form is voluntary, and any respondent is free to withdraw from this survey at their will. Your rights to privacy are acknowledged and the no information provided here will be given to any authority for any purpose – do not write your name anywhere on this questionnaire.

SECTION A: BIOGRAPHY

Please fill in by putting a cross [x] over the relevant answer / boxes below.

1.   What is your racial group / ethnic identity, please choose from box below

Black	Coloured	Indian	White	Other

2. If other please specify in dotted line ahead...

3.   Indicate your age group in the boxes below –

Less than 20	20 - 30	30-40	41-50	50+

4. Please indicate your gender – this is for statistical purposes only

Female	Male	Other

5. If other please specify briefly in dotted lines that follow...

6.   What is your marital status, please indicate below

Never married	Divorced	Widowed	Married	Common law partner

7. Please indicate your family status in relation to how you stay

Single parent	Parent + spouse	Live with family at home	Live alone

8. What the highest educational qualification you are attained – even if you did not pass all

Never went to school	Did Matric	Got a diploma	Got a degree +

9. As there anything else you want to say about your biography / life in general, please list that in point form below

....

....

....

....

SECTION B: BIOGRAPHY

You'll not be punished for any information you provide here, this is why you should not put your name or that of your clinic. This information will be used to improve our service to you. Please respond to all questions by putting an X in the boxes (numbers) corresponding to each statement. The scale is; 1= strongly disagree, 2 = disagree, 3 = neutral / no opinion, 4 = agree and 5 = strongly agree..

	Problems and reasons for defaulting **Social family fife**	Strongly disagree	Agree	Neutral	Agree	Strongly agree
1	I live alone and have no one to remind me	1	2	3	4	5
2	I never really forget but am always busy	1	2	3	4	5
3	I know I must go but I always mix up on the dates	1	2	3	4	5
4	I live very far and find it difficult to go up to the clinic	1	2	3	4	5
5	I only go you the medicine when I am not well	1	2	3	4	5
	REGULARITY OF MEDICINE INTAKE					
6	I don't always feel sick	1	2	3	4	5
7	Think I am better now than before	1	2	3	4	5
8	I only use the tablets when I am not well	1	2	3	4	5
9	I sometimes go for weeks without pain and I am healed	1	2	3	4	5
10	Very often I skip my medication because I am well	1	2	3	4	5
	THE DISTANCE AND MY MEDICATION					
11	I live very far from the clinic and have no transport	1	2	3	4	5
12	I only come if there is someone to escort me	1	2	3	4	5
13	I am not that strong to be walking this distance for medicine	1	2	3	4	5
14	I need someone to wake me up early every time	1	2	3	4	5
15	I live close to the clinic but am lazy to come regularly	1	2	3	4	5
	SERVICE AT THE CLINIC					
16	Even if I get here early I have to wait for the whole day	1	2	3	4	5
17	The process used to give us the medicine is too slow	1	2	3	4	5
18	If you get here early you can be served within an hour	1	2	3	4	5
19	The pharmacists sort out medicines only if we are present	1	2	3	4	5
20	The clinic managers never worry about how long we wait	1	2	3	4	5
	PERSONAL ATTITUDES AND PERCEPTIONS	1	2	3	4	5
21	I am tired of this treatment and take because I have to	1	2	3	4	5
22	My health is not improving that"s why I skip sometimes	1	2	3	4	5
23	I feel no difference whether or not I take the medication	1	2	3	4	5
24	It doesn't always work so I supplement with other medicines	1	2	3	4	5
25	My illness was caused problems which need to corrected	1	2	3	4	5
	MY WORK / LIFE AND MY CHRONIC MEDICINE	0	0	0	0	0
26	I am so committed and I don't have time to collect medicine	1	2	3	4	5
27	My conditions don't allow me to be off for a full day	1	2	3	4	5
28	I sometimes share with friends with the same problems	1	2	3	4	5
29	I spend time pushing these negatives away from my mind	1	2	3	4	5
30	The church prays for me and sometimes the pain disappears	1	2	3	4	5
31	I can't reverse this, so I don't worry much about the medicine	1	2	3	4	5
32	On occasion I became acute had to be rushed to the clinic/ doctor	1	2	3	4	5

SECTION C: OPEN ENDED QUESTIONS

1. **State below in your own words and in point form 5 possible causes for you to default on collecting your chronic medicine.**

a. ....

b. ....

c. ....

d. ....

e. ....

2. State below five [5] things you think should be done to stop people from defaulting on their chronic medicine.

f. ....

g. ....

h. ....

i. ....

j. ....

3. Please list here any other issues you may want to highlight, put them in point form

k. ....

l. ....

m. ....

n. ....

o. ....

Thank you for your co-operation.