

**AN INVESTIGATION ON THE EFFECTIVENESS OF LIFESTYLE
MODIFICATION INTERVENTIONS FOR HYPERTENSIVE PATIENTS IN A
PUBLIC HEALTH CLINIC, IN THE EASTERN CAPE PROVINCE**

By

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DECLARATION

I Lulama Pearl Katiya, declares that this research is my original work, unless stated otherwise and that it is has never been published anywhere else before.

Signature:

Date: 02/06/2014

ABSTRACT

The continued increase in morbidity and mortality of hypertensive patients in Alice in the Eastern Cape Province, prompted the researcher to investigate the effectiveness of lifestyle modification intervention on hypertensive patients. High morbidity and mortality rates of hypertensive patients are occurring in spite of hypertensive patients being taught about lifestyle modification (De Haan, 2006:55). According to the fifth South African Guidelines (2011:60), hypertension is a global health burden affecting developed and developing countries including South Africa. In 2003, the South African District Health Statistics showed that in the Eastern Cape, 221 females over 15 years of age and 101 males over 15 years of age had moderate hypertension and 92 males over 15 years had severe hypertension. Hypertension is a `silent killer` because it seldom gives rise to any symptoms (De Haan, 2006:66).

The objectives of the study were to: investigate the effectiveness of lifestyle modification intervention on hypertensive patients, and to determine the strategies used in order to ensure the effectiveness of lifestyle modification by hypertensive patients. The research question was: what is the level of effectiveness of lifestyle modification on hypertensive patients in Alice?

A descriptive quantitative research design was used in this study. This design allowed the researcher to investigate the effectiveness of lifestyle modification of hypertensive patients in Alice area. A convenience sample was used to sample the target population for the study on the criteria and a total of 169 respondents served as a size of the sample. A pre-test of the tool was carried out on 16 participants to validate the tool before the actual data collection commenced. Ethical approval was obtained from University of Fort Hare, the Department of Health, as well as Victoria

Hospital and clinics. Data were collected by means of self-administered questionnaires. The Statistical Package for Social Science (SPSS) version 21.0 software for windows reference was used to analyse the data. The results were presented in tables, graphs and pie charts.

The results revealed that 77% (n=125) reported to know nothing about hypertension. Twenty three percent of the participants (n=37) knew about hypertension, they mentioned that it is when the heart has too much blood that is overloading the heart due to problems of the heart, then the blood flow through the heart is disturbed. Furthermore participants stated that it is important that every hypertensive patient engage in lifestyle modification. The study recommended that the Department of Health should emphasise the use of Hypertension Guidelines where all nurses in public clinics should be trained in educating and doing counselling to all hypertensive patients, including those who are pre-hypertensive that are visiting the clinics. Health education about risk factors and complications of hypertension must be done. All patients visiting public clinics must be educated regardless of their problems.

DEDICATION

I dedicate this study to my late grandmother and aunt (Sisi Hobe) who passed away from hypertension. I would also like to express my gratitude to my loving and caring husband Master, my children Sanele and Sihle, my sister Nolundi and my aunts sisi Tembie and sisi Bulie for their love, support and understanding. I love you all so dearly.

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CHAPTER 1

1 INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

According to the Standard Treatment Guidelines & Essential Drug Lists (2008:17) hypertension is a condition characterised by blood pressure (BP) elevated above normal measurements on three separate occasions, a minimum of 2 days apart. A systolic BP equal or above 140 mmHg and/or a diastolic BP equal or above 90 mmHg.

Levels of hypertension in adults are as follows:

Level of hypertension	Systolic mmHg	Diastolic mmHg
Mild	140 - 159	90 - 99
Moderate	160 - 179	100 - 109
Severe	180 or more	110 or more

These guidelines further state that all patients with hypertension require lifestyle modification which is:

- Weight loss if overweight
- Regular physical exercise
- Stop smoking
- Moderate or no alcohol intake

- Restrict salt intake
- Restrict fat intake and adequate dietary fibre intake (fruit, vegetables & unrefined carbohydrate).

Vlok (2007:625) however defines hypertension as consistent blood pressure (BP) 160/100 mmHg or above which is generally accepted to be abnormally high. Hypertension is largely driven by four risk factors, namely alcohol, smoking, poor diet, and lack of exercise. Hypertension results from a generic predisposition coupled with exposure to certain environmental influences, like diet high in salt, cigarette smoking, overweight and obesity (De Haan 2006:66). Hatting, Dreyer & Roos (2008:242) state that changes in lifestyle of the community should be a priority of all health care professionals. They further argue that the causes of hypertension are mostly found in the lifestyle of the individual that can be smoking, drinking, over-indulgence in food, inactivity and excessive salt intake. Furthermore, diabetes, gender, contraceptives, age and stress can trigger this chronic condition.

In addition to decreasing blood pressure, lifestyle modification enhances anti-hypertensive drug efficiency and decreases total cardiovascular risk (Guidelines 2011:66). It should be given to all patients when blood pressure measurement is performed. In case of elevated blood pressure, a programme of lifestyle modification should be implemented immediately.

1.2. PROBLEM STATEMENT

The researcher who is a lecturer did clinical accompaniment of student nurses at War Memorial clinic where the researcher observed that hypertensive clients on treatment were not improving. Health education on lifestyle modification is given yet the mortality rate remains high. Morbidity rate is also on the increase where these

patients are admitted for complications and this is affecting the economy of South Africa. The concern of the researcher is: Are lifestyle modification strategies practised? If practiced, why are not effective? If not practiced what are the barriers?

1.3 PURPOSE OF THE STUDY

The purpose of the study is to investigate the effectiveness of lifestyle modification intervention on hypertensive clients in a public health clinic in the Eastern Cape, with the aim of formulating strategies to improve the effectiveness of lifestyle modification on hypertensive patients.

1.4 SIGNIFICANCE OF THE STUDY

The results and recommendations from this study may influence policy makers to improve and strengthen guidelines that will help to enhance the use of lifestyle modification interventions by hypertensive clients. The study will also develop strategies to ensure that the lifestyle modification interventions are disseminated to the clients with hypertension. This will enhance the use of life style modification interventions by hypertensive clients.

Information from the study may decrease the morbidity rate of those suffering from stroke and decrease mortality rate. This study may add to the body of knowledge within the area of preventive and promotive health.

1.5 RESEARCH OBJECTIVES

The objectives of the study are:

1. To investigate the effectiveness of lifestyle modification interventions on hypertensive patients.
2. To determine the strategies used to ensure effectiveness of lifestyle modification interventions on hypertensive patients.

1.6 RESEARCH QUESTION

The research question is:

What is the level of effectiveness of lifestyle modification interventions on hypertensive patients?

1.7 DEFINITION OF CONCEPTS

Effectiveness

Effectiveness is producing a successful result that is wanted or intended (Oxford Advanced Learner`s Dictionary 2005:469). In this study, the term means reducing blood pressure. It also refers to the successful results obtained from lifestyle modification. In this study it is when a hypertensive patient practises lifestyle modification and takes treatment regularly where the patient`s blood pressure drops below 140 mmHg and/or a diastolic BP lower than 90 mmHg on three separate occasion, a minimum of 2 days apart

Lifestyle modification

Lifestyle modifications is the act or process of changing in order to improve life or make it more acceptable (Oxford Advanced Learner`s Dictionary 2005:946). In this study, it means persuading people to practice lifestyles that will improve their health.

Intervention

To intervene is to become involved in a situation in order to improve or help (Oxford Advanced Learner`s Dictionary 2005:782). In this study, it is the management of increased hypertension.

Hypertension

Hypertension is a consistent blood pressure of 160/100 mmHg or above, which is generally accepted to be abnormally high (Vlok 2007:624). In this study it is a systolic > 140 mmHg and diastolic > 90 mmHg with minimal or no drug effect.

1.8 RESEARCH METHODOLOGY

Research approach and design

A research design refers to a logical framework that guides the researcher in the process of collecting, analysing and interpreting the data (Burns & Grove 2012:32). In this study, a quantitative research approach and descriptive design was used.

Target population

The population is all elements (individuals, objects or substances) that meet the criteria that the researcher is interested in (Burns & Grove 2012:132). In this study, the target population consisted of hypertensive patients who were visiting War

Memorial clinic, aged 18 years and above on the second week of April and first week of May 2014.

Sampling

According to Burns and Grove (2012:132) sampling is a process of selecting subjects, events, behaviours, or elements for participating in a study. In this study, convenience sampling was used to select hypertensive patients who were visiting the clinic for their reviews and treatment. Convenience sampling involves choosing readily available people or objects for the study. The age of the participants were from 18 years and above regardless of their gender, educational level and socio-economic status. Hypertensive patients were visiting War Memorial Clinic during the time of data collection and answered the questionnaire. A private room was provided where a hypertensive patient would be brought to me after consultation by a registered nurse.

Sample size

In quantitative studies, a researcher can calculate the exact number of participants needed according to how much sampling error the researcher is willing to accept (Brink, Van der Walt & Rensburg 2012:143). In this study, a confidence level of 95% and margin of error of 5% was used and the sample size was 169. In this clinic, 300 hypertensive clients are seen monthly. According to Roasoft table, if the population size is 300, confidence level is 95% and margin of error is 5%, the sample size is 169 (Copyright. The Research Advisor 2006)

Inclusion criteria

Hypertensive patients who were aged 18 years and above attending War Memorial clinic and agreed to participate in the research were included in the study. The data was collected on the second week of April and first week of May 2014.

Exclusion criteria

Hypertensive patients attending hospitals, private clinics and private practitioners were excluded.

1.9 DATA COLLECTION

The collection of information for a study is called measurement. It is the process by which values are obtained for the characteristics of individuals being studied (Joubert & Ehrlich 2010:10). A questionnaire is a list of questions which are answered by the respondent, and which give indirect measures of the variables under investigation (Joubert & Ehrlich 2010:10). A questionnaire is a tool for collecting and recording information about a particular issue of interest. It is mainly made of a list of questions, but should also include clear instructions and space for answers or administrative details (Burns & Grove 2012:43). In this study, a questionnaire was used as a tool for collecting the data.

A private room was provided for all hypertensive patients coming for follow up visits, they were invited to participate in the study and its purpose was explained to them. They were given time to ask questions. The respondents were given questionnaires and provision was made for those who do not understand English by interpreting the questions into IsiXhosa. The patients were also reassured of protection of their rights by safeguarding all information collected from the research. This was done through

having all documents and equipment used kept under lock and key. All participants signed consent forms. Respect, anonymity and confidentiality were maintained throughout the study.

1.10 VALIDITY AND RELIABILITY

The validity of an instrument is a determination of the extent to which the instrument actually reflects the abstract construct being examined (Burns & Groove 2012: 377).

The questionnaire was taken to the manager in charge of the clinic and statistician to check if the questions are clear and not ambiguous. Reliability of the tool was tested on the first 16 respondents at Gateway clinic in Alice who did not participate in the main data collection.

1.11 DATA ANALYSIS

Data was analysed using the Statistical Package of Social Science (SPSS) software, version 21.0. The significant level was set at 0.05. Descriptive statistics were used to describe and summarise data with the assistance of a statistician. Data was converted and condensed in an organised in the form of table and graphs, so that the data had meaning to the readers of the research report. Demographic data and responses from the questionnaire was analysed through frequency counts. Results of data collected from questions were linked with the numbers of times the score occurs. Each score was listed separately, or the results were grouped. The results were subdivided into classes, or collections of scores, which were grouped together. The results of this study were presented in percentages, tables and histograms (Brink et al 2012:180).

1.12. PRE-TEST OF THE TOOL

A pre-test is commonly defined as a smaller version of a proposed study conducted to refine the methodology (Burns and Grove 2012:42). A pre-test was conducted at Gateway clinic where 16 hypertensive patients answered the questionnaire to test the reliability of the instrument and to identify problems early in the study. The participants for the pre-test did not participate in the actual study.

1.13 ETHICAL CONSIDERATIONS

Brink et al (2012:38) argues that a researcher has the responsibility of conducting nursing research in an ethical manner. Failure to meet this responsibility completely undermines scientific processes and may lead to many unfortunate and problematic consequences. The following ethical steps were followed:

Approval by Institutional Committees

In this study permission for conducting the research was requested from the ethics committee of the Faculty of Science and Agriculture at the University of Fort Hare, the Department of Health and the Management of Nkonkobe Sub-district, as well as the Manager of the War Memorial Clinic in Alice.

Protection of human rights

- Right to self-determination

The respondents were informed about the purpose of the study, and were informed that the questions needed their personal experiences and knowledge. Participation was voluntary, this means one had a right to refuse participation in the study.

Additionally, the questionnaire was anonymous and consent forms only required signatures. Written consent was obtained from the participants.

- Right to Privacy, Anonymity and Confidentiality

The participants were reassured of their privacy and confidentiality as the questions were answered individually and the information was written down in an anonymous questionnaire. The information was kept confidential

- Right to protection from Discomfort and Harm.

The research study did not cause any physical harm to anyone involved. Temporal discomfort might have occurred to the respondents as the study was investigating their lifestyle and behaviours regarding modification. The respondents were informed that the questionnaire was anonymous, and confidentiality of the respondents was maintained all the times. The respondents were informed about their right to refuse participation and to withdraw any time.

1.14 RESULTS AND RECOMMENDATIONS

The results were interpreted and recommendations were provided to the Department of Health in the Eastern Cape and Nkonkobe Sub-district Health Service Manager.

1.15 SUMMARY

In this chapter, the scientific foundation of the study was introduced with a brief description of the background, problem statement, purpose, objectives, research question, and significance of the study, definition of terms, research methodology and ethical considerations. The next chapter reviews literature that is relevant to the topic under discussion.

CHAPTER 2

2 LITERATURE REVIEW

2.1 INTRODUCTION

A literature review is an organised written presentation of what has been published on a topic by scholars (Brink et al 2012:70). In this study an empirical literature review was to identify and integrate relevant sources published since the original literature review (Brink et al 2012:72).

The researcher performed a literature search on the effectiveness of lifestyle modification on hypertensive patients. A review of literature assists in identifying the methods used in the research, and also the research findings of other researchers in order to be able to use them. The content of the reviewed literature is classified as follows:

- Definition of hypertension
- Risk factors as result of lifestyle
- Effective lifestyle modification

2.2 DEFINITION OF HYPERTENSION

De Haan (2006:66) states that hypertension is a condition characterised by a systolic and/or diastolic blood pressure which is above normal. It is very difficult to decide, what a normal blood pressure is at a given age. Hypertension results from a genetic predisposition coupled with exposure to certain environmental influences. Diets high in salt, cigarette smoking, overweight and obesity may all play a part.

Walsh and Crumbles, (2007:252) argues that hypertension is a condition in which there is a sustained increase in arterial blood pressure. They further argue that defining hypertension is problematic because the normal range vary, creating a blurring between normotensive and hypertensive people. A blood pressure of 135/85 mmHg may be seen as acceptable, but if the patient has a condition such as diabetic or renal disease, this blood pressure may be considered to be too high.

2.3 RISK FACTORS AS RESULTS OF LIFESTYLE

De Haan, (2006:54) states that according to World Health Organisation (WHO) (2004), non-communicable diseases are a major cause of death and disability worldwide. In the same report, WHO (2004) stated that this group of diseases now account for 59% of the 57 million deaths that occur globally every year, and 46% of the global burden of diseases. It was also noted that relatively few risk factors – high blood pressure, high cholesterol, obesity, smoking and alcohol are associated with most of these diseases. If people change their dietary habits and participate in regular physical activity, they can reduce non-communicable diseases like hypertension substantially.

Hatting, Dreyer & Roos (2008:242) state that changes in lifestyle of the community should be a priority of all health care professionals. They further argue that the causes of hypertension are mostly found in the lifestyle of the individual that can be a lifestyle of smoking, drinking alcohol, overindulgence in food, inactivity and excessive salt intake. Furthermore, diabetes, gender, contraceptives, age and stress can trigger this chronic condition.

According to a Scientific Statement from the American Heart Association, Lawrence, Appel, Michael, Brands, Stephen, Daniels, Karanja, Elmmar, Frank and Sacks

(2005:1), a substantial body of evidence, strongly supports the concept that multiple dietary factors affect blood pressure. Well established dietary modifications that lower blood pressures are reduced salt intake, weight loss, and moderation of alcohol consumption among those who drink alcohol.

Bouwer, Dreyer, Herselman, Lock & Zeelie, (2006:63) state that a person`s health behaviour is a very important part of behaviour in general. This behaviour depends on four factors which are knowledge, beliefs, attitudes and values. These four influential factors are combined in a model of health behaviour. The relationship between knowledge and personal experience influence beliefs. Beliefs in turn influence attitudes.

2.4 EFFECTIVE LIFESTYLE MODIFICATION INTERVENTION

Weight loss, reduced sodium and alcohol intake, and increased physical activity are all effective as individual interventions to lower blood pressure. Two long term studies were conducted to test such comprehensive interventions, and the results were encouraging: - favourable positive changes were observed in each of the targeted behavioural factors. Secondly, the intervention groups maintained clinically significant changes over 4 – 5 years of follow up. Thirdly, the behavioural changes were associated with clinically significant favourable blood pressure outcomes. Medication adherence was also addressed on an individual basis. Successful intervention programs such as those required an ongoing planning and team-work among the health professionals with expertise in each of the component areas. In this study, it was concluded that there was now considerable evidence that behaviour modification can prevent and control high blood pressure in many individuals. The most effective at that point was weight reduction, restricting sodium

and alcohol use and increasing physical activity. Better methods of achieving modification of such lifestyle factors were needed at both individual and community (public health) levels of interventions (Dubbert, 2008:212). Additional future research direction which is important for all the various types and combinations of interventions was to improve the match between behavioural treatment and patients. Individuals from low socio – economic classes however, were identified as experiencing problems in getting the desired diet and in adhering to treatment due to lack of money to access health care services (Dubbert 2008:212).

Marquez – Celedonio and Laguna de Alvarado, (2008:86) in their study argued that pre - hypertension is associated with high blood pressure and higher cardiovascular risk, and it should be suggested to pre - hypertensive patients that they modify their lifestyle in order to avoid cardiovascular diseases. The aim of their study was to determine the clinical effectiveness of modifying lifestyle to reduce cardiovascular risk in pre – hypertensive patients and to compare the results obtained with those achieved by the standard management of such patients. In this study, the results showed that the subjects who undertook lifestyle changes experienced a reduction in blood pressure.

Ike, Anebue and Aniebue (2010:57) state that population surveys have shown that hypertension is either untreated or uncontrolled in around 70 – 75% of patients worldwide, despite advances in drug treatment that have made life more tolerable for people with hypertension. More than 50% of people with hypertension are not aware of their condition, as well as more than 50% have not been treated. The identified reasons for non-treatment included poor adherence, awareness of advice on lifestyle modification, cost effectiveness, others cannot afford and level of education.

2.5 CHAPTER SUMMARY

This chapter explored existing literature on lifestyle modification as a phenomenon and its effectiveness on hypertensive patients. The next chapter presents the research methodology followed in this study.

CHAPTER 3

3 RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter outlines the research methodology applied during this study. Included is a discussion of the research design, the research problem, the target population and sampling procedures, inclusion and exclusion criteria, piloting the questionnaire data collection, limitations, ethical consideration, method of data analysis and a summary of this chapter.

3.2 RESEARCH DESIGN

A research design refers to the set of logical steps taken by the researcher to answer the research question. It forms a blue print of the study and determines the methodology used by the researcher (Brink et al 2012:96). The purpose of a design is to achieve greater control and thus improving the validity of the study (Burns & Grove 2012:231). In this study a quantitative research approach was used in order to obtain information about the effectiveness of lifestyle modification used by hypertensive patients in a public clinic. A descriptive design was used in order to explore and describe the phenomena in real life situation (Burns & Grove 2012:44).

3.3 STUDY SETTING

A study setting is the location where a study is conducted (Burns & Grove 2012:359).The study was conducted at in Nkonkobe Sub-district in Alice, in the Eastern Cape Province. War Memorial clinic is situated in Alice and has the following catchment areas: Town, Hill Crest, Happy Rest, Golf Course and KwaMavuso. It also caters for University of Fort Hare residents. Monday is a day for clients coming from

other catchment areas, Tuesdays for those coming from University of Fort Hare, Town, Hillcrest, Happy rest, Golf course and KwaMavuso and Thursdays are for old people and physical challenged hypertension clients. The number of hypertension patients seen monthly is approximately 300. The study is based on the population of hypertensive patients from the age of 18 years and above residing in Alice.

3.4 POPULATION

3.4.1 Target Population

The population is all elements (individuals, objects, or substances) that meet the criteria that the researcher is interested in (Burns & Grove 2012:40). In this study, target population consisted of hypertensive clients who were visiting War Memorial clinic in Alice area in the Eastern Cape and were 18 and above years old.

3.4.2 Sampling procedure

According to Burns and Grove (2012:132) sampling is a process of selecting subjects, events, behaviours, or elements for participating in a study. In this study convenience sampling was used on hypertensive clients visiting the clinic for their reviews and treatment.

Brink, et al (2012:140) states that convenience sampling is availability sampling and involves choice of readily available subjects or objects for the study. This sampling was used as it gave all the targeted hypertensive patients attending the clinic, an equal chance to participate in the study.

Selected hypertensive patients from War Memorial Clinic who were aged 18 and above, were included in this study. These respondents were selected by the researcher because of their relevance to the study and they met the eligibility criteria.

3.4.3 Sample Size

In quantitative studies, a researcher can calculate the exact number of participants needed according to how much sampling error the researcher is willing to accept (Brink et al 2012:143).

In this study, a confidence level of 95% and margin of error of 5% was used. In War Memorial clinic, 300 hypertensive clients are seen monthly. According to Resift table if the population size is 300, confidence is 95% and margin of error is 5%, the sample size is 169. In this study the sample size is 169 hypertensive patients from the age of 18 years and above, who volunteered to respond to the questionnaire. This sample was drawn from the available targeted population that was at the clinic during the second week of April and first week of May in 2014.

3.4.4 Inclusion criteria

The sample included hypertensive patients who were aged 18 years and above, attending War Memorial clinic and agreed to participate in the study during the second week of April and second week of May..

3.4.5 Exclusion criteria

The sample excluded hypertensive patients attending private clinics, private practitioners and admitted in the hospital during the the second week of April and May 2014.

3.5. RESEARCH TOOL

Instrumentation, a component of measurement, is the application of specific rules to develop a measurement device (instrument) (Burns & Grove 2012:368). A questionnaire is a tool for collecting and recording information about a particular

issue of interest. It is mainly made of a list of questions, but should also include clear instructions and space for answers or administrative details (Burns & Grove 2012:43). According to Joubert & Ehrlich (2010:107), a questionnaire is a list of questions which are answered by the respondent, and which give direct measures of the variables under investigation. In this study, a structured questionnaire was used as a tool of collecting data.

A copy of the questionnaire is attached (see Annexure H). A questionnaire was constructed in such a way that it corresponded with the aims and objectives of the study and enabled the respondents to answer the research questions. The questionnaire consisted of four sections. Section 1 presented socio demographic data which comprises of age, marital status, gender and level of education of the respondents. Section 2 consisted of questions which focused on the knowledge about hypertension. Section 3 consisted of questions which focuses on lifestyle behaviour modification and support system of the respondents and Section 4 on effectiveness of lifestyle modification intervention. The questionnaire was anonymous, and the information was confidential and consisted of closed questions. The questions were of relevance to the research study and were written in English. Translation was done where necessary. The questionnaire took about 10 – 15 minutes to administer. The following questions were asked in order to investigate the knowledge of participants on:

- Hypertension and risk factors
- Lifestyle behaviour taught and the ones they are practicing
- Barriers and obstacles for not practising them

- Support system from family and community
- Effectiveness of lifestyle modification intervention

3.6 VALIDITY AND RELIABILITY

The validity of an instrument is a determination of the extent to which the instrument actually reflects the abstract construct being examined (Burns & Grove 2012: 377). The questionnaire was taken to the Manager of Nkonkobe Sub-district to check if the questions were clear and not ambiguous. Reliability is the degree of similarity of the information obtained when the instruments is repeated on the same subject. Reliability is the lack of distortion or precise of a measuring instrument (Burns & Grove 2012:377).

To measure reliability of the instrument, a pre-test was conducted. A pre-test study was done at Gateway clinic to check or asses if the instrument addresses or measures what it is supposed or intends to measure. An effort was made to ensure that the questions asked were related closely to the objectives of the study.

3.7 PRE-TEST OF THE TOOL

A pre-test is commonly defined as a smaller version of a proposed study conducted to refine the methodology (Burns & Groove 2012:42). A pre-test was conducted at Gateway clinic where 16 hypertensive patients answered questionnaire to test the reliability of the instrument and to identify problems early in the study. The participants for the pre-test did not participate in the actual study it was also taken to the Sister in charge as well as the statistician to check for any ambiguity.. The purpose of the pre-test was to check the reliability of the questionnaire. The participants were able to understand the questionnaire answered the questions.

3.8 DATA COLLECTION

The collection of information for a study is called measurement. It is the process by which values are obtained for the characteristics of individuals being studied (Joubert & Ehrlich 2010:10). Burns and Grove (2009:43) describe data collection as ‘the precise, systematic gathering of information relevant to the research purpose or specific objectives, questions, or hypothesis of the study’.

In this study, data were collected by the researcher using a structured questionnaire, with closed questions. The questions were used to investigate and describe the extent of effectiveness of lifestyle modification intervention on hypertensive patients, as the researcher was concerned about increasing morbidity and mortality rate of hypertensive patients in Alice.

The researcher used a self-reported questionnaire on 169 respondents during data collection after obtaining informed consent. Prior arrangements were done with the clinic supervisor to get permission to visit the institution for data collection. The data were collected by the researcher using designed structured questionnaires. The questionnaire was available in English language and assistance of language translation was done when necessary. The questionnaire was completed in the presence of the researcher and confidentiality was maintained by using a private room with one respondent at a time and questionnaires were collected immediately after completion. The researcher preferred to collect data individually, as individuals may be embarrassed to ask for assistance of translation.

Data was collected when the respondents came for consultation. On arrival at the clinic, the researcher reported to the Sister in charge that in turn referred the respondents to the researcher. The researcher explained to the respondents

individually about the data collection questionnaire and their rights to refuse and withdraw any time. Those who volunteered to respond to the questions were given consent forms to sign.

3.9 DATA ANALYSIS

Data analysis reduces, organises and gives meanings to the data

(Burns & Grove, 2007:41). Pilot & Beck (2004:716) define data analysis as the systematic organisation and synthesis of research data, and the testing of research hypothesis using those data. After collecting data, data was analysed with the help of a statistician.

Data was analysed using the Statistical Package of Social Science (SPSS) software, version 21.0. The significant level was set at 0.05. Descriptive statistics were used to describe and summarise data with the assistance of a statistician. Data was converted and condensed in an organised, visual presentation or picture in the form of table and graphs, so that the data had meaning to the readers of the research report. Demographic data and responses from the questionnaire were analysed through frequency counts. Data collected from questionnaires was linked with the numbers of times the score occurs. Each score was listed separately, or the results were grouped. The results were subdivided into classes, or collections of scores, which were grouped together. The results of this study were presented in percentages, tables and histograms (Brink et al 2012:180).

3.10 ETHICAL CONSIDERATIONS

Brink et al (2012:38) argues that a nurse researcher has the responsibility of conducting nursing research in an ethical manner. Failure to meet this responsibility

undermines completely the scientific process and may lead to many unfortunate and problematic consequences.

Before the research was conducted, permission was obtained from the University Ethical Research Committee, the Department of Health and the Institutions that were to be used for data collection. The letters requesting approval and the approvals are attached at the end of this document. All respondents were made to sign the consent forms before the data was collected after a clear explanation of the purpose of the study.

The consent forms were read and explained to the respondents before signing. The copies of consents are attached (see Annexure G). The respondents were made aware of their right to refuse to respond or to withdraw and this would not affect the service rendered to them. The participants were told that there were no wrong or right answers as the questionnaire focused on their knowledge and behaviours. They were reassured that the questionnaire was anonymous, and their decision is respected. A private room was created for data collection while coming for consultation.

3.11 CHAPTER SUMMARY

In this chapter, the researcher outlined the descriptive quantitative design and the methodology used in conducting the research study. This includes explaining the study setting, population and sampling, research tools and piloting of the tools and data collection, the limitation of the study, data analysis and ethical considerations.

CHAPTER 4

4 RESULTS AND INTERPRETATION

4.1 INTRODUCTION

Data was collected by the researcher using designed structured questionnaires, after collecting the data, data was captured and coded in the form of spreadsheets in Microsoft Excel and exported to a Standard for Statistical Package for Social Science (SSPSS) software (Version 21.0) for analysis. For the analysis of hypertensive patients' knowledge and behaviour with regard to effective lifestyle modification, descriptive statistics were applied. Interpretive analysis, simple statistics, tables, pie charts and graphs were used to present the results as shown below.

4.2 ANALYSIS OF THE RESULTS

4.2.1 SECTION 1: Demographics

Variable 1: Age of the respondents

Figure: 1 presents the age frequency of respondents. The target population of the study was aged from 18 to 98 years. The percentage of the 18 up to 40 was 2% (n=4), 41 up to 50 the percentage was 15% (n=25), 51 up to 60 the percentage was 28% (n=45), 61 up to 70 the percentage was 32% (n=52), 71 up to 80 the percentage was 18% (n=29), 81 up to 90 the percentage was 3% (n=5) and 91 up to 98 percentage was 2% (n=3).

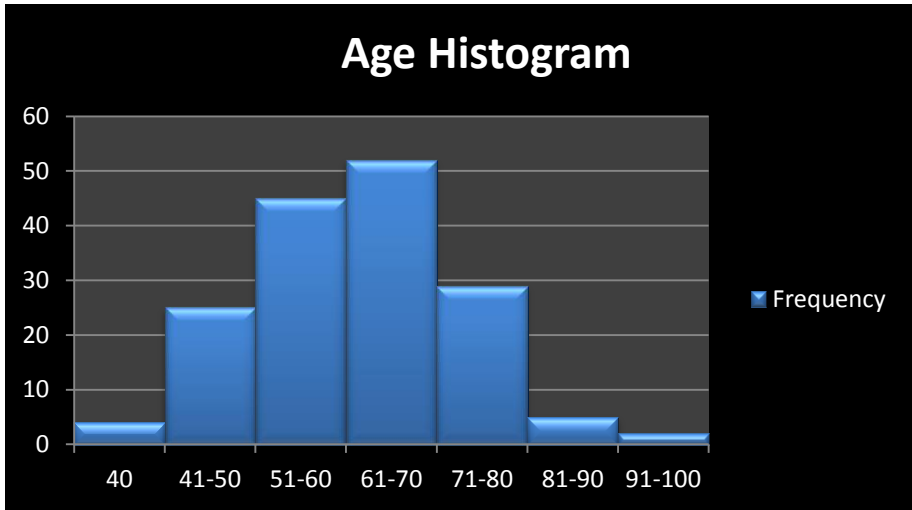


Figure 1: Age of the respondents

Variable 2: Marital Status of the respondents

Figure 2 below shows the marital status of the research respondents, which is as follows: single were 24% (n=39), married 56% (n=91), divorced were 3 % (n=5), widowed 15 % (n=25), separated 1% (n=2) and there were no respondents that were cohabitating.

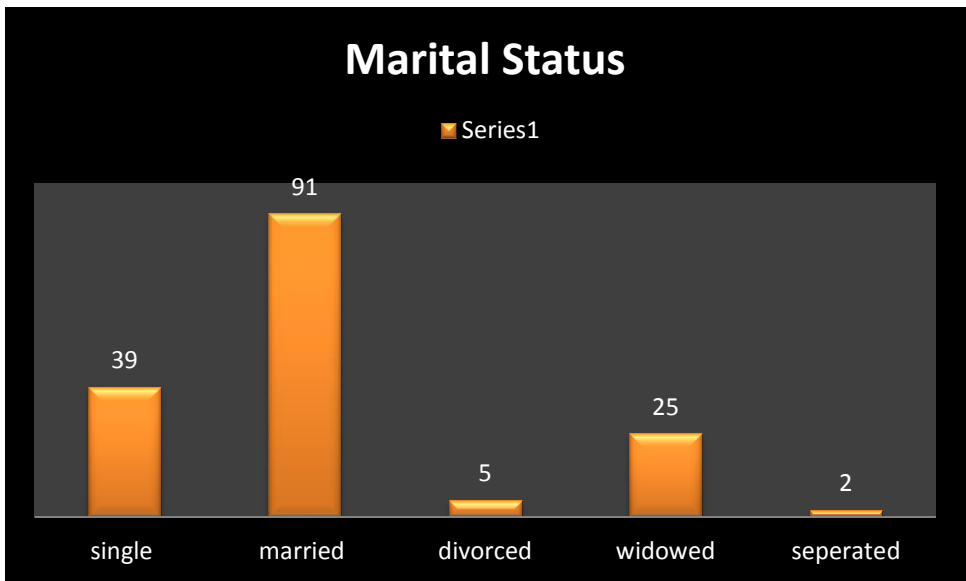


Figure 2: Marital status of the respondents

Variable 3: Gender of the respondents

Figure 3 below presents the gender of the respondents as follows: females 84% (n=136) and males 16% (n=26).

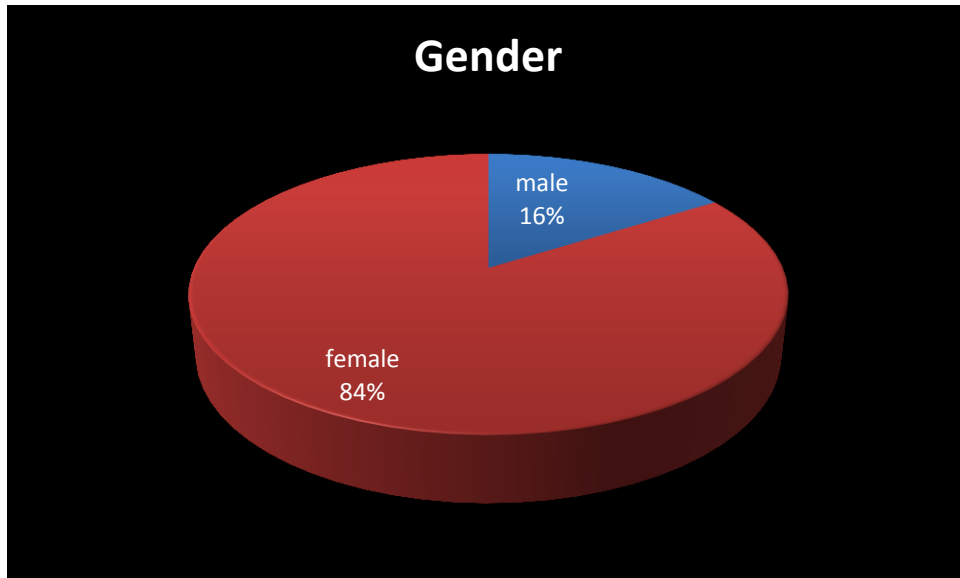


Figure 3: Gender of the respondents

Variable 4: Education status of the respondents

Figure 4 illustrates the education status of the research respondents. Those who have no formal education were 6% (n=10), primary education not completed were 25% (n=41), primary education completed were 21% (n=34), secondary education not completed were 33% (n=53), secondary education completed were 8% (n=13) and tertiary education were 7% (n=11).

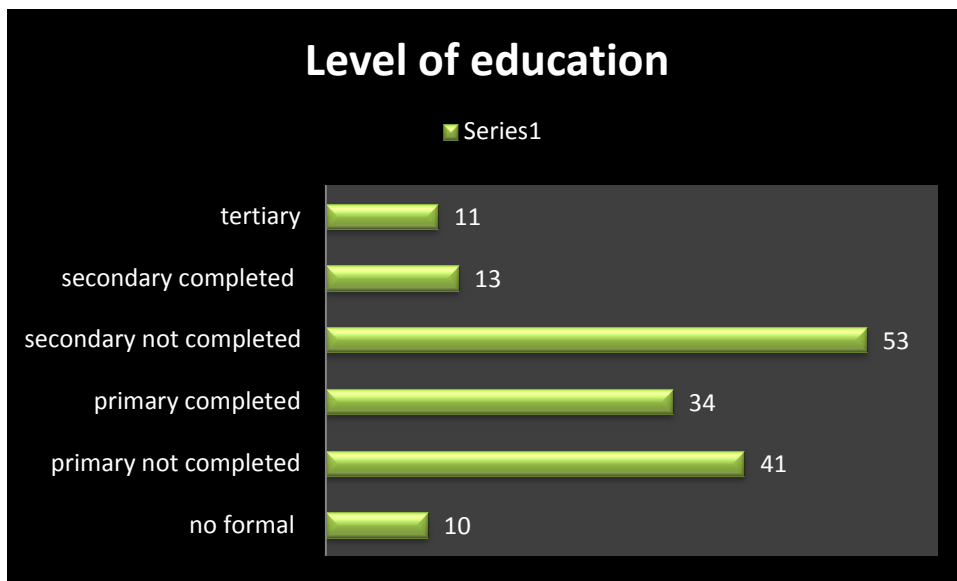


Figure 4: Level of education

4.2.2 Section 2: Knowledge about hypertension

Variable 5: Knowledge about hypertension

What is hypertension?

Figure: 5 shows the responses of the respondents on their knowledge about hypertension. There were 162 respondents. Out of 162 respondents 77% (n=125) knew nothing about hypertension and 23% (n=37) had knowledge and knew what hypertension was.

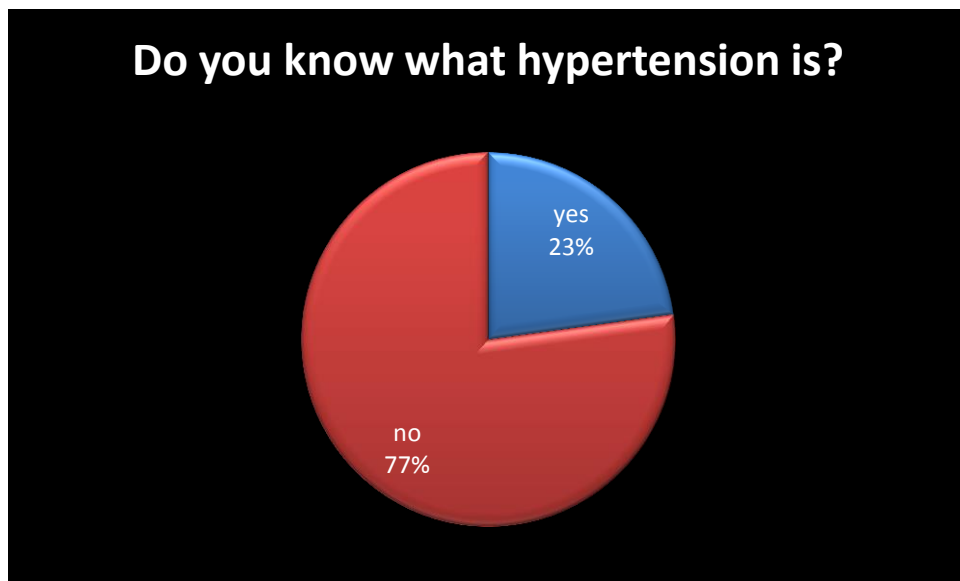


Figure 5: Knowledge about hypertension

4.2.3 SECTION 3: HYPERTENSION MANAGEMENT

Variable 6: Participant`s hypertension management

How is your hypertension managed?

Figure 6 shows responses of hypertensive patients on their hypertension management. Of 162, 77% (n=124) used both drug and lifestyle modification, 20% (n=32) were using drug management only and 4% (n=6) used non drug (lifestyle modification).

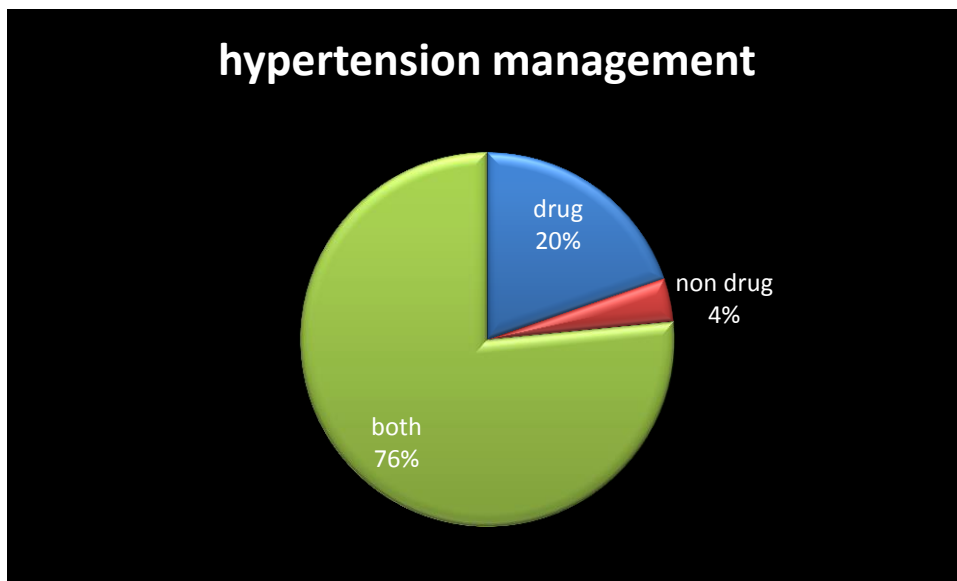


Figure 6: Hypertension management

Variable 7: Barriers/obstacles in practising behaviour modification

Which are your barriers/obstacles in practising behaviour modification?

Figure 7 shows responses of the participants about their barriers/obstacles in practising behaviour modification. 58% (n=94) had no barriers/obstacles in practicing lifestyle modification, 18% (n=29) had all the barriers/obstacles, they had no knowledge. Some were unemployed, had no money, were negligent and they stopped when feeling better, 13% (n=21) had no money, 8% (n=13) were negligent, 2% (n=4) were unemployed, 1% (n=1) had no knowledge and there were none that stopped when feeling better.



Figure 7: Barriers/obstacles in practicing behaviour modification

Variable 8: Knowledge about lifestyle modification

When were you told about lifestyle modifications?

Figure 8: shows the count of participants when they were told about lifestyle modifications. 96% (n=156) were told on their first and subsequent visits, 2% (n=4) were never told, 1% (n=1) was told on first visit and 1% (n=1) was told on the first day of initial drug treatment.

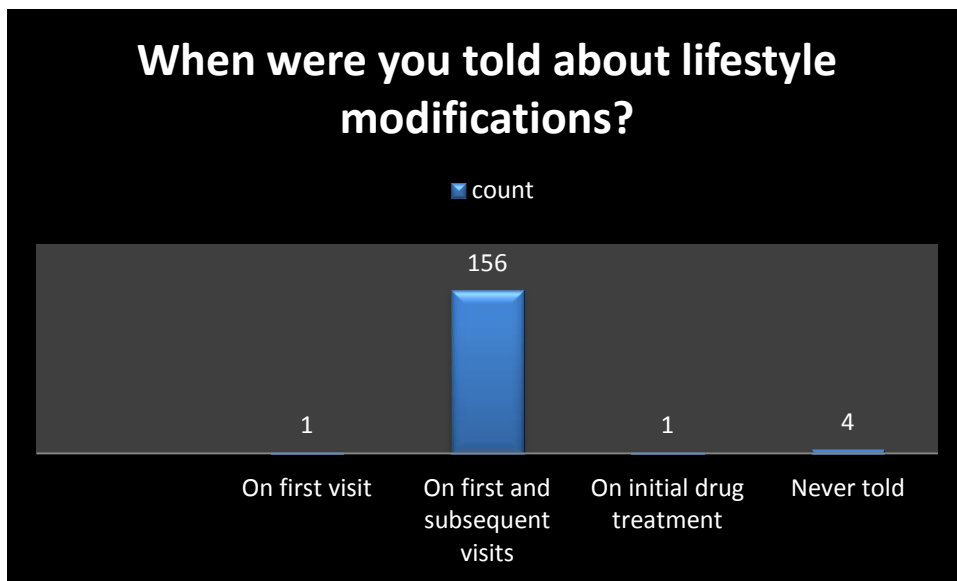


Figure 8: Source of knowledge about lifestyle modifications?

Variable 9: Support Structure

Who is supporting you?

Figure 9 shows responses of participants about their support structures. 44% (n=71) were supported by their spouses, 28% (n=45) their support structure is more than one family member, 13% (n=21) their support structure were their children, 11% (n=18) their support structure is extended family member, 2% (n=4) their support structure is community members, and 2% (n=3) had no one to support them.

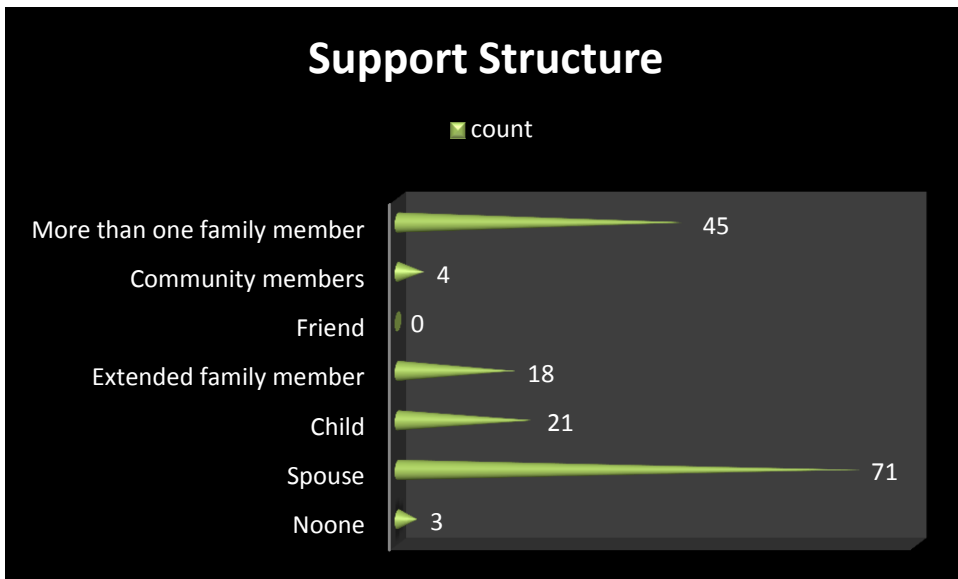


Figure 9: Support Structure

Variable 10: Vegetable Garden

Do you have a vegetable garden at home?

Figure 10 below shows that out of 162 participants, 64% had vegetable gardens (n=104) and 36% had no vegetable gardens at their homes (n=58)

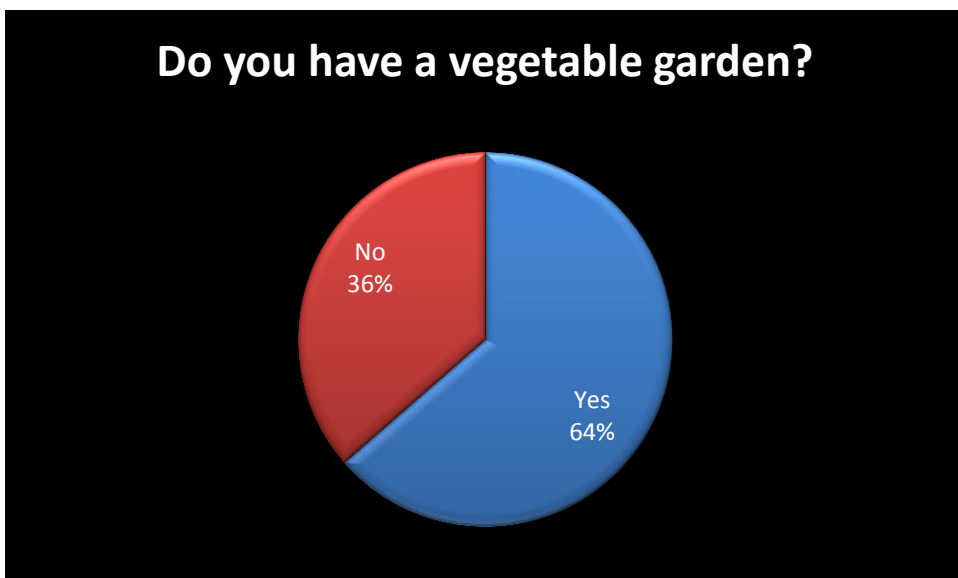


Figure 10: Vegetable garden at home.

Variable 11: Vegetable garden in the community

Is there a garden in the community?

Figure 11 below shows response from the participants about the availability of the gardens in the community. 98% (n=159) stated that there was no garden in the community and 2% (n=3) stated that there were gardens in the community.

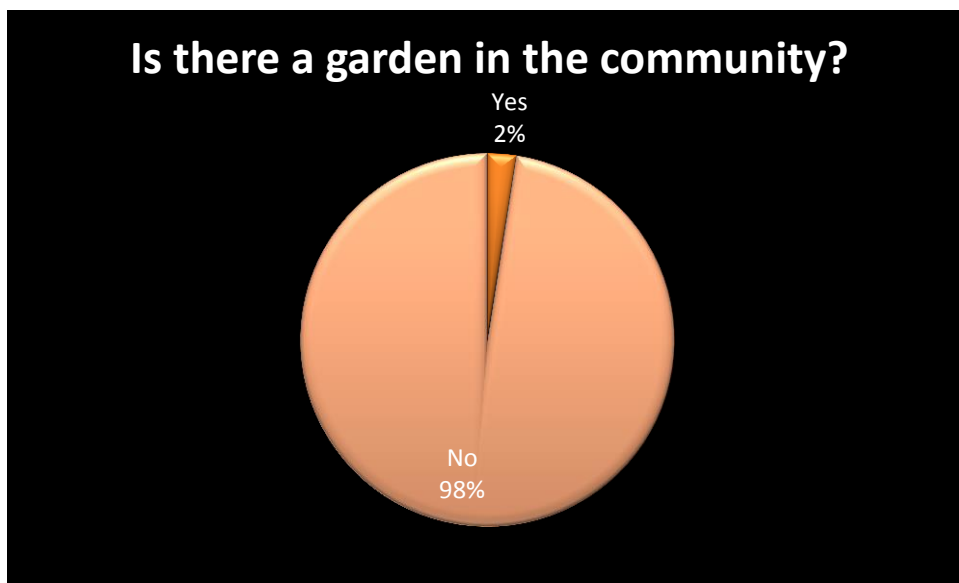


Figure 11: Garden in the community

Variable 12: support group in the community

Are there support groups in the community?

All respondents indicated that there were no support groups in their communities.

Variable 13: Support group at the clinic

Is there a support group in the clinic?

Figure 13 below shows the response of the participants on the availability of support groups at the clinic. 98% (n=159) stated that there were no support groups at the clinic and 2% (n=3) stated that there was a support group at the clinic.

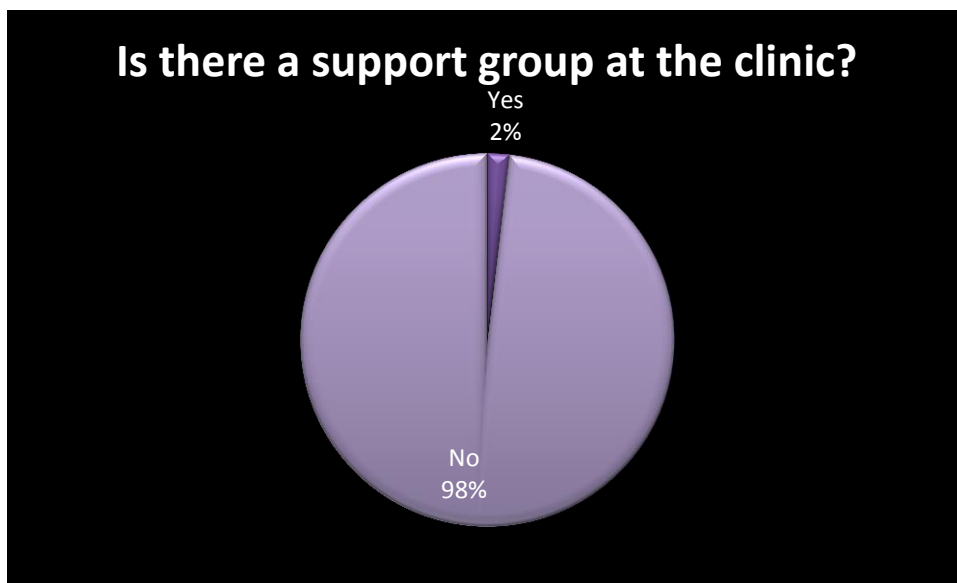


Figure 13: Support group at the clinic

Variable 14: CLINIC VEGETABLE GARDEN

Does the clinic have a vegetable garden?

Figure 15 shows the response of participants on the availability of a vegetable garden at the clinic. 92% (n=149) and 8% (n=13).

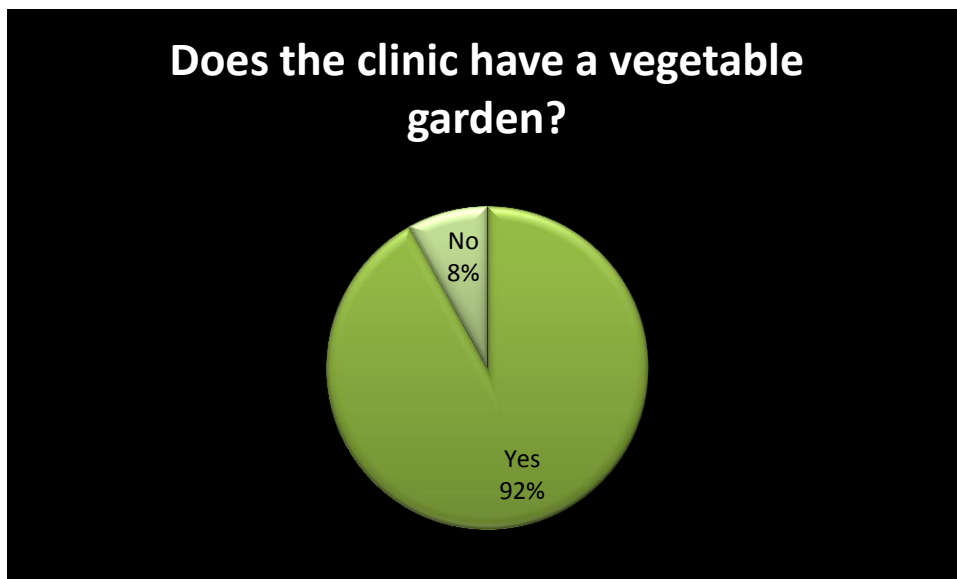


Figure 14: Vegetable garden at the clinic

Variable 15: FOOD PARCEL FROM WELFARE ORGANISATION

Do you get food parcels from the social welfare organisation?

All respondents indicated that they did not receive food parcels from the social welfare organisation.

4.2.4 SECTION 4: Factor Analysis

Variable 6: Evaluating statements for effectiveness of lifestyle modification.

Interpretation of the Output

The first output from the analysis is a table of descriptive statistics for all the variables under investigation. Typically, the *mean*, *standard deviation* and *number of respondents* (N) who participated in the survey are given. Looking at the *mean*, one can conclude that *S4.1 (it is important that every hypertensive client engage in lifestyle modification)* is the most important variable that influences the effectiveness of lifestyle modification intervention. It has the highest *mean* of 4.94.

Table 1: Descriptive Statistics

Descriptive Statistics

	Mean	Std. Deviation
S4.1	4.94	.255
S4.2	4.92	.334
S4.3	4.93	.285
S4.4	4.90	.405
S4.5	4.93	.252
S4.6	4.88	.437
S4.7	4.87	.475
S4.8	4.92	.294
S4.9	4.90	.338
S4.10	4.77	.626
S4.11	4.89	.386
S4.12	3.75	1.362

4.3 CHAPTER SUMMARY

The analysed data reveals that these hypertensive patients are not well informed about hypertension, all that they know is that they have high blood pressure. In other words, they do not know what is really happening in their bodies and the complications and effects of not changing their life style. Those who changed their lifestyle behaviour were not regular in spite of them having support systems. Some of the participants claimed that it is difficult to restrict salt and fats and it is worse in winter. If this is the case, they lack information of effects of salt and fats in the body. how does the salt and the fat affect their health.

CHAPTER 5

5 DISCUSSIONS, RECOMMENDATIONS, LIMITATION AND CONCLUSION

5.1 INTRODUCTION

In this chapter, the demographic data of the research participants, the findings pertaining to the objectives and the questions of the research study will be discussed and recommendations made.

5.2 DEMOGRAPHIC DATA

The interviewed participants for this study were from the age of 18 up to 98 years of age. The highest percentage was the age of 61 up to 70 which was 32%, followed by 28 % of age range 51 up to 60, then age of 71 to 80, 15% of age of 41 to 50, 3% of age of 81 to 90 and lastly 2% of age of 91 to 98 years. The researcher`s opinion is that the age with highest percentage is at risk such, more, health education needs to be done at this age. They should be made aware of the risks of hypertension. The marital status of the participants were 56% married, 24% single, 5% widowed, 3% divorced and 1% separated and they were no participants cohabitating.

The reason most hypertensive people are married, is that Alice is a rural area where cohabitation is not promoted or accepted. Most however were customary marriages. Concerning the education levels of the participants, 33% did not complete secondary education, 25% did not complete primary education, 21% completed primary education, 8% completed secondary education, 7% completed tertiary education and 6% had no formal education. The researcher`s opinion is that, those with secondary

education and tertiary education are working class, so they have medical aids and are not attending the public health clinic that is why their percentage is low.

5.3 KNOWLEDGE ABOUT HYPERTENSION

Twenty three percent (23%) of the research participants knew about hypertension, they stated that it is when the heart has too much blood that is overloading the heart due to problems of the heart, and then the blood flow through the heart is disturbed. Furthermore participants stated that it is important that every hypertensive engage in lifestyle modification. Seventy seven percent (77%) of the research participants had no knowledge of what hypertension is and were not aware of the risk factors like salt and fats intake. Some stated that it is very difficult to restrict salt and fats.

Bower, Dreyer, Herselman, Lock & Zeelie (2006:63) state that a person`s health behaviour is a very important part of behaviour in general. This behaviour depends on four factors which are: knowledge, beliefs, attitudes and values. These four influential factors are combined in a model of health behaviour. The relationship between knowledge and personal experience influences beliefs. Beliefs in turn influence attitudes. In the current study, those without knowledge of hypertension and risk factors did not see the need to engage in lifestyle modification. They continued with their lifestyle in spite of their chronic high blood pressure.

5.4 RISK FACTORS

Regarding treatment management, not all participants were both drug management and lifestyle modifications. Only 76% (n=124) used both drug and lifestyle modification, 20% (n=32) were using drug management only and 4% (n=6) were using non-drug (lifestyle modification). The researcher`s opinion is that some hypertension patients still lack knowledge about the importance of lifestyle

modification. Hypertension is largely driven by four risk factors, namely alcohol, smoking, poor diet, and lack of exercise. This is explained by De Haan (2006:66) that hypertension results from a generic predisposition coupled with exposure to certain environmental influences, like diet high in salt, cigarette smoking, overweight and obesity. According to the South African Hypertension Guideline (2011) important steps towards improving the quality of persons living with hypertension is lifestyle modification. They state the control of hypertension together with the curbing of other major risk factors such as cigarette smoking, alcohol consuming, constitutes the ideal approach to the primary prevention and remains a major challenge for the community.

In addition to decreasing blood pressure, lifestyle modification enhances anti-hypertensive drug efficiency and decreases total cardiovascular risk (Guidelines 2011:66). It should be given to all patients when blood pressure measurement is performed. In case of elevated blood pressure, a programme of lifestyle modification should be implemented immediately.

5.5 KNOWLEDGE ABOUT LIFESTYLE MODIFICATION

Ninety six percent (n=156) were told on their first and subsequent visits, 2% (n=4) were never told, 1% (n=1) was told on first visit and 1% (n=1) was told on the first day of initial drug treatment. Only 76% (n=123) of hypertensive patients used both drug management and lifestyle modification. The researcher's opinion is that these hypertension patients are not aware of the importance of lifestyle modification interventions.

5.6 SUPPORT STRUCTURE FROM THE FAMILY, COMMUNITY AND THE CLINIC

Out of 162 participants, 44% (n=71) were supported by their spouses, 28% (n=45) had more than one family member, supporting them, 11% (n=18) their support structure was the extended family member, 2% (n=4) their support structure was community members and 2% (n=3) had no support. Most support therefore comes from the family more than the community and the clinic.

With regards to vegetable garden 64% (n=104) had vegetable gardens at home, only 36% (n=58) has no garden at home.

Ninety five percent (n=159) stated that there were no gardens in their community only 2% (n=3) stated that there were gardens in their community.

With the support group in the clinic 98% (n=159) stated that there were no support groups in the clinic and only 2% (n=3) stated there was a support group in the clinic. Ninety (n=149) stated that there was a vegetable garden at the clinic and 8% (n=13) did not know about the garden at the clinic. The researcher's opinion is that even though the clinic has a vegetable garden, that vegetable garden does not belong to the hypertensive patients as they have no support group at the clinic.

5.7 RECOMMENDATIONS

The researcher recommends that the Department of Health should emphasise the use of Hypertension Guidelines where all nurses in public clinics are trained in educating and counselling hypertensive patients and those that are pre-hypertensive. Health education about risk factors and complications of hypertension must be given. All patients visiting public clinic must be educated regardless of their problems.

Televisions with programs that teach about hypertension through role-playing must be available in the waiting rooms where patients may watch whilst waiting so that they can gain more information. Employing health educators who focus on educating patients will also help to relieve heavy burden caused by chronic diseases.

Support groups must be formed by these patients where they can come together and talk about their problems, as well as their challenges. They should also be referred to relevant services for their challenges and problems.

5.8 LIMITATION OF THE STUDY

Non-probability sampling was used, therefore findings cannot be generalised. The study was done only at one public clinic, those in the private clinics, private doctors and those admitted were not included. Therefore, this may not be a true reflection of experiences and behaviour of all hypertensive patients. The questionnaire had a lot of questions, some would say they are in a hurry they have no time.

5.9 CONCLUSION

The researcher conducted a study investigating the effectiveness of lifestyle modification intervention of hypertensive patients in Alice. The results revealed that hypertensive patients lack knowledge on hypertension and importance of lifestyle modification. Hypertensive patients have no support structures in the clinics. The health care workers should continue with the intense health education process aimed at increasing knowledge, responsibility as well as accountability regarding promotion of quality life of people. Continued support must be provided.

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ANNEXURE A

**LETTER REQUESTING PERMISSION TO CONDUCT A STUDY FROM THE
ETHICAL COMMITTEE OF THE UNIVERSITY OF FORT HARE**

Lenge Location
KwaGaga
Alice
5700
24 October 2013

The Ethical Research Committee
University of Fort Hare
East London

Dear Sir/Madam

REQUEST FOR AN APPROVAL TO CONDUCT A RESEARCH STUDY

I hereby request for an approval from the Ethical Research Committee of the University of Fort Hare to conduct a research study in Alice, War Memorial clinic. The proposed research topic is: An investigation into the effectiveness of lifestyle modification interventions in a Public clinic in Alice in the Eastern Cape.

I am currently registered for the Degree of Masters in Community Nursing Science within the Nursing Science Department of the University of Fort Hare.

The summary of the research findings and recommendations will be distributed to your office

Kind regards

Ms L.P. Katiya

ANNEXURE B

**PERMISSION FROM THE ETHICAL RESEARCH COMMITTEE OF FORT HARE
UNIVERSITY**



University of Fort Hare
Together in Excellence

ETHICAL CLEARANCE CERTIFICATE

Certificate Reference Number: PET051SKAT01

Project title: **Investigation of effectiveness of life style modification intervention of hypertensive patients in public health clinic in the Eastern Cape**

Nature of Project: Masters

Principal Researcher: Lulama Pearl Katiya

Supervisor: Mrs Z Peter

Co-supervisor:

On behalf of the University of Fort Hare's Research Ethics Committee (UREC) I hereby give ethical approval in respect of the undertakings contained in the above-mentioned project and research instrument(s). Should any other instruments be used, these require separate authorization. The Researcher may therefore commence with the research as from the date of this certificate, using the reference number indicated above.

Please note that the UREC must be informed immediately of

- Any material change in the conditions or undertakings mentioned in the document
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research

The Principal Researcher must report to the UREC in the prescribed format, where applicable, annually, and at the end of the project, in respect of ethical compliance.

The UREC retains the right to

- Withdraw or amend this Ethical Clearance Certificate if
 - Any unethical principal or practices are revealed or suspected
 - Relevant information has been withheld or misrepresented
 - Regulatory changes of whatsoever nature so require
 - The conditions contained in the Certificate have not been adhered to
- Request access to any information or data at any time during the course or after completion of the project.
- In addition to the need to comply with the highest level of ethical conduct principle investigators must report back annually as an evaluation and monitoring mechanism on the progress being made by the research. Such a report must be sent to the Dean of Research's office

The Ethics Committee wished you well in your research.

Yours sincerely


Professor Gideon de Wet
Dean of Research

18 November 2013

ANNEXURE C

**LETTER REQUESTING PERMISSION TO CONDUCT A STUDY THE NATIONAL
DEPARTMENT OF HEALTH EASTERN CAPE**

Lenge Location

KwaGaga

Alice

26 November 2013

The Manager/Mr Merhile

Department of Health

Eastern Cape

King William`s town

Dear Mr Merhile

REQUEST FOR PERMISSION TO CONDUCT RESEARCH ON HYPERTENSIVE PATIENTS AT YOUR DEPARTMENT

As I am in my final year M Cur Masters in Community Nursing Science at University of Fort Hare, as part of the fulfilment of the programme I have to conduct a research. The topic of the research is INVESTIGATION OF EFFECTIVENESS OF LIFESTYLE MODIFICATION OF HYPERTENSIVE CLIENTS IN A CLINIC IN THE EASTERN CAPE.

I hereby request your permission to do research at your department to investigate effectiveness of lifestyle modification interventions on hypertensive clients. The questionnaire will take 20 minutes to complete. Feedback will be supplied to you by means of a copy of the research on its completion.

Thanking you in anticipation

Yours sincerely

L. P. KATIYA (MS)

ANNEXURE D

**PERMISSION FROM THE EASTERN CAPE DEPARTMENT OF HEALTH IN
EASTERN PROVINCE**



Eastern Cape Department of Health

Enquiries: Zonwabele Merile

Tel No: 040 608 0830

Date: 16th January 2014
e-mail address: zonwabele.merile@impilo.ecprov.gov.za

Fax No: 043 642 1409

Dear Ms LP Katiya

Re: Investigation of effectiveness of lifestyle modification of hypertensive clients in a clinic in the Eastern Cape

The Department of Health would like to inform you that your application for conducting a research on the abovementioned topic has been approved based on the following conditions:

1. During your study, you will follow the submitted protocol with ethical approval and can only deviate from it after having a written approval from the Department of Health in writing.
2. You are advised to ensure, observe and respect the rights and culture of your research participants and maintain confidentiality of their identities and shall remove or not collect any information which can be used to link the participants.
3. The Department of Health expects you to provide a progress on your study every 3 months (from date you received this letter) in writing.
4. At the end of your study, you will be expected to send a full written report with your findings and implementable recommendations to the Epidemiological Research & Surveillance Management. You may be invited to the department to come and present your research findings with your implementable recommendations.
5. Your results on the Eastern Cape will not be presented anywhere unless you have shared them with the Department of Health as indicated above.

Your compliance in this regard will be highly appreciated.

DEPUTY DIRECTOR: EPIDEMIOLOGICAL RESEARCH & SURVEILLANCE MANAGEMENT



Ikamva eliqaqambileyo!

ANNEXURE E

**A LETTER REQUESTING PERMISSION TO CONDUCT A STUDY AT
NKONKOBÉ SUBDISTRICT WAR MEMORIAL CLINIC**

Lenge Location

KwaGaga

Alice

24 February 2014

Nursing Service Manager

Nkonkobe Subdistrict

Fort Beaufort

5720

Dear Mrs Magenuka

REQUEST FOR PERMISSION TO CONDUCT RESEARCH ON HYPERTENSIVE PATIENTS AT THE WAR MEMORIAL CLINIC

As I am in my final year MCur Masters in Community Nursing Science at University of Fort Hare, as part of the fulfilment of the programme I have to conduct a research. The topic of the research is EVALUATION OF EFFECTIVENESS OF LIFESTYLE MODIFICATION INTERVENTIONS ON HEALTHY BEHAVIOURS OF HYPERTENSIVE PATIENTS IN A PUBLIC HEALTH CLINIC IN THE EASTERN CAPE.

I hereby request your permission to do research at your clinic to evaluate effectiveness of lifestyle modification interventions on hypertensive patients. The questionnaire will take 20 minutes to complete. Feedback will be supplied to you by means of a copy of the research on its completion.

Thanking you in anticipation

Yours sincerely

L. P. KATIYA (MS)

ANNEXURE F

PERMISSION LETTER FROM NKONKOBÉ SUB-DISRICT



PROVINCE OF THE EASTERN CAPE
DEPARTMENT OF HEALTH



IPHONDO LEMPUMA KOLONI
ISEBE LEZEMPILO

Amathole Health District
NKONKOBÉ SUB-DISTRICT

Ireferensi:
Ref. No. :

Imibuzo:
Enquiries:

P. O. Box 967
Fort Beaufort
5720

Tel. No.: 046 645 1252/1892/2547/2695
Fax No.: 046 645 3052/1397

From	Sub-District Manager
To	Ms LP Katiya
Subject	Permission to conduct research granted to Ms LP Katiya Research topic: Investigation of effectiveness of lifestyle modification interventions of hypertensive patients in a public health clinic in the Eastern Cape.
Date	07 March 2014

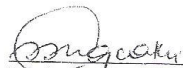
Attention: Ms LP Katiya

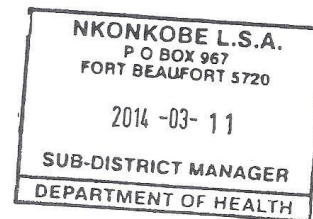
This communiqué serves to grant you, yourself permission to conduct research at our facility War Memorial clinic as per your request.

The research topic the student applied for and agreed upon is Investigation of effectiveness of lifestyle modification interventions of hypertensive patients in a public health clinic in the Eastern Cape.

This institution wishes you good luck and success on your studies.

Kindly Regards


Ms S.S Ngcaku
Nkonkobe Sub-District Manager



ANNEXURE G

CONSENT FORM FOR PARTICIPANT

APRIL - MAY 2014

CONSENT FORM: RESEARCH

I Lulama Pearl Katiya doing final year / MCur Masters in Community Nursing Science at University of Fort Hare. I am conducting a research.

My research topic is in investigation into effectiveness of lifestyle modification intervention of hypertensive patients in a public clinic in Eastern Cape. You will be required to complete a questionnaire and that will take 20 minutes.

Please note that all information is deemed confidential. You have the right to withdraw from the research if you so wish, but if you agree to participate in this research study, please sign this consent form.

Thank you for your co-operation

L.P. KATIYA

CONSENT FORM

I.....hereby agree to participate in your research study.

I understand the above information and give consent to do the interview.

Signed on this on.....day of.....2014 at.....

Signature.....

Witness.....

ANNEXURE H

QUESTIONNAIRE

A research study is currently being performed on investigation of effectiveness of lifestyle modification hypertensive patients in a Public clinic.

Your assistance would be appreciated.

Thanking you for your cooperation.

L.P. KATIYA

M CUR STUDENT

DEPARTMENT OF HEALTH NURSING SCIENCE

UNIVERSITY OF FORT HARE

CONTACT DETAILS: 0406530856 (WORK)

CELL NO: 0787873406

MAY 2014

QUESTIONNAIRE (English Version)

Introduction

I am a post graduate at University of Fort Hare doing a research on investigation of effectiveness of lifestyle modification interventions on hypertensive patients in a public health clinic in the Eastern Cape. We understand that you have hypertension and we would like to ask you some few questions.

Participant no:

Respondent: Circle the correct response

SECTION 1

Socio demographic data

1. **Age..... (Exact age)**

2. **Marital status (please mark with a tick or x)**

a.	Single
b.	Married
c.	Divorced
d.	Cohabiting
e.	Widow

f.	Separated
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3. Please indicate your gender

a. Male

b. Female

4. Level of education

a.	No formal education
b.	Primary education not completed
c.	Primary education completed
d.	Secondary education not completed
e.	Secondary education completed
f.	Tertiary education completed

SECTION 2:

KNOWLEDGE ABOUT HYPERTENSION

1. Do you know what hypertension is?

a. Yes

b. No

2. How is your hypertension managed?

a. Drug treatment

b. Non-drug treatment

c. Both (drug & non-drug treatment)

3. What the level is your hypertension?

a. Mild - (140-159/90-99)

b. Moderate- (160-179/100-109)

c. Severe- (180 or more/110 or more)

4. What are your risk factors?

a. Obesity
b. Smoking
c. Alcohol intake
d. Diet
e. Heredity

SECTION 3

QUESTIONS ON LIFESTYLE BEHAVIOUR MODIFICATION

1. Which lifestyles strategies were you taught?

a. Weight loss
b. Regular physical exercises
c. Smoking

d. Alcohol intake
e. Salt & fat intake
f. Diet

2. Which ones are you practising?

a. Weight loss
b. Regular physical exercises
c. Stop smoking
d. Taking moderate alcohol
e. No alcohol
f. Restriction of salt
g. Restriction of fat
h. Eating adequate dietary fibre intake (fruit, vegetable & refined carbohydrates)

3. What are the barriers or obstacles in practising the abovementioned behaviours

a. No money
b. Unemployment
c. Negligence
d. No knowledge
e. Stops when feeling better

4. When were you told about these lifestyle modifications?

a. On your first visit
b. On your first & subsequent visits
c. On your initial drug treatment
d. Never told

5. Who is supporting you at home?

a. Spouse
b. Child
c. Extended family member
d. Friend

6. Is there any vegetable garden at home?

1. Yes
2. no

7. Is there any garden in the community?

1. Yes
2.No.

8. In the community is there a support group?

1.Yes
2.No

9. In the clinic is there a support group?

1.Yes
2.No

10. Is there any vegetable garden at the clinic?

1.Yes
2.No

11. Do you get any food parcel from the social welfare organisation?

1.Yes
2.No

SECTION 4: Effectiveness of lifestyle modification interventions

	EVALUATION STATEMENT	Strongly Disagree =1	Disagree =2	Neutral =3	Agree =4	Strongly Agree =5
1	It is important that every hypertensive client engage in lifestyle modification					
2	Weight loss does lower high blood pressure.					
3	Regular exercises lower high blood pressure					
4	Stopping smoking lowers high blood pressure					
5	Moderate or no alcohol lowers high blood pressure.					
6	Restricted salt & fat intake lowers high blood pressure					
7	Fruit, vegetables and unrefined carbohydrates lower high blood pressure					
8	Insufficient intake of nutrients increases blood pressure					
9	Stress increases blood pressure					


10	Diabetes increases blood pressure					
11	Taking some medication without consulting health professionals may increase blood pressure					
12	Laughing and being happy can lower blood pressure					

EDITOR'S DECLARATION

I Dr Ketiwe Ndhlovu (Department of Linguistics UNISA) confirm that I edited Lulama Pearl Katiya (201206148)'s MA thesis which reads:

AN INVESTIGATION ON THE EFFECTIVENESS OF LIFESTYLE MODIFICATION INTERVENTIONS FOR HYPERTENSIVE PATIENTS IN A PUBLIC HEALTH CLINIC IN THE EASTERN CAPE PROVINCE

During the process of editing, the following changes were recommended; grammatical, sentence construction and paragraphing and structural among others. It is up to the candidate to effect these changes as she is the author of this research and thus remains in control of the writing process.



13/06/2014

.....

.....

Editor's Signature

Date

.....

.....

Candidate's Signature

Date