The Information Needs of Persons with Hypertension
in St. Vincent and the Grenadines

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By

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Primary Health Care has been a focus area for the Government of St. Vincent and the Grenadines. Within the past three years or so, the Government through the Ministry of Health and the Environment attempted to decentralize primary health care to other clinics across the country. As a consequence, polyclinics were constructed in the larger communities thus providing primary care services closer to the residents of St. Vincent and the Grenadines. Therefore, non communicable diseases such as diabetes and hypertension were to be given special attention, thus ensuring that the needs of these persons were satisfied. However, with the challenges faced with other diseases such as AIDS and cancer, more concentration was diverted in these areas.

From the statistics released from the Ministry of Health, it became quite evident that the high mortality rates of persons suffering from hypertension and other related diseases. It was from this vantage point that the researcher’s interest was piqued to research the topic “the information needs of persons with hypertension in St. Vincent and the Grenadines”. Ideally, the researcher sought to ascertain the information needs of these patients, whether or not there were gaps between their knowledge and their access to this information and finally was these needs met by the healthcare system.

The methodology employed was a positivist / quantitative study which was deemed an appropriate approach for this study. Questionnaires were distributed to persons with hypertension who were treated at the health clinics. The results were then analyzed using SPSS application.

The findings of this research showed that the patients were knowledgeable about the disease. Information was provided to them from the medical staff (doctors and nurses). They believed that there was no further information that they required regarding their health. Nevertheless, the researcher recognized that patients were too dependent on doctors and nurses for information. They were not exposed to other mediums (internet, websites, and other electronic and print media) that would allow them to conduct their own research.
For those patients who were non compliant with instructions need to become compliant as an initial step to improving their condition. Furthermore, patients were of the view that medication along with the instructions given by the doctors and nurses were the ultimate solutions to their medical condition. They did not see the need to attend counseling sessions, visiting the nutritionists and dieticians.

To this end, the implications of this research showed that persons required ongoing assessments thus ensuring that the information gaps were bridged. The strategies must be reviewed and assessments be made of the effectiveness of medication prescribed should be conducted. This research piece would be forwarded to the Ministry of Health. It is hoped that the recommendations would be implored as part of the planning strategies for the ministry which would ultimately improve the quality of life for persons with hypertension.
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Special thanks to Dr. Peter Bath, Dissertation Supervisor, for providing guidance and support. Peter ensured that ethical standards (among other things) were maintained throughout the entire project. To my siblings who avail themselves to typing of this document from time to time and also gave encouragement during this undertaking. Finally, to all of the participants who gave unselfishly of their time to completing the questionnaires and providing honest responses; without whom this survey could not be completed.
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CHAPTER ONE
INTRODUCTION

1. Introduction

In this introductory chapter, the researcher adopted a logical and practical methodology to presenting information on the caption: “The Information Needs of Persons with Hypertension in St. Vincent and the Grenadines”.

This chapter gave details about information on various authors’ viewpoints on hypertension and in particular outlined the context in St. Vincent and the Grenadines. An update was included on the healthcare structure and the research study. The aims and objectives were identified and summary of the chapters highlighted.

1.1. What is Hypertension: Authors’ Viewpoints

The WHO Report (2010 pg. 9) explained hypertension as “the force of blood against the artery walls as it circulates through the body. High blood pressure as it is commonly known is the constant pumping of blood through blood vessels with excessive force. It may be caused by changes in tissues possibly due to heredity tendency, emotional tensions, faulty nutrition or hormonal influence”.

This report also stated that “hypertension is a major health problem throughout the world because of its high prevalence and its association with increased risk in cardiovascular disease. Advances in the diagnosis and treatment of hypertension have played a major role in the recent dramatic declines in coronary heart disease and stroke mortality in industrialized countries”.

According to Willis, R. (1994) “hypertension is rare in people under 40 years and is most prevalent between the age ranges 50 to 60 years”. He also believed that it occurs as a result of strong heredity and lifestyle.

Furthermore, Hales, D. (2005) also listed the risk factors that cannot be controlled which included heredity, race and ethnicity, age and gender. He indicated that only “one third of
people with hypertension had effectively controlled it, guarding against the risk of heart diseases, heart failures, strokes and kidney disease”. Research had proven that there were two stages of hypertension; these were the systolic pressure ranging from 140-159 and a diastolic pressure ranging from 90-99.

In PAHO’s report (2006) looked at the surveys conducted in the Caribbean, reported that the comparisons from a study, supported that people between the ages of 25 – 64 years in Barbados were found to be hypertensive. This represented 27.2% of Barbados’ population. Jamaica’s statistics reported 24% of their population and likewise St. Lucia recorded with 25.9%. The report further stated that “this evidence suggests that continued upward trends in these conditions will occur if the process of economic development is followed among other countries that are currently at lower level”.

1.2. **St. Vincent’s Context**

St. Vincent and the Grenadines (commonly referred to as SVG) is a small island in the Caribbean located east of Barbados. It is 133 square miles with a population size of approximately 107,000 people. Like the other Caribbean islands mentioned before, St. Vincent and the Grenadines continued to experience high incidences of hypertension. In the 2001 census report, (the latest report available) it was revealed that hypertension, in this country, ranged from 40 years and over. The Epidemiologist, Dr. Jennifer George, confirmed that each year the Ministry of Health included in its work programme the management and surveillance of this disease. She also explained that due to the challenges relating to AIDS and cancers, much of this country’s human and financial resources have been channeled in this direction. As a consequence, insufficient resources were available to effectively manage the disease.

Similarly, in reviewing the Global Status Report (2010), it was stated that during the period 2001-2010 hypertension was ranked among the top ten (10) leading causes in mortality rates in St. Vincent and the Grenadines. The ranges were as follows:
As can be seen from the table above, the trend showed a fluctuation in death rate over the last ten years. The figures were used to further support that one of the leading causes of mortality in St. Vincent and the Grenadines included hypertension.

Having reviewed these materials, coupled with exposure to health sessions (workshops, seminars and training sessions) including a recent summit convened in St. Vincent and the Grenadines – The National Non-Communicable Disease Summit, the researcher’s interest was heightened, hence the urge to pursue this topic. As a consequence, the interest was piqued to pursue a study on persons with hypertension.

1.3. **The Healthcare System in St. Vincent & the Grenadines**

From discussion undertaken with senior personnel within the Ministry of Health & the Environment, it was discovered that the structure of the healthcare system in SVG was a simple but appropriate one, given the size of the population. The structure depicted the main segments of the island’s nursing services for which the Minister of Health and the

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1 For the purpose of this assignment, I refer to myself as the researcher or author of the study.
Environment was ultimately responsible. He was supported by the Permanent Secretary, followed by the Chief Medical Officer and the Principal Nursing Officer (PNO).

The PNOs was responsible for all the Senior Nursing Officers (SNOs) namely SNO Education, SNO Milton Cato Memorial Hospital & Lewis Punnett Home, SNO Community Services and SNO Psychiatry. Under their charge were Administrative Sisters, Tutors, Health Supervisors & Family Nurse Practitioners. These persons were supported by staff nurses and nursing assistants. The community health aides and ward assistants worked along closely with the staff nurses and nursing assistants.

This structure was instituted in 1994 and continued to function up to present time. Speaking at the Summit in August 2011, the then Minister of Health and the Environment explained that the structure will support the current needs of the people in St. Vincent and the Grenadines. Minister Cecil McKie outlined government’s plan to increase the complement of health care providers over the next three years. These persons would include practitioners with specialized skills and home helpers.

1.4. Research Study Overview

As aforementioned, the research study made an assessment of the information needs of persons with hypertension in St. Vincent and the Grenadines. In this assignment, the researcher assessed the persons with the disease in the following categories: demographics, health status, health practices, information knowledge, information access and information needs. The researcher was particularly interested in the advice that was given and by whom it was given. She sought to ascertain the source of this information obtained and other pertinent information currently available. Additionally, barriers to getting this information will be identified and finally the further support that health care providers can supply in order to assist them in acquiring the required information.

The research methodology involved a simple questionnaire given to the groups of persons with hypertension and who attended regular health clinics. The research project was explained and an open invitation extended to persons with hypertension to participate in the activity. For those persons who consented to participate, an information sheet was handed to them, acknowledging their willingness to be part of this survey. The questionnaire was then

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2 Lewis Punnett Home is an Senior Citizens Home owned by the Government
distributed and the completed forms were taken up at the same time. Prior to carrying out this survey, the researcher envisaged that there may not be found sufficient recruits at the health centres. Thereafter, a two tier strategy was adopted in the event. If there were less than 120 persons at the health centres, the researcher was prepared to contact the district nurses who can assist in identifying persons (with the disease) who were treated in their homes. All information was kept in strict confidence used solely for the purpose of this research assignment. The anonymous data will be analyzed and presented in chapter four of this dissertation. The recommendations from this exercise were forward to the Chief Medical Officer, utilizing the information for further development of the healthcare system in St. Vincent and the Grenadines.

1.5. Aims & Objectives

The main aim of this research assignment was to assess the information needs of persons with hypertension in St. Vincent and the Grenadines.

From this main idea, the following objectives will be derived:

- To ascertain the needs of persons with hypertension
- Were these needs adequately met by the health care system? Were there barriers to meeting these needs?
- What information was available to persons with hypertension and was this information easy to obtain.
- To identify other types of information that was required.

More details were provided in Chapter three – Research Methodology. This section gave an outline of how the research was conducted incorporating the recruitment of the candidates to participate in this research project. The ultimate objective therefore was to receive feedback on how they perceived the services offered by the health system.
1.6. **Summary Chapters**

In Chapter one, the general introduction to the project was outlined, giving a comprehensive overview of the project. Chapter two of this research covered the literature review. This section as explained by Marshall D. et al (2003) is a “critical and in-depth evaluation of previous research. It is a synopsis of a particular research allowing anybody reading this paper to establish why the particular research is being carried out. It will expand the reasons behind selecting this research topic and provide an evaluation integrating previous research as well as explaining how it integrates into the research activity”.

The use of well known databases such as MedlinePlus, EMBASE, MedicineNet.com, ISHIB (Improving the healthcare and life expectancy of ethnic populations around the world) CINAHL and WEBMD will be the critical research pillars in this assignment.

The third chapter was the methodology explaining how the project was undertaken and the methodology adopted in this research. Research governance and ethical considerations were also a critical part of this discussion. In this section, the conduct of a pilot study was explained, information sheets were read to the participants distributed and questionnaires were distributed. These were completed by the participants and handed back to the researcher at the same time. Following which, the researcher analyzed the data that was collected. Data quality considerations and feedback were also considered in this chapter.

Chapter four discussed the results and findings of the dissertation piece. With the aid of graphs and statistical tables, the results from the survey were tabulated. This key data formed the genesis for the recommendations that appeared in the final chapter. Practicalities and ethical considerations were the focal points and were highlighted in the discussion. No information obtained from this assignment was divulged to third parties. Data collected was held in strict confidence.

The final chapter was the conclusion, looking at the limitations to this study, overall findings, recommendations and suggestions for future research. This project produced very insightful information but ultimately meeting the aims and objectives as stated before. Throughout this project, the researcher adhered to ethical and governance procedures that were enshrined in the University of Sheffield’s Research & Ethics Policy. Importantly also were the discussions
held with the Dissertation Supervisor, Dr. Peter Bath who provide much support and guidance during this period.

1.7. **Conclusion**

As highlighted earlier, this section presented the background and context in which the research was conducted. The aims and objective of this study was outlined and also the summary of subsequent chapters. A logical and systematic approach has been adopted so in chapter two the main focus covered the literature review looking at the available information regarding information needs. Ethical and practical considerations were also important tenants for consideration in undertaking this research study.
CHAPTER TWO
LITERATURE REVIEW

2. Introduction

In the first chapter, the aims and objectives and the general overview of the research study were outlined. Therefore, chapter two presented the review of the literature assimilated thus far in the research project. This section was arranged with the ease of subheadings examining the materials reviewed and the integration of these readings into the project.

Marshall (2003) explained that a “literature review is a description of the literature relevant to the particular field or topic”. It gives an overview of what has been said, who the key writers are, what are the prevailing theories and hypotheses, what questions are being asked and what methods and methodologies are appropriate and useful. Copper (1988) cautioned that a literature review “is not a primary research but rather it reports on other findings”.

The main components of this chapter included problem formulation, literature search strategy and interpretations of the literature reviewed. Under the subheading problem formulation, the researcher discussed the strategy used in conducting the research and provided background information on the topic. The literature reviewed examined the existing literature on the information needs of persons with hypertension identifying the critical role of the health practitioners; namely nurses and physicians in dispensing this information. Finally, the analyses and interpretation subheading presented different types of information needs by various authors and with the application drawn to this project.

2.1. Problem Formulation

As mentioned in chapter one, the main aim of this dissertation was to assess the information needs of persons with hypertension in St. Vincent and the Grenadines. A recent report from the Ministry of Health cited hypertension as one of the top ten leading causes of high mortality rates in this country between the years 2001 – 2010. From discussions held with the Ministry of Health, there was seemingly no assessment conducted on information needs of persons with hypertension. As a consequence, the researcher’s interest was heightened to further investigate the topic and to ascertain whether or not the rate of persons with
hypertension was due largely to un-assessed need for information on this disease. It was imperative therefore to also examine whether or not there were barriers to those needs and if so what can be done to address the issue.

2.1.1. Causes of Hypertension

Of all the articles reviewed, the National Institutes of Health’s definition was favoured. The article quoted hypertension as “the force exerted by blood on the walls of the arteries and veins as it courses through the body”. The article further explained that it was normal for blood pressure to rise and fall throughout the day. But when the pressure stayed elevated overtime, it caused the heart to pump harder and work overtime, possibly leading to various serious health problems ranging from hardening of the arteries, stroke and brain hemorrhage to kidney malfunction and blindness”.

The WebMD database also stated that “a blood pressure reading records a number at the top and one at the bottom”. Blood pressure can be classified as normal (less than 120 over 80) (120/80), pre-hypertension: 120-139 over 80 – 89. Stage one high blood pressure: 140 – 159 over 90 – 99 and stage two: 160 and above, over 100. Persons whose blood pressure is above the normal range are advised to consult their doctor about steps to reduce high blood pressure.

This article further identified the major causes of hypertension as smoking, overweight, lack of exercise, high salt intake, too much alcohol consumption, stress, old age, genetics, family history, chronic kidney disease and adrenal and thyroid disorders.

Two types of hypertension were also mentioned (in the article) namely essential hypertension and secondary hypertension. Its cause cannot be determined but it can be influenced by diet and lifestyle. In the article, people living in the northern islands of Japan were highlighted, emphasizing that they eat more salt per capita than anyone else in the world and as such have recorded the highest incidence of essential hypertension.

Alternatively, the article explained that secondary hypertension occurred when a direct cause can be identified. Kidney disease ranked the highest among the known cases of secondary hypertension in the world.
2.1.2. **Definition of Information**

The Business Dictionary (2010) described data as “items or statistics that is verified to be accurate and timely which is specified and organized for a purpose. It is presented within a context that gives meaning and relevance that can lead to an increase in understanding and a decrease in uncertainty”.

Information dispensed to persons with hypertension must be “data endowed with relevance and purpose. It requires some unit of analysis as well as human mediation and consensus” Davenport (1997); given this definition, there seemed to be an apparent correlation between persons with hypertension and their information needs. In the materials reviewed, in particular, the electronic databases, it was observed that people obtain information in various ways. The most updated method was through the use of technology.

Information needs on the other hand, goes back to a definition given by Taylor (1962) who categorized these needs into four types. He stated that there ca be, “an actual but unexpressed need for information, the conscious description of need, the formalized need and finally the compromised need”. Taylor explained that the conscious need was the “recognized need at a cognitive level”. The formalized need was described as a “formal statement of the need” while the compromised need was so called because “a question must be adapted to accommodate the available resources”. Finally, he viewed the visceral need as “the actual need but unexpressed need for information”.

Ormandy (2010) clarified that information need was “the recognition that the knowledge is inadequate to satisfy a goal, within the context / situation that they find themselves at a specific point in time”. These two authors both realized that for information needs to be assessed there must be knowledge to be obtained for which this information was required.

2.1.3. **Information Needs of Persons with Hypertension**

“Hypertension may be classified as primary or secondary. Primary hypertension also known as essential hypertension can be found in the majority of patients while secondary hypertension (in a few cases) may be due to causes such as drugs, renal disorders, endocrine
and neurological disorders”. Recent publications also address the early and aggressive approaches to prevention and management of hypertension. A new category known as prehypertension has emerged which warned of the need to continue the promotion of healthy lifestyles. “Tight control of the hypertension itself required a patient-centered approach of lifestyle modification and drug therapy”, PAHO’s Report (2007, pg. 2&3).

Similarly, extensive research has been carried out throughout the Eastern Caribbean on hypertension from as far back as 1986. Subsequent reports were developed while the existing ones were modified to show trends over the years. The information needs of patients were well documented and supported by Cutler, et al (2008), Marshall, et al (2003) & Freeman, et al (1996). These authors were of the view that hypertension was a “silent killer” which was caused largely by unhealthy diets, high salt intake, inadequate exercise and excessive use of alcohol. The prevalence of the rise in the persons with hypertension escalates with age.

Reports from Stibich, (2007), PAHO and WHO and the Journal from American Heart Association continued to provide updated information giving statistics in mortality rates looking at trends from year to year. In St. Vincent and the Grenadines, the Ministry of Health embarked on a strategic plan for this fiscal year. The work programs of the Ministry were well constructed with workshops, seminars, clinic days and public outreach programs to assist persons suffering from hypertension. In the last national budget address presented in January 2012, Minister of Health, Hon. Cecil McKie, stated that the government made an allocation approximately 11% of the health budget to medical supplies for persons suffering from non-communicable diseases. As a consequence, new initiatives such as the launching of the dietary guidelines, and the National Health and Nutrition Survey were implemented for better surveillance and monitoring of the disease. Consequently, the public relation initiatives were heightened to promote a changing health care environment which supported changes in lifestyles and new methods for accessing and using information were adopted. Improved access to information technology must be given high priority during this fiscal year since this was one of the main drivers to better health care delivery in St. Vincent and the Grenadines.

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3 Clinic day in the Caribbean is normally the day when patients visit the health care centers in their district to meet with nurses and physicians. Routine checks for blood and sugar levels are performed as well as consultations for pedicures, nutrition and how to take care of themselves.
In the Eastern Caribbean and particularly in St. Vincent and the Grenadines, the ethnic background of our peoples was afro-American which linked closely to the high risks ethnicity group of persons with hypertension. In addition, St. Vincent and the Grenadines as a former colony of Britain, so presently our laws, norms and customs remain tied to our mother country. To this end, some of the health practices and services offered (to persons accessing health care) did not change even after gaining independence in 1979.

By and large, it was observed that information needs of persons with hypertension were associated with knowledge and application. Patients should be able to obtain information via the available and appropriate mediums as it pertained to nutrition, which included foods with high salt intake and sodium contents. Individuals must have the ability to adopt a 24 hour recall routine and to participate in regular physical activities. It was recommended that a minimum of thirty minutes (30) physical exercise per day was sufficient. Finally, patients must be willing to minimize the use of alcohol which was also a major contributor to the disease.

2.1.4. Information for Physicians

Hypertension can be normally treated within the primary health care unit. Therefore, physicians were treating persons within this unit are the first and most regular ones that patients seek for medical care. Primary health care “provides the first point of contact in the health care system”, University of Bristol Academic Unit of Primary Care (2010). These persons may be general internists, who treat adults, family physicians, who treat anyone from birth to elderly, general pediatricians who look after children from birth to age eighteen (18) and obstetrics and gynecologists who specialized in women’s health and are often seen for a woman’s primary care and routine issues.

One important caveat of physicians was to ensure that they possess the ability to dispense accurate and up to date information to the patients they serve. Physicians also relied on trusted sources of health information and were perceived (particularly by the persons in the older generations) as persons with the ‘monopoly on health’. The WHO Report (2008 pg. 12) further supported that physicians must be also able to “reduce social disparities in health, organize health services around peoples’ needs, collaborate models of policy dialogue and increase stakeholder participation”.

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2.1.5. Information Needs of Nurses

“The assessment of the information needs and information behavior of various professionals including nurses was essential for assisting them to access and use information resources required for optimal work performance” Oyewo (2006). Nurses constitute the majority of a hospital’s clinical employees and they were also the most frequently consulted persons in the health care system.

Nurses were not only responsible for carrying out the instructions of physicians but also for constant screening and monitoring of their patients. The nurses’ main responsibility was to take care of sick people and to assist them with their physical and medical needs until their health condition was improved.

In addition and most critically, nurses collate and disseminate information to patients and their families and sometimes serve as resource personnel between the patients and their physicians. Nurses were also responsible for coordinating all the care activities of the patients. Knowledge was therefore a very critical component for nurses. The means by which they acquire and dispense this information determined the effectiveness and efficiency on the tasks undertaken. It was incumbent on them to have access to useful information and to possess the necessary skills for using this information.

According to Corcoran-Perry & Graves (1990), the information needs and information behavior of nurses remained constant over the years. This behavior was as a result of rapid changes taking place in the work environment as well as the emergence of new information technologies.

As alluded to previously, nursing professionals required a wide range of knowledge on health related subjects. Presently, they rely on print materials including journals, textbooks and other medical reports for information. Dee et al (2005) reporting from a research undertaken in the mid-1990s realized that electronic databases such as CINAHL and MEDLINE were becoming quite popular. Regrettably, there were a few drawbacks which included lack of computer access, lack of time to search large volumes of health literature and to use digital information. There was also a reluctance to pursue all avenues to obtaining information to
the patients within their care. The research also noted that the nurses did not possess the requisite technological skills to support their information needs because of insufficient training. Nevertheless, when the training was assessed, nurses obtained more online health information resources hence its usage was more prevalent. These practices ultimately improved the information seeking behavior of the nurses. Noteworthy was the improvement in the quality of their work.

The summary of these articles paid attention to the causes, cost of treatment and showed remarkable statistics and projections about the disease if it was not controlled. The reading materials also supported that there were increases in hypertensive cases which impacted the cost of treating persons with the disease.

2.2. Literature Reviewed

In carrying out this review, relevant pieces of research on the information needs of persons with hypertension was undertaken. This approach was an attempt to present an unbiased and balanced strategy with the aid of critical appraisal mechanisms. One of the journal editorials written by Professor Dave Sackette on Evidence-Based Medicine (EBM) in summarizing the essential steps in the science of EBM was “to appraise the evidence critically i.e. to assess its validity (closeness and truth) and usefulness (clinical applicability); to implement the results of this appraisal in our clinical practice; to evaluate our performance” Greenhalgh (2010).

In reviewing the literature, it was discovered that there was a wide variety of studies conducted on this subject matter. It was also realized that new and emerging ideas were put forward by different authors. There were readings from the National Institutes of Health, Pan American Health Organization (PAHO) & the World Health Organization (WHO) Reports. These printed materials were also very informative presenting statistics and trends throughout the world.

2.2.1 Common Literature Databases

The list below identified relevant search areas from which information was obtained. The databases in particular were selected because it was realized that a wider range of information was presented through these mediums. Some of these were:
a) MedlinePlus: Medical Literature Analysis and Retrieval System
The National Library of Medicine, part of the National Institute of Health and covers over 900 topics on health information.

b) EMBASE: Excerpta Medica Database
A comprehensive biomedical database on the internet consisting of over 20 million biomedical research references.

c) CINAHL: Cumulative Index to Nursing and Allied Health Literature
A database of references to journal papers.

d) The Cochrane Collaboration: The Cochrane Database of Systematic Reviews
A non-profit, independent organization formed in 1993 consisting of more than 11,500 persons in over 90 countries – many of whom are health care specialists.

e) WHO Database: World Health Organization Database
Indexes all WHO publications from 1948. An onsite card catalogue organized by subject headings for journals and technical documents.

f) EBSCO- Medical Databases: Evidence-Based Point-of-Care Resources
Biomedical Research Databases, Health and Wellness for employees. Online resources for medical institutions

2.2.2 Review of the Literature on Information Needs
Apart from the databases reviewed above, other research sources were reviewed, which epitomized all information needs for persons with hypertension more or less the same. The articles also supported that the common causation of these diseases such as age, ethnicity, family history, improper diet and lack of exercise. In the Annals of Internal Medicine (2011, pg. 77) Houston, T.K. et al produced a full report entitled “Culturally Appropriate Storytelling to Improve Blood Pressure” using a random control trial methodology to analyze specific outcomes (heart attacks, kidney failures etc) for persons with the disease. Greenhalgh (2010 pg. 37) further supports that this method is often seen as “the gold standard in medical
research”. Noteworthy, is the relationship between information needs and information behavior.

Greenhalgh (2010 pg. 15) was able to assess that information was still widely obtained from textbooks, journals and personal contacts as a primary source of seeking information. “The use of the internet as in information resource tool has increased especially via PubMed Medline/Medline Plus and was deemed as a very popular site for supplying health care information”. Some patients needed to keep abreast with the latest available details of their condition. Likewise, physicians must be able to obtain information for the patients and to explain important risk factors particularly for all patients. “Physicians need to obtain information on pharmacology, fill the gaps in the knowledge on “new” diagnoses and therapies, satisfying curiosity, personal interest and inclination and ultimately to resolve the issues around uncertainty and evidence” Thomas et al (2009). In the subsequent subheadings, common themes of various articles were selected for emphasis.

**High Sodium Consumption**

The Centre for Disease & Prevention (2009, p9-15) article encouraged Americans to consume less sodium. The article concluded that sodium consumed in the form of salt was often found in processed and restaurant foods. It warned against high intakes of sodium which was bad for health which can result in the increases in heart attacks and strokes. These diseases were highlighted as the top leading causes of death among men and women each year. Individuals were encouraged to consume a maximum of 1,500 mg or less per day. They must avoid adding too much salt in cooking and at the table. The article cited that in 2006 high blood pressure was the main contributing cause of death for 326,000 Americans. In addition, in 2010, hypertension cost was $76.7 billion from health care services, medication and sick leave. Another striking statistic produced from the article showed that 25% of adults in America were diagnosed with pre-hypertension. The risk of these pre-hypertensive cases is that they can be easily elevated to high blood pressure if not monitored properly.

Striking realities such as the varying levels of disease prevalence by ethnicity, gender and age are detailed hereunder.
The statistics provided identified that the disease was more widespread among males between the ages of 20 – 44 among age groups. However, from 55 years and over, grew higher among females. It also showed that it was the most common among persons of afro-American descent than those of white and afro-Mexican origin.

Hypertension was reported; once again, in the PAHO Report (2007, p.295 - 299) as the major risk for heart disease and cerebro-vascular diseases. A study was undertaken across the Latin American countries showing trends by age and gender from 2002 – 2004. The outcomes produced that men and women from as early as age 20 up to 69, there were high incidences of the disease, ranging from 48.52% to 49.8% in 2002. Haiti recorded the highest hypertensive rate of 48.52 in males and 45.68 in females.

The report also substantiated that those persons who were obese with a body mass index (BMI) of ≥ 30kg/m² were at a greater risk of suffering from hypertension. The report further
projected that if the current trends persisted, it was estimated that more than 1.5 billion persons can be overweight by 2015 and the BMI can increase. If this trend continues, there can be significant increases worldwide. Regrettably, every year, at least 2.6 million people die because of overweight or obesity.

In Volume 2 of this report, the trends were more or less the same, recording up to 26% after diagnostic confirmation was found in young men. The 2003 National Health Survey reported that treatment for hypertension and control rates are 59.8% & 36.3% respectively but were higher among females. 12% of adults suffered from chest pains and pre-cardiovascular diseases.

**Cost Associated with Hypertension**
In the World Bank Report (1993, p.2) cases were argued regarding developing nations should focus their attention on revenue generation and cost containment strategies for pharmaceutical supply systems. After personnel costs, pharmaceuticals were generally the largest item of expenditure within the public sector health budgets, ranging from 40 – 60 percent of total recurrent cost.

Invariably, physicians cared for patients whether in offices or in hospitals, diagnose and treat minor uncomplicated illnesses, manage chronic illnesses, find solutions to health problems during routine screening exams and or physicals and determine when specialist care was required and to facilitate referrals. In executing these functions, the patients were expected to have all of the medical problems addressed, to receive continuous care and the physicians can learn of patients’ lifestyles, habits, family histories, medications, allergies etc.

Reference was made to a procurement pharmaceutical entity called the Eastern Caribbean Drug Service (ECDS) Huff-Rouselle & Burnette (1996, p.8). The main responsibility of this company was to provide procurement services to nine Ministries of Health in the smaller islands of the Caribbean which includes St. Vincent and the Grenadines. An analysis was undertaken to examine the elements of the procurement operation that allowed ECDS to reduce unit costs for pharmaceuticals by over 50% during its procurement cycle. The list of hypertensive drugs procured annually include: Angiotensin 11 Receptor Blockers, Angiotensin Converting Enzyme, Inhibitors, Diuretics, Beta-blockers, Calcium channel
2.2. **Accessibility to Information**

From the definition provided by Portsmouth Accessible Information Website, it was observed that accessibility was all about making information available to as many people as possible. In addition to making information accessible, it must also be easier to understand and also be presented in the different ways. In the Caribbean and more so in St. Vincent and the Grenadines, health information is obtained through various methods. Most popularly were leaflets and pamphlets and other printed materials, posters, books etc. However, within recent times information was sought via electronic mediums.

It was important to remember that accessibility was dependent on age and exposure to different mediums. For example, the older people in St. Vincent and the Grenadines will continue to access information from their district clinics while the younger persons will either engage in discussions with physicians and finding information from websites. The Ministry of Health during their budget exercise will include strategies for disseminating information to those who desire it. Therefore, individual will be expected to make request for access to the information as it pertains to their personal health and wellness.

2.3. **Management of Information**

In 2011, St. Vincent and the Grenadines successfully implemented a Health Information Management System. This facility will store and manage all health related information on patients from the first to the last doctor’s visit. The objective of this facility is to improve the overall health care management of patients throughout the country Project Document (2008, pg. 7).

This software application is segmented by a series of authorizations access levels to avoid non access by persons who do not need to have the information. For example, the nurses, physicians and health care aids at the district clinics are the ones authorized to access notes for patients who attend the clinic in their district. The patient’s medical history can be accessed using this medium. The excerpts from DavenPort (1997) & Whitten & Bentley (2008) supported that technology plays an integral role in the dispatch of information. The
advantages include but are not limited to facilitating better planning, minimizing information overload, encouraging decentralization, bringing coordination, making data easier to analyze and interpreting and also assembling, processing, storing and retrieving information.

On the contrary, as good as technology may seem DavenPort (1997, pg. 6) argues that there is a lot of time and money that is wasted through misuse and nonuse. He stressed that this is “due to poor communication between business managers and technologists and to assume that technology by itself will solve the problems, is the real problem”. Health professionals must therefore strive to maintain effective communication strategies that will facilitate the smooth transmission of information for all persons involved in the health cycle.

2.5. Information Models

Information Seeking Behavior refers to “the way people search for and utilize information” Dictionary.com. It is also defined by Wilson (2000) as “the totality of human behavior in relation to sources and channels of information”. Hence it is essential to understand the relationship between the model of behavior and the impacts on the information seeking behavior.

In order to better appreciate these models, five literatures were taken into consideration. Wilson’s (1981) model of information seeking behavior, Dervin’s (1983) sense-theory, Ellis’ (1989 & 1993) behavioral model of information seeking strategies and Kuhlthau’s (1991) model of the stages of information seeking behavior.

**Wilson’s Model (1981)**

In Wilson’s (1981) model, the main intention is to look at “various information seeking behavior as an alternative to the common information needs”. The model gave the impression that information seeking behavior is as a result of a need perceived and in order to satisfy that need demands are made for formal and informal information sources and services resulting in success or failure.
In his second model, two propositions are put forward. Firstly, that information need is not primary but a second need may arise from the primary need. Secondly, in an attempt to find information, the person is likely to face different type of obstacles.

\[\text{Fig. 1: Wilson’s Information Model} \]

*Source generated from 1983, p.11*

**Devin’s Model (1983)**

This theory is termed by Dervin (1993) as “sense making” which she described as “a set of assumptions, a methodological approach, a set of research methods and a practice which is crafted to deal with perceived information. In figure 2, the elements in the shape of a triangle are mapped out below.
This concept however, was better understood using a ‘bridge metaphor’ as shown below.

**Fig. 3: Dervin’s Sense Making Model re-drawn**
*Source generated from 1993, p.10*

This model revealed a problematic situation and showed the extent to which information bridges the gap between uncertainty, confusion and outcomes using information.


The different behaviors involved in information seeking was not set out in diagrammatic format but rather a series of features and the way in which different behaviors come together to form a set of stages. This was the concept of Ellis (1989) & Cox & Hall (1993). These were identified as starting, chaining, browsing, differentiating, monitoring, extracting, verifying and ending. See Fig 4.
The work of Kuhlthau (1991) was complemented with that of Ellis’ by adding feelings, thoughts and actions and appropriate information tasks to the information search process.

The merger of these models brought together similarities but the major difference was that Ellis specifying the ‘models of exploration or investigation’. As a consequence, the two models present different concepts in the authors’ mind. Ellis gave the impression that the characteristics in behavior can vary while Kuhlthau assumed the stages of information behavior on the basis of her analysis.
Wilson (1996)

The model in fig. 6 was the updated model to the 1981 version which drew on research from "a variety of fields other than information science, including decision-making, psychology, innovation, health communication and consumer research" Wilson (1996).

The Wilson’s model was one which impacts external behaviors and incorporates other behavioral models which are more comprehensive than the earlier model.

2.6. Summary of Models

The models identified above were mainly concerned with information behaviors relating to persons seeking information. In addition, the models also look at IT systems which aid in information searches. It was important to look at the linkage between information systems and information/data types that can be recorded on these systems. This was why in Wilson’s (1996) model; he proposed that such a system can be designed to reduce the risk of failure by the user. His assertive position conveys that the desired results were increased while at the
same time reducing the risk of information being lost or irretrievable which is the responsibility of the system designer.

2.7. The Use of Models in the Research Project

The models aforementioned cannot evaluate all aspects of information behavior. However, they could be understood with a view of showing the relevance in this research project. Most of the models on information behavior focus on individual seeking information. From the perspectives of Taylor (1962) and Ormandy (2010) it can be concluded that information needs encapsulated the association of knowledge and its application.

Although, this research project did not assess information seeking behaviors, it was useful to understand the linkage between the two. Dervin (1983) in her model showed the correlation between knowledge / situation and application or the outcome. Noteworthy also was the bridge / gap which utilized time and space.

As a consequence, the Dervin’s model was incorporated as part of the research project which would add value to show the linkage between information needs and knowledge possessed by the health care professionals. In addition, it was observed from the readings that individuals were heavily reliant on information dispensed by the doctors and nurses. The survey can further determine whether or not this was the situation in St. Vincent and the Grenadines.

2.8. Success Stories of Hypertension by Assessment of Needs

In two separate articles provided by ^4Heartwire, the success stories were told of Canada and Portugal who were successful in the management of the disease.

Nainggolan, L. (2009) reported on a study undertaken by Dr. Martins who led a team of doctors from the Portuguese Society of Hypertension to spearhead a mass media campaign regarding the consequences of consuming too much salt. They recognized that this was the main driver of hypertension. Dr. Martins, a very influential physician appeared on Portuguese television on the Heartwire program proclaimed that “doctors should be like politicians”. He

[^4]: Heartwire is an online magazine, available to anyone with free registration, which is distributed to physicians and cardiologists, primarily and provides the latest news on various drugs and procedures and therapies for heart disease.
stated that “in order to get the attention of the people the media was required”. He incorporated major celebrities, well known soccer players and children’s cartoon characters to get the message across. The campaign also sparked the interest of the Parliament who was instrumental in passing laws for the reduction of salt intake in manufactured goods.

From the study, Dr. Martin and his team discovered that Portugal had the highest rate of stroke in Western Europe and knew that the main contributing factor was the high salt intake.

Following this mass campaign, the media reported that 72% of the population of Portugal was well informed of the risks of excessive salt, 59% knew of the association of salt to hypertension, 44% changed their salt consumption intake significantly. Dr. Martins and his colleagues were able to save the lives of over 2500 persons per year in Portugal by reducing the daily in-take of 1 gram of salt daily.

The second success story told by Nainggolan, L. (2011) reported on Canadians ability to manage high blood pressure for more than two decades. Dr. McAllister and his team embarked on public awareness campaigns annually. The success rate was also attributed to annual updates of the hypertension guidelines along with an ongoing education program. These were actively implemented, targeting physicians and the general public. Three surveys were also conducted 1986 – 1992 Canadian Health Measures Survey, the 2006 Ontario Survey on the prevalence and control of hypertension and the 2007-2009 Canadian Health Measures Survey. All of these surveys collected health information and measured blood pressure among adults.

The findings showed that hypertension control was improved in the country from 13.2% in 1992 to 64.6% in 2009. They also found that there was an increase in the use of the antihypertensive drugs and persons treated for the disease had substantially lower systolic blood pressure in 2009 than in 1992. In addition, among the persons with hypertension, those who had cardiovascular and cerebro-vascular diseases were also able to control the blood pressure. Dr. McAllister was satisfied that “Canadian physicians appropriately targeted more intensive therapy to patients at higher risk or those patients at higher risks are more compliant to their therapy”. He cautioned that “without continued vigilance and reinforcement after improvements in practice have been made, quality care can deteriorate overtime”
As a result, every February is celebrated as Heart month in Canada. The update to the guidelines commences in spring every year with preliminary release of a document in fall. This allows for feedback and the new guidelines are published by January – February each year.

These updates also included websites, targeting health care providers, supplying them with new recommendations and slide kits. Advertisements are placed on buses, in newspapers on radios and all avenues where information can be obtained.

2.9. Conclusion

The highlight of this chapter was to review related material on information needs of persons with hypertension. Nevertheless, the researcher used the opportunity to also include information needs of both physicians and nurses showing the relationship with the patients. Although this research would not assess behavior, it was important to show the correlation between information needs and information behavior, highlighting how needs impacted behavior. Having assimilated all of the relevant pieces of information, this research sought to fill the information gaps for persons with hypertension.

In SVG, it was recognized that there was no needs assessment conducted for persons with hypertension and whether or not these needs were met by the healthcare system. The results of this survey would be forwarded to the Ministry of Health. It is hoped that the recommendations be reviewed by health personnel. The researcher would ensure that a copy of the document would be forwarded to them with the hope that the information could be incorporated into future programs, thus creating further positive impact on the lives of persons with hypertension.

The discovery of the models used to assess information behavior was very important, one of which was selected for implementation. The reviews served as a good basis on which to develop the methodology and to provide useful insight of the survey exercise. It was also observed that the use of technology was promulgated as one of the main drivers to effective communication. Regrettably, it did not address the concerns of physician-patient
relationships and the effectiveness of that information passing from physicians to nurses to patients.

The two articles written by Nainggolan, L. (2009) & Nainggolan, L. (2011) emphasized the importance of meeting the needs of patients through appropriate information mediums and its impact on reducing the prevalence of hypertension.

Raghupathi & Nerur (2010) in their research on health care systems recognized that “information systems have become increasingly important in health care delivery and should be promoted as a cost saving measure”.

The selected subheadings were geared towards developing a logical and practical approach to assessing the relevance and application of the readings undertaken. Chapter three of this research assignment will present the research methodology, ethical and governance issues, implications of the research and conclusion.
CHAPTER THREE
RESEARCH METHODOLOGY

3. Introduction

Research methodology is defined “as a collective term for the structured process of conducting research. The term was considered to include research design, data gathering and data analysis” (Kothari, C.R.1985, p2). Research methodologies can be classified into two research paradigms which are the quantitative method or the positivist and the qualitative or naturalistic (Creswell 2003, p9).

In chapter two, the literature review outlined the framework from which credible information was sought which will form the information base of this research project. However, in chapter three, the appropriate methodologies to be applied were detailed. This research project was aimed at assessing the information needs of persons with hypertension in St. Vincent and the Grenadines. Therefore, the methodology executed ensured that the research was valid and reliable and produced credible results. The outcomes of this project would not be based on the researcher’s opinions or preconceived ideas but rather employ objectively. This research methodology will outline the procedures followed in analyzing and interpreting data gathered.

In addition to selecting the most appropriate methodology, the categories in this chapter will provide information on the research methods and design, research governance, ethical and practical considerations, data analysis, research implication and conclusion.

3.1. Research Methods & Design

The two most common research methods as discussed were quantitative and qualitative analyses. (Creswell 2003, p9) advised that in selecting research methods it is best to choose a single paradigm.

The qualitative or naturalistic research was research that “was scientific consisting of an investigation that sought answers to a question, systematically used a predefined set of procedures to answer the question, collected evidence, produced findings that were not
determined in advance, produces findings that were applicable beyond the immediate boundaries of the study”. These types of data methods were usually field notes, audio recordings and transcripts (Denzin 2000, p15).

Quantitative or positivist research on the other hand was described by (Bryne, D.S. 1998, p5) as “the systematic investigation of social phenomena via statistical, mathematical or computational techniques. The objective of any research is to develop and employ mathematical models, theories and or hypotheses. Researchers understanding quantitative analyses would ask specific questions and collect numerical data from participants to answer the question. The researcher would then analyze the data using statistics”.

Having an appreciation for both types of research methods, the researcher sets out to explore these options, in an attempt to adopt the most practical and applicable method. Specific questions were asked which required a choice of answers. There were a few open ended questions but no interviews were conducted with the participants.

Furthermore, the research was conducted solely by the researcher and supervised by Dr. Peter Bath. As far as possible, the researcher had to ensure that the study was carried out in a timeframe conducive to the participants. The element of cost was also carefully considered. The researcher was cautious in implementing cost cutting measures while at the same time ensuring that the objectives were achieved. All costs pertaining to the research were borne by the researcher and no cost was incurred by the participants. This research was rated by the Sheffield’s Research and Ethics Committee as a low risk project; hence there were no security and legal obligations.

### 3.2. Methodology of Quantitative Research

As mentioned previously, this research study utilized the positivist approach which was most appropriate and will provide the best results given the context of the study. By adopting this method, the researcher designed a questionnaire which was sub-divided into subcategories namely demographics, health status, health practices, information knowledge, information access and information needs. This questionnaire structure was geared to obtain (in a logical order) the information needs of persons with hypertension. The participants in this survey were persons with hypertension who visit the health clinics. The researcher was advised by
the Senior Community Services Officer, Ms. Ferosa Roache to use the clinics days when patients come to visit the doctor.

During that time, the researcher introduced herself to the patients stating the reasons for seeking their participation. She then read the information sheet to the participants after which each person was asked to sign giving consent to participate in the survey. A sample size of one hundred and thirty (130) persons was deemed sufficient which incorporated an even geographical spread from the windward and leeward side of the island and the two clinics on the largest grenadines island of Bequia. This sample size was validated as sufficient credibility to the study as well as being quite manageable considering the fact that the researcher was engaged in full time employment.

3.3. Research Sample and Timescales

3.3.1. Pilot Study
This research was conducted in two phases; a pilot study and the research survey. The pilot study was first undertaken with a sample size of twenty (20) participants whereas the researcher made an assessment of one hundred and thirty persons (130) with hypertension. This milestone was achievable mainly because the researcher established good working relationships with the Senior Community Services Officer who was instrumental in coordinating an audience with the participants. Hence, access to these persons posed little difficulty. Noteworthy was the willingness of the individuals to participate. Both in the pilot study and the research survey were conducted in similar manner.

Participants who consented to get involved with the survey were then given a questionnaire to complete. Upon completion of it, these questionnaires were returned to the researcher. Nine health centres with approximately twenty four persons (24) were visited. The questionnaires were given to participants who consented to take part of this activity.

Although a qualitative research could have been considered, the researcher was mindful that open ended questions should be in keeping with the aims and objectives. This research type as mentioned by (Greenhalgh 2010, p163-167) was a “primary research reporting research firsthand, from which surveys can be a sub-category”. Surveys were used “to measure
something in a group of patients, health professionals or some other sample of individuals”. These can also be used “to measure people’s opinions, attitudes and self reported behaviors”.

The questionnaire was also constructed in such a manner to glean from the patients whether or not the health care professionals were equipped to disseminate information thus meeting their needs of patients. Equally, the research was able to produce the findings on the information seeking behavior of health care professionals in particular, the doctors and nurses. The survey process was well managed taking into consideration the availability of the patients. The entire process was carried out over a three week period.

3.4. **Research Governance**

Imperial College in London (2012 pg.1) explained research governance as “the broad range of regulations, principles and good standards of good practice that exist to achieve and continuously improve research quality across all aspects of healthcare”. In the NHS, research governance was viewed as “the framework intended to ensure that all NHS research conducted to high scientific and ethical principles in a manner which safeguarded the health and well being of participants. It encompasses areas such as ethics, science, information, health and safety, indemnity, finance, intellectual property and the responsibilities of researchers and sponsors”. The article further emphasized that “formal approval from each NHS organization must be given before the research commence”.

It was a requirement that approval must be sought before conducting a research study. Approval for this project was obtained from the University of Sheffield’s Research and Ethics Committee and also from the Ethics Committee in St. Vincent and the Grenadines.

3.5. **Practical Considerations**

Looking at the practical issues of a research study the “feasibility issued potentially experienced by the individual carrying out the research design should never be ignored”, (Chong 2006, p7-10). Some considerations of practical issues when undertaking research as outlined by Chong were “the number of subjects to consider, the time spent versus freedom, people versus numbers and mixed-method research”.

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3.5.1. **Number of Subjects**

(Chong 2006, p7-10) further explained that quantitative research usually involves many more subjects as compared to qualitative research, particularly from surveys. “It is not uncommon to see a survey study involving hundreds of subjects. Given the demands of inferential statistics, it was a requirement that sample sizes be sufficiently large in relation to the population from which the sample was drawn”.

3.5.2. **Time Spent on Subjects**

From Chong’s point of view, he recognized that the data from a qualitative research is “rich”. The researcher was able to engage in “repeated interviews, observations, participation, event analysis and content analysis over a long period of time”. He was of the opinion that by adopting this research approach, the researchers could better manage bias responses and the time spent on actual discussion would be significantly reduced.

3.5.3. **Rigor versus Freedom**

He further stated that “researchers undertaking quantitative analyses must adhere to strict guidelines”. As a consequence, “the researcher was expected to grasps all of the components of the particular qualitative design used. These must be clearly understood and function in relation to each other”.

3.5.4. **People versus Numbers**

Chong continued to explain that unlike qualitative research, a researcher using quantitative study approach “will not necessarily have much contact with the sample study. In some cases the researcher may use a predesigned instrument called a survey, whereas in qualitative research, there must be interaction with the participants”. It was widely accepted that qualitative research was the instrument while the primary means of gathering data is through interviews, observation and focus groups (Creswell 2009, p11-12).

3.5.5. **Mixed-method Research**

Chong also agreed that this type of research has its merits wherein the researcher can gain insight into an issue from both angles. However, he was of the view that mixed method research was the worst type. “In approaching a research problem using multiple methods, the researcher must collect two sets of data of different nature and be able to conduct the analyses
separately and then link them together. In addition, the researcher must discuss multiple instruments and rationale.

Creswell (1994) stated that “using both paradigms in a single study was expensive, time consuming and lengthy” (p.7). He remarked that “the researcher must be competent in the skills required by both methodological approaches”.

The additional knowledge acquired regarding these practical concerns and the implications of the research quality further supported the choice of conducting a quantitative analysis as the most relevant research best methodology to undertake.

3.6. **Ethical Considerations**

The University of Sheffield’s Research Ethics Policy considered three aspects of ethics in research. These were rigour, which was disciplined by honesty and integrity. Respect where all research has implications for the lives of others and to take account of any potentially adverse effects that the research may have on people, animals and the natural environment and finally we must respect the rights and privacy of others. The policy also made mention of responsibility and should never be the intention of the researcher to mislead, or cause others to be misled about our research. Presentation of data, theory or interpretation must be honest and accurate.

Resnik (2011) described ethics as “norms of conduct to distinguish between acceptable and unacceptable behavior, simply put being able to decipher between wrong and right”. Resnik further explained that ethical principles addressed honesty, objectivity, integrity, carelessness, openness, respect for intellectual property, confidentiality, responsible mentoring, respect for colleagues, social responsibility, non-discrimination, competence, legality and human protection (Shamoo & Resnik 2009, p3-7).

Amidst the various guidelines of ethical research that was designed and was currently available the Data Protection Act (1998) has detailed critical guidelines. Some of these included but not limited to:

- The racial or ethnic origin of the data subject
- The political opinions and religious beliefs of participants
- The physical or mental health of the individual and also the sexual lifestyle
- The commission or alleged commission of the participant in any offence
The University of Sheffield’s Research Ethics policy stipulated that “all research involving human participants must include informed consent procedure for each participant. This consent must be obtained prior to conducting the research which must be given freely and voluntarily. Under no circumstance must coercion be used. Consent is a process not a one off event”.

Before carrying out the research, the researcher was cautious to ensure that ethical approval as well as signed consent from the participants which must be given voluntarily. All aspects of the ethical procedures were taken into consideration with no intention to mislead the interviewees. A disclaimer was affixed for this purpose. These actions were used to further substantiate the authenticity of the research. Challenges encountered in conducting the study were documented as part of the learning outcomes.

3.7. **Data Analysis**

When carrying out quantitative research, the main aim should be “to determine the relationship between one thing and another (an independent variable) in a population. These can be either descriptive or experimental” (Hopkins 2000, p3).

As mentioned earlier, the researcher collected the questionnaire as soon as they were completed. These were counted and analyzed using the SPSS tool. In addition, the researcher was able to use Dervin’s (1983) model to show the relationship between knowledge and application and to identify the gaps which were better utilized by time and space. General sub-headings such as demographics, health status, health practices, nutrition and information quality were used to present the results of the survey. Summary graphs also aided in presenting the outcome of the survey. Every effort was made to ensure that all aspects of the ethics policy were strictly adhered to. Unlike qualitative analyses, there were no interviews, nor transcripts which required coding for confidentiality and anonymity.

Given that the main objective of this research was to make an assessment of the information needs of persons with hypertension, the researcher was cognizant that the questions and responses were in keeping with the main aim. This was one added advantage of the positivist research as opposed to the naturalistic research.
3.8. **Implications of the Research**

The assessment was extremely important since it was recognized that this disease may become a pandemic in this country, if there was not properly managed. Sadly, there was no gap analysis assessment conducted in St. Vincent and the Grenadines, looking at what currently existed, whether or not it was sufficient and be able to take proactive measures.

The findings and recommendations from this research can be used to better manage the disease and thus which could be used as a promotion strategy for primary care systems in the St. Vincent and the Grenadines.

3.9. **Conclusion**

The adoption of a quantitative/positivist approach emerged the most appropriate methodology for this research. Questionnaires were so structured that the participants gave honest answers which added value to the validity of the research. This approach sought to maximize reliability and to present an unbiased report of the analysis.

Prior to the commencement of the survey, the researcher received ethical approval from the Sheffield’s Research Ethics Committee and the Ethics Committee in St. Vincent and the Grenadines.

In chapter four, the findings of the results, both of the pilot study and the survey, would be detailed. The main subheadings introduction, general observations, results and discussion (demographics, health status, health practices, information knowledge, information access, information needs) and conclusion were adopted, thus presenting the results in a systematic order.
CHAPTER FOUR
RESULTS & DISCUSSION

4. Introduction

This chapter gave details on the findings and results of the survey carried out. As mentioned in a previous chapter, the study undertaken was a quantitative / positivist view of persons with hypertension and to assess their information needs. This section was subdivided into the following sections: pilot study, general observations, results and discussion and conclusion.

The main reason for carrying out a pilot study was to ensure that the questionnaire was understood by the participants and to obtain feedback. The researcher sought to find out whether or not the questions were clear or unclear. They were also given the opportunity to indicate if any further questions could have been added and if there was any difficulty in answering the questions. For the pilot study, twenty (20) persons were interviewed.

Following the completion of the pilot study, the researcher undertook the second phase of the survey. At this time, one hundred and thirty four (134) persons were surveyed by the researcher. From the nine health districts in the country, seven districts were visited. Ideally, one clinic from each district was visited (mainly the largest clinic) in that particular district. The districts visited were Kingstown, Calliaqua, Pembroke, Chateaubelair, Georgetown, Northern Grenadines and Cedars. Regrettably, no research was conducted in the Southern Grenadines distance and time constraints. The pilot study was undertaken in the Marriaqua district.

4.1. General Observations

The survey commenced from the first week in June and lasted for two weeks. The researcher was invited to visit the clinics when patients were given doctor’s appointments. It was observed that the persons with hypertension stuck to their appointments. In discussion with the nurses in charge most persons were compliant also with taking their medication.
patients were given a small book in which the nurse recorded their pressure readings, comments by the doctor or nurse, medication received, and appointments.

Having conducted the pilot study, it was realized that persons do not have blood pressure machines at their homes hence the blood pressure was checked by the nurses at the district clinics. In addition, persons preferred to express their exercise time on a weekly basis rather than daily. These questions (numbers seven and fourteen) were revised for this purpose. There were four general questions asked during the pilot study to which the respondents answered in the affirmative. See Appendix B.

4.2. Results & Discussion

4.2.1 Demographics

The total number of persons who participated in this survey was one hundred and fifty four (154) persons including those persons who were recruited for the pilot study. One hundred and sixty five (165) persons were invited to take part in the survey, giving a response rate of 93.3%. As shown in the distribution below, there were forty one (41) males and one hundred and thirteen females (113). The percentage distribution was 27% and 73% of males and females respectively. It was difficult to obtain an even number of males and females to participate in the survey. So as a result, the female participation rate was twice time more than the males. All of the respondents provided answers to the questions under this subheading, requiring only a selection of an answer that best fitted their individual situation. Fig.1 below presents the information by gender.
All of the participants in this survey were persons with hypertension. The pie bar chart presented the distribution by age. As shown in the graph below, more males were in the age category 71 and over, participated in the survey. The second highest age group was in the category aged 61 – 70 years old. See Fig. 1.2.

Looking at the statistics, the majority of the respondents were from the age groups 51 – 60, 61 – 70 and 71 and over. The Fig 1.2 also showed the percentage participatory rate by each category of persons. Altogether, the highest participation came from those three categories recording rates of 32%, 30% and 24%. 
For the females, the statistics were somewhat different. For both male and females, the statistics revealed that the highest concentration of people with hypertension were in the category 71 and over, followed by 61 – 70 then 51-60.

The ethnicity and districts from which persons resided were depicted in the graphs below. From the number of persons who participated in the survey, one hundred and thirty six (136) persons 88.3% of these persons were of black origin. Four persons were of white ethnicity (2.6%), twelve were Indians (7.8%). One person was an Asian and one person fell under the category “other”. These two ethnic groups accounts for .6% of the survey population. See Fig. 1.4.

The highest concentration of the survey participants came from the Windward district. This district recorded 51.9% of the participants (80 persons) from the black ethnic group. The leeward district secured 24.7% of persons, (38 persons) 9.1% (14 persons) from Kingstown and 14.3% (22 persons) from the Grenadines. The windward district also had the highest percentage of Indians in the survey and also the only district that Indians were found. As such the statistics recorded this ethnic group with 7.8% participation. See Fig. 1.3.
Fig. 1.3 Participants in the Districts

![Bar chart showing participants in the districts.](image)

Fig. 1.4 Participants by Ethnic Group

![Pie chart showing participants by ethnic group.](image)
I. **Discussion**

In this section of the research project, the researcher discussed each subsection of the questionnaire. Therefore, the sections were subdivided into the following: demographics, health status, health practices, information knowledge, information access and information needs. These were selected to assist the researcher in presenting the information in a logical and systematic format.

It was evident from the survey that there was a higher participatory rate among the females than the males. In addition, the age groups 51-60, 61-70 and 71 and over showed that the greatest concentration of persons with hypertension came from these categories. See Figs. 1. & 1.2

Having reviewed the article (in the Chapter two - Literature Review) produced by the Centre for Disease & Prevention, it was recognized that this disease was most prevalent in the age groups 55-64, 65-74 and 74 and over for both males and females. In addition, the article also cited that hypertension was most common among Afro-Americans and Mexican-Americans. Similarly, the results from this survey indicated that hypertension was most common among the black ethnic group. The districts from which the participants were drawn showed that the black ethnic group was dominant in all of the districts. These facts further supported that hypertension was widespread by age group and ethnicity.

4.2.2. **Health Status**

In this segment, persons were given the opportunity to rate their physical health, selecting their status from excellent to poor health. This question was answered by all participants and no information was missing.

The survey results revealed that 3.2% of the persons (5 persons) were experiencing excellent health, 7.1% (11 persons) rated their health as being very good. Those who stated their health was good recorded 37.7% (58 persons) and those with fair health rated 36.4% (56 persons) while 15.6% (24 persons) of the persons indicated that their health was poor.

The results also indicated that thirty two (32) persons representing 20.8% stated that they were diagnosed with heart diseases. Sixteen (16) of the participants (10.4%) did not know
whether or not they had heart diseases. However, one hundred and six persons (106) persons answered in the affirmative stating that they did not have heart diseases. This amount accounted for 68.8% of the survey population.

II. Discussion
Given the statistics, the conclusion was drawn that most persons expressed that experienced good and fair health. Both categories recorded similar ratings of 37.7% & 36.4% respectively. Those persons who identified their health as poor were mainly those suffering from heart disease such as high cholesterol levels and angina. All of the respondents answered this question and were able to identify their status without any difficulty. Very few persons indicated that their health was excellent. These persons were mainly from the age groups 40 or less and 41-50. See Fig. 1.5 below.

![Health Status of Persons with Hypertension](image)

4.2.3. Health Practices
From the total number of participants, 40.3% (62 persons) stated that exercise was not applicable. From this number approximately 64.5% (40 persons) of them were diagnosed
with heart diseases while the remaining 14% (22 persons) did not exercise. They were unable to state the duration of time spent exercising hence the question was not applicable to them.

Of the respondents, who indicated that they were engaged in physical exercise revealed that 7.9% (12 persons) of the spent less than fifteen minutes exercising, 37.1% (57 persons) exercised for a period between 15-30 minutes and 20.2% (31 persons) spent between 30-60 minutes exercising weekly. Approximately, thirty four point eight percent (34.8%) (54 persons) of the respondents spent more than sixty (60) minutes exercising.

Of the total number of persons who took part in the survey, 56.6% (87 persons) of them were diagnosed with hypertension for more than five years. Approximately, twenty eight point nine (28.9%) (45 persons) were diagnosed within 1-5 years, 8.6% (13 persons) were between 6 months – one year) and the remaining 5.9% (9 persons) were detected with the disease in less than six months.

Those persons who were prescribed medication were categorized by age cohorts. Most persons were compliant with taking the medication prescribed particularly among the females. The statistics showed that 73.1% (113 persons) of the patients were females with a compliance rate of 36.2% (41 persons). The rate of non compliance among the females was 22.2% (34 persons) while for males it was 26.9% (41 persons). The overall compliance rate among the respondents was 45.1% (70 persons) while 5.8% (9 persons) were noncompliant. Only nine persons did not take any medication that was prescribed.

III. Discussion
In this section, the individuals were able to answer most of the questions, except for the question which asked about the medication taken. Thirty one point eight percent (31.8%) (49 persons) of the respondents could not recall the names of the drugs prescribed while others were unsure of which medication was prescribed for hypertension. Noteworthy, was that all of the persons who took part in the survey were people with hypertension. For those persons who were prescribed medication, the survey was classified by age cohorts. This allowed the
researcher to better understand the age at which persons became affected by the disease. The list of medication as prescribed to the patients and was taken by them as follows: bezide (51.3%) (79 persons), aspirin (20.1%) (31 persons), atenolol (14.3%) (22 persons), lisinopril (20.1%) (31 persons), amlodipine (4.5%) (7 persons), nifedipine (5.8%) (9 persons) and amlogen (3.2%) (5 persons). Noteworthy, was that patients took more than one type of medication for their condition. The survey also singled out the females and those who were more compliant with taking medication compared to the males.

For those persons who did not engage in physical exercise, the time spent exercising was not applicable to them which accounted for 2.2% (3 persons) of the participants.

4.2.4. Information Knowledge

Most of the participants in the survey knew that breakfast was important to their health. They also knew that high salt intake was bad for their condition. Approximately, ninety four point two percent (94.2%) (145 persons) of the respondents stated that they eat breakfast while 84.4% (130 persons) ate up to three times per day. These persons were also able to identify quite accurately the foods containing high salt which were bread, cheese, sausages and canned foods.

The survey statistics also revealed that 83.8% (129 persons) of the participants knew when to check their pressure. The number of persons who did not know when to check their pressure was about 7.1% (11 persons). Only 9.1% (14 persons) did not check their pressure. See Table 1 below.
The number of participants who knew when their blood pressure was high was about 85.1% (131 persons). Those who did not know were about 5.8% (9 persons) while those who never knew whether their pressure was high or not was approximately 13.6 (21 persons). See Table 1.1 below.

Table 1.1 **Persons who knew when pressure escalated**

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>131</td>
<td>85.1</td>
<td>85.1</td>
<td>85.1</td>
</tr>
<tr>
<td>No</td>
<td>9</td>
<td>5.8</td>
<td>5.8</td>
<td>90.9</td>
</tr>
<tr>
<td>Don't Know</td>
<td>14</td>
<td>9.1</td>
<td>9.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>154</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Approximately eighty one point two percent (81.2%) (125 persons) were aware of the reasons why their pressure escalated. Eight percent (5.2%) (8 persons) were not aware while 13.6% (21 persons) were unsure if their pressure was high or not. See Table 1.2 below.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Yes</td>
<td>125</td>
<td>81.2</td>
<td>81.2</td>
<td>81.2</td>
</tr>
<tr>
<td>No</td>
<td>8</td>
<td>5.2</td>
<td>5.2</td>
<td>86.4</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>21</td>
<td>13.6</td>
<td>13.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>154</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The results further showed that 7% (11 persons) of the respondents could not recall what the doctor or nurse asked them to do if their pressure was high. Of the remaining 93% (143 persons) who answered this question, various reasons were given.

Most of the participants visited the doctor and nurse and in a few cases had the opportunity of interacting with other health professionals. The results declared that the percentage of persons who were seen by the health practitioners were as follows: 66.9 % by the nurse (103 persons), 26.1% by the doctor (40 persons) and 4.5% by other health professionals (7 persons). See Fig. 1.6. From the follow up question (what do you ask the doctor or nurse....?) the majority of persons answered no. Approximately, 2.5% (4 persons) of the participants did not answer the question while a few others explained what the things they asked about.
IV. **Discussion**

This subsection was aimed at assessing what the patients knew about their condition. In an attempt to ensure that the needs of persons were addressed, the assessment of the knowledge was critical. This segment was detailed hence it required the most responses in the entire survey. There were twelve questions to be answered in this section.

In carrying out the survey, it was discovered that there were persons who ate more than three times per day. For those persons who attended counseling sessions at the Milton Cato Memorial Hospital explained that they were advised to eat often but in small portions. Hence these persons ate more than three times per day. In terms of their knowledge about the disease, most persons knew when to check their pressure; they were able to tell when it was high and the reasons for the pressure escalating. Some of the explanations given were stress, poor diet, high salt intake, hard work, insufficient rest, too much sunlight, noncompliant with nurses and doctors instructions and alcohol.
Except in a few cases, most persons did not ask any questions about their blood pressure. They were satisfied with the information received from the doctor and or nurse. The responses given for the question “what does the doctor or nurse asks you to do if your blood pressure was high?” varied. They were told to continue taking their medication, rest and relax, exercise regularly, eat more fruits and vegetables, reduce salt intake, eat on time, reduce alcohol, reduce food rich in high cholesterol, consume more water and maintain a balanced diet. When asked about other things that they asked about, they inquired about why their pressure was high, requesting that their blood pressure be taken. They also wanted to know how to control high and irregular blood pressure, the reason for the stiffness felt at the back of the neck, what foods to eat and length of time for taking medication.

4.2.5. Information Access

From the list of questions asked under this section, 5.2% (8 persons) of the respondents did not answer this question. Approximately, eighty one point two percent (81.2%) (125 persons) stated that the information received at the clinic was sufficient while 13.6% (21 persons) did not know if the information was enough. Those persons who answered no, did not state what additional information they required.

Invariably, 78.6% (121 persons) of the participants never attended counseling sessions while 21.4% (33 persons) attended sessions. One hundred and thirty six (136) persons stated that there were no problems encountered trying to obtain information from the health practitioners (doctor, nurse, etc.). The results indicated that the main sources of information were the clinics and media, in particular television and radio.

V. Discussion

Access to medical attention was observed as one of the Government’s priority areas as outlined in the 2012 Budget. As mentioned in Chapter one, there were work programmes designed to meet the needs of persons at the health centres. The Government ensured that district clinics and health centres were strategically placed throughout the country and accessible to all persons. In addition polyclinics were constructed in the larger districts namely Windward, Leeward and Marriaqua. These clinics were equipped to meet the primary care needs of persons in the community.
In conducting the survey, it was realized that persons trusted the nurses and doctors. As such, most of them adhered to the advice given especially that of taking medication. A large percentage of the respondents were satisfied that enough information about their condition was provided at the health clinics. Only two persons did not know if the information was sufficient. On the contrary, not many persons visited the dietician or nutritionist. Hence they were unable to report on the helpfulness of the information received. The researcher was uncertain as to whether or not these persons were non-compliant or that they were so confident with the information received that there was no need to engage the dietician. However, the researcher was informed that at the Milton Cato Memorial Hospital nutritionists were available at designated times. In order to visit the dietician, persons were required to make an appointment.

The majority of the respondents did not have any problems obtaining the information they required. At a particular clinic, three persons reported that the doctor and nurses were not courteous. As a result, they felt intimidated and did not ask any questions about their health. One person attributed his failing health to a negative reaction by the health practitioner.

The most common sources of information identified in the survey were the clinics 90.9% and media 57.1%. Some persons reported that they obtained information from relatives and friends who were indicated in the category ‘Other’ 6.5%. The researcher therefore concluded that given the age category of persons with hypertension, these persons may not have been conversant with the modern technology. Hence, the use of websites and the internet were unfamiliar information sources to them. See Fig. 1.7. It was recognized that persons in these categories visited the clinics with the expectancy of socializing with their peers. The nurses recounted that persons spent up to four hours at the health clinics after they received medical attention.
4.2.6. Information Needs

From this section 5.1% (8) of the persons did not give a response when asked what other things they needed to know about their health condition. Of the remaining one hundred and forty six persons (146), those who needed other information were approximately of 6.8% (10 persons) while 93.2% (136 persons) answered no to this question. Those who said yes gave varying explanations for their answer. See Table 1.3 below.

Table 1.3 Persons requiring other Information

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>Yes</td>
<td>10</td>
<td>6.8</td>
<td>6.8</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>136</td>
<td>93.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>154</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
In addition, the majority of the participants were so satisfied with the information they received that they did not think there was anything else they required. Similarly, 80.5% (124 persons) agreed that the information helped them to improve. Thirty persons (19.5%) did not believe their condition had improved. See Table 1.4.

Table 1.4 **Persons whose condition improved**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>Yes</td>
<td>124</td>
<td>80.5</td>
<td>80.5</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>30</td>
<td>19.5</td>
<td>19.5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>154</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The final question asked was about willingness to share the experience with other persons. The response was produced 70.1% (108 persons) of the persons expressing their willingness to pass on information to other persons while 29.9% (46 persons) of them did not wish to pass on any information to other persons. See Table 1.5 below.

Table 1.5 **Persons willing to share information**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>Yes</td>
<td>108</td>
<td>70.1</td>
<td>70.1</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>46</td>
<td>29.9</td>
<td>29.9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>154</td>
<td>10.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
VI. Discussion

When the participants were asked what other additional information they would like (if they felt that they were not getting all the information they needed at the health clinic) the majority of the respondents answered ‘No’. For those persons who said ‘Yes’, they wanted to know, why was their pressure not regularized although the doctors and nurses’ instructions were followed. They were confident that whenever new information becomes available, these medical personnel will keep them abreast with the most recent information. By and large, persons were satisfied that the information received helped their condition to improve.

When asked how the information had assisted you, persons replied that knowledge was obtained from the medical personnel at the health clinics, having regular checkups, compliance with doctors and nurses’ instructions were all major contributors to improving their health. Furthermore, from the results obtained, it was observed that persons were willing to share their experiences with others. Among the explanations given, persons with the disease stressed the importance of regular checkups, reduction in salt intake, having a balanced diet, avoiding high blood pressure, exercise, avoid stress, ensure that they took adequate rest, reduce alcohol, drink a lot more water and reduce fats and oils. They were willing to encourage persons to read and avail themselves to the latest information.

4.3 Conclusion

This chapter was aimed at presenting the results and findings of the survey conducted. Questionnaires were used to obtain information and were designed to follow a logical and structured approach mainly to assess information knowledge, information needs and information access for persons with hypertension. In the literature review, reports from PAHO & WHO and authors such as Taylor and Ormandy all cited that information needs of persons with hypertension were associated with knowledge and application.

In the survey conducted, one aspect of Dervin’s (1993) sense making model was brought out showing the situation, the gap and the outcome. When this model was re-drawn, it incorporated time / space with a bridge connecting situation and outcome. The situation which existed was that persons knew about high blood pressure but some did not apply the knowledge to obtain better health status which ideally was the outcome. They did not spend
time exploring research options which would ultimately help their condition to improve. Hence, the dependency gap between obtaining information from doctors and nurses and conducting research on their own should become closer.

In terms of information seeking, Wilson’s (1996) model epitomized how well participants used information sources. Wilson highlighted that information seeking behaviours can be given passive attention, passive search, active search and ongoing search. The diagram also pointed out the psychological, demographic and inter-environmental aspects. Although the survey did not assess information behaviour, it was recognized again that persons were heavily reliant on the health practitioners and the media (ideally radio and television). Incidentally, those media communication channels also gave information from health personnel; participants did not engage in active search for information themselves. They were convinced that the information received from the doctors and nurses was all that they needed to know. Only a few persons indicated that friends and relatives played an important role in disseminating information based on their experiences living with the disease.

Notwithstanding this, many people were willing to share what they have learnt from others. They were satisfied that there needs were addressed. However, these patients should not take their situation lightly since the statistics (as highlighted in the literature review) showed the increasing death rate of persons with hypertension. This was one of the lifestyle diseases that can be controlled but only if persons took precautionary measures. The figures not only related to the Americas but our own country statistics also showed that it was one of the major causes of high mortality rates in St. Vincent and the Grenadines.

The final chapter of this research presented the conclusion and recommendations. It outlined in summary the aims and objectives of the research undertaken as well as the research limitations. The recommendations for the way forward were documented for future work.
CHAPTER FIVE

CONCLUSION & RECOMMENDATIONS

5. Introduction

This final chapter followed on from chapter four after the results and discussion of the survey were presented. This section outlined in summary the conclusions drawn from conducting this research. As with the other chapters, this chapter is arranged with the ease of the following subheadings: introduction, aim and objectives, research limitations, recommendations and conclusion. After which, the references and appendices would follow.

5.1. Aim and Objectives

As mentioned in the first chapter, the overall aim of this research piece was to assess the information needs of persons with hypertension in St. Vincent and the Grenadines. Therefore, an attempt was made to assess those needs. The researcher set out to accomplish four objectives, which were:

- To ascertain the needs of persons with hypertension
- Were these needs adequately met by the health care system? Were there barriers to meeting these needs?
- What information was available to persons with hypertension and was this information easy to obtain.
- To identify other types of information that was required.

Objective 1: To ascertain the needs of persons with hypertension.

In order to achieve this objective, the researcher made an assessment of their knowledge, to find out whether or not they had access to the information they required and if these needs were met. The patients had a good understanding of the disease, its causes and the reasons for their blood pressure escalating. However, there only access to information was from the doctors and nurses. They believed that if the instructions were followed closely (doctors and nurses’ instructions) their blood pressure would be normal. Patients who were tested at the
health clinics were always regular with their appointments. They were confident that there needs were met and the doctors and nurses were doing the very best to ensure that their health improved. In light of this, the researcher is confident that this objective was achieved.

**Objective 2: Were the needs adequately met by the health care system and were there barriers to meeting those needs?**

From the responses received from the questionnaires, persons with hypertension were satisfied with the information disseminated by the doctors and nurses. Except for one clinic visited, all other patients remarked of the warm, friendly and courteous approach of the medical staff. They expressed no barriers to obtaining whatever information they required. Although, only a few persons attended counseling sessions, other patients were not marginalized and left short of receiving the information they required. The nurses ensured that as far as possible areas of nutrition were thought during ‘clinic days’ for persons with hypertension. It was also observed that persons were quite liberal with information regarding their illness so even as the researcher, communication flowed freely. Medical staff was well respected and trusted by the patients even though they were not always able to explain what they nurses say to them. Quite often they remarked “doctor say so, nurse say so and it will be so”. From this, the researcher concluded that their needs were adequately met.

**Objective 3: What information was available to persons with hypertension and was this information easy to obtain.**

This objective was indeed met. As mentioned before, persons with hypertension were reliant on the information received from the doctors and nurses. Some persons received information from the media (in particular, radio and television). Even through these mediums, persons strictly adhered to the advice given to them. They recalled quite vividly the broadcast times and ensured that they did not miss any of the programmes. Most recounted that they were informed of the causes of the disease, how to should be best controlled and how to maintain normal pressure.

For those persons who attended counseling sessions, they recalled receiving tokens (mugs and bags) as well as leaflets and pamphlets with written information regarding this disease. However, most patients were inclined to turn up at the health clinic if they felt that urgent
attention was required. This was quite was customary. It was evident that the patient-nurse and patient-doctor relationship existed; therefore they felt comfortable visiting the clinics.

**Objective 4:** *To identify other types of information that was required.*

From the survey conducted, the participants stated that they did not require more information. They knew the causes of the disease, why the blood pressure escalated and the measures to be taken so that it goes back to normal. Some persons were concerned that despite the instructions followed, their blood pressure was not reduced. Having discovered that most persons were not willing to do any research for themselves; one possible reason could have been that these persons were not exposed to other information sources such as internet and websites. They expressed that these mediums were absent in their homes. As such, patients should have been able to have access at the health clinics. This practice would have encouraged them to become more independent in obtaining additional information about their disease. This practice would encourage more informed discussions between the patients and the nurses or the doctors and the patients. They can also discover new methodologies and updated medication that can help them to experience better health. They were satisfied that whenever new information became available, they were assured that the updates would be disseminated to them. From the researcher’s viewpoint this objective was achieved.

5.2. **Overall Findings**

The researcher was particularly pleased with the level of participation and cooperation received from the persons with hypertension. There were cases where more information was given than was required for the survey. As aforementioned, most of the participants were females; who were mainly from the Windward district. By and large, St. Vincent and the Grenadines mainly consist of persons with black ethnicity hence the high concentration of persons who participated was of black origin. All persons who were involved in the survey were persons with hypertension who reported honestly about their condition. They were not hesitant to report non compliance with doctors and nurses instructions particularly for taking medication. For example, those who did not remember what medication was prescribed and what their doctor or nurse asked them to do if the pressure was high were not ashamed to indicate such. In terms of their knowledge, they stated clearly what they know and did not know.
With regards to information access, persons were contended that the nurses and doctors were available when they needed information. Finally, in understanding their information needs, they were fully acquainted with the avenues available to them. Except in a few cases, most persons were confident that their condition would improve and were willing to share their experiences with others, more so with friends and relatives, safeguarding them against engaging in unhealthy lifestyles.

5.3. **Research Limitations**

The decision to undertake a positivist research was indeed a prudent one with few responses to analyze. The researcher distributed the questionnaires to the participants and the participants provided the responses. Any question that was not understood was explained by the researcher. In carrying out the survey, the researcher considered an even geographic spread in distributing the questionnaires. However, moving from one clinic to another was a demanding and challenging exercise. Given the terrain of the country, (which is very mountainous) there were times when it became difficult to get from one clinic to another. Hence, some clinics could not be visited due to their location, although these clinics were considered clinics of average sizes.

Furthermore, most of the participants were females. Due to time constraints, the researcher was unable to obtain an even balance of participants, while at the same time balancing the geographical spread of persons throughout the country. As a result, questionnaires were given to whoever attended the clinic on the scheduled day.

For the same reason, the researcher was unable to visit any of the clinics in the Southern Grenadines. In addition, the survey was conducted at a time when the researcher was engaged in full time employment and actively involved with volunteer organizations. As such, the time to visit clinics was shortened, visiting as much as three clinics in one day.

Particular attention was paid to the timetable ensuring that time lost in one activity was made up, making sure that the activities were not impacted in any significant way. The limited knowledge of the use of the SPSS application posed some challenges for the researcher. In
essence, more comparative analyses could have been presented had the researcher been proficient with the application.

Finally, the protocols involved in getting the questionnaire from the researcher to the respondents were unfamiliar to the researcher. As a consequence, time elapsed trying to establish the correct procedures. A few nurses were not informed of the scheduled visit by the researcher hence on the day of the visit, some of the prospective participants returned home.

5.4. **Recommendations**

5.4.1. **Medical Practitioners**

Although the survey did not make assessment of the medical staff, it was necessary to have an appreciation of their roles and responsibilities. To this end, it is recommended that nurses and doctors encourage patients to conduct their own research about their condition. In so doing, more practical approaches can be appreciated by persons living with this disease. The use of You Tube is just one medium by which information can be obtained. Another medium that can be effective is by reading printed materials (books, magazines etc.). Medical personnel should establish a closer relationship with social workers to get the patients engaged in these practices (as mentioned above) and to encourage more practical sessions such as skits and dramas of persons with hypertension. These sessions should also incorporate those persons who may be pre-hypertensive and non-hypertensive.

5.4.2. **Patients**

Having completed the needs assessment for persons with hypertension, it is strongly advised that those patients who were non compliant become compliant. It is the best way to improve one’s health. They need to explore ways of getting information and not become solely dependent on the information from the doctors and nurses. Although the information dispensed is reliable, obtaining additional information would encourage more meaningful discussions about their illness. It is the reality that new and emergent information has been disseminated frequently which helped to keep patients abreast with the latest available information. They need to know and understand the importance of attending counseling sessions and visiting with the nutritionists / dieticians. These persons are adept in helping
patients to address their nutritional needs rather than trying to seek this type of assistance from the doctor and nurse. Persons with hypertension became too dependent on the nurses; hence they were seemingly not aware that the duties of nurses, doctors, nutritionist and other health professionals were segregated. Patients also need to know that medication was not the ultimate solution for their condition. Information gathering (through print material, videos and websites) and attending counseling sessions etc. are all additional avenues whereby information can be obtained on the disease.

5.4.3. Ministry of Health

One of the roles of the Ministry of Health is to set policies and guidelines for the health sector. However, these should be communicated such that it benefited the persons for whom it is intended; ideally those persons requiring services at the health clinics. The researcher observed the lack of dieticians assigned to the health clinics to assist persons to better manage the disease. It is therefore recommended that at these sessions, the availability and access to electronic and print media can be utilized which could propel patients to conduct their own research. This practice could be particularly appreciative by the younger persons who may be more technologically inclined than those aged 71 and over.

Exercise sessions should be included in these special sessions, demonstrating the importance of exercise on health. As such, a trainer should be assigned to the health clinics when persons are attending counseling sessions.

The famous maxim “what gets measured, gets done” can be applied in this situation. The Ministry should ensure that there is continuous assessment of the persons with hypertension which is an important facet to better monitoring and surveillance of the disease. Previously, the concern of staffing was a major concern. However, the ministry has been training more nurses each year at the Community College – Division of Nursing Education. Therefore, the matter of staffing to assist persons with hypertension should be addressed.
5.5. Conclusion

This research undertaking was an enchanting experience for the researcher. Good time management, analytical skills and determination are just a few tenants that are required for completing this project. Nevertheless, the researcher ensured that the aim and objectives of this research were achieved. Critically, was the adherence to ethical standards as enshrined in both the University of Sheffield’s Ethics Policy and the Policy of the Ministry of Health & the Environment in St. Vincent and the Grenadines.

The subject of information needs was an important and interesting one, since it is imperative that persons with hypertension are continually assessed. In so doing, the medical staff can assess whether or not the strategies employed and the medication prescribed are fulfilling its purpose. Following which, decisions can be made regarding any changes that may be required.

This research piece would be forwarded to the Ministry of Health as requested by the Chief Medical Officer. It is hoped that the health professionals would find the information useful which can positively impact the lives of the persons with hypertension. The findings and results of this project can further convince health professionals that it should be a requirement to assess (on an ongoing basis) the information needs of persons with hypertension in St. Vincent and the Grenadines.

*Word count: 16,836*
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BIBLIOGRAPHY


Thorpe, R and Moscarola, J (1991) Detecting your research strategy, Management education and development, 22(2) p. 127-133

Databases

- MedlinePlus: Medical Literature Analysis and Retrieval System
- EMBASE: Excerpta Medica Database
- CINAHL: Cumulative Index to Nursing and Allied Health Literature
- The Cochrane Collaboration: The Cochrane Database of Systematic Reviews
- WHO Database: World Health Organization Database
- EBSCO- Medical Databases: Evidence-Based Point-of-Care Resources
## ORIGINAL TIMETABLE

<table>
<thead>
<tr>
<th>Dates</th>
<th>Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 2011</td>
<td>Submission of Project Proposal</td>
</tr>
<tr>
<td>September 2011</td>
<td>Obtain ethical approval from the government of SVG and the University of Sheffield.</td>
</tr>
<tr>
<td>October – December 2011</td>
<td>Literature review</td>
</tr>
<tr>
<td>January 2012 – March 2012</td>
<td>Draft questionnaire and interview structure Conduct interviews with hypertensive persons</td>
</tr>
<tr>
<td>April &amp; May 2012</td>
<td>Data analysis for both qualitative and quantitative reviews</td>
</tr>
<tr>
<td>June &amp; July 2012</td>
<td>Pooling of research and write up of the project. Further adjustments to the literature review.</td>
</tr>
<tr>
<td>NB: However, the intention is to put together the pieces of the document on an ongoing basis and not wait until the completion of the research.</td>
<td></td>
</tr>
<tr>
<td>August 2012</td>
<td>Proof reading and final updates to the project with the assistance of the designated a supervisor. A second opinion may also be considered at a time.</td>
</tr>
<tr>
<td>September 2012</td>
<td>Submission of project</td>
</tr>
</tbody>
</table>
APPENDIX

TWO
Information Needs Assessment has been identified as an information gap requirement in St. Vincent and the Grenadines. As a third year graduate student undertaking my research project, I am conducting a study on the information needs of hypertensive persons.

To this end, I am soliciting your cooperation by completing this questionnaire and returning it to me as soon as possible. The results of this study would be kept confidential and used solely in my project.

As part of the ethical practices and procedures required by the University of Sheffield Ethics Research Committee and the Ethics Committee within the Ministry of Health and the Environment, no information would be divulged to third parties without your consent.

Thank you very much for your support and participation.

Colleen C. Thomas
MSc. Health Informatics
University of Sheffield
Instructions: Please tick the box with the correct answer.

Demographics
1. To what age group do you belong?
   [ ] 40 or less
   [ ] 41—50
   [ ] 51—60
   [ ] 61—70
   [ ] 71 and over

2. Please indicate your gender
   [ ] Male
   [ ] Female

3. What is your ethnic origin?
   [ ] Black
   [ ] White
   [ ] Indian
   [ ] Asian
   [ ] Other. Please specify…………………………..

4. Where in St. Vincent do you live?
   [ ] Windward
   [ ] Leeward
   [ ] Kingstown
   [ ] Grenadines

Health Status
5. How would you rate your health?
   [ ] Excellent
   [ ] Very Good
   [ ] Good
   [ ] Fair
   [ ] Poor

6. Do you suffer from heart disease?
   [ ] No
   [ ] Yes
   [ ] Don’t know

Health Practices
7. Do you engage in any physical exercise?
   [ ] No
   [ ] Yes
   If yes, how much time do you spend exercising per week?
   [ ] less than 15 mins
   [ ] 15—30 mins
8. Have you been diagnosed with hypertension?
   [ ] No
   [ ] Yes

   If yes, for how long?
   [ ] less than 6 months ago
   [ ] 6 months—1 year
   [ ] 1—5 years
   [ ] more than 5 years

9. Do you take medication for your hypertension?
   [ ] No
   [ ] Yes

   If yes, which medication(s) are you taking?
   Please state
   ................................................................................................................................................

**Information Knowledge**

10. Do you know if breakfast is important to your medical condition?
    [ ] No
    [ ] Yes

11. Do you know that high salt intake is bad for your health?
    [ ] No
    [ ] Yes

12. Which of the following food(s) contains high salt?
    [ ] eggs
    [ ] cheese
    [ ] bread
    [ ] sausages & canned foods

13. Do you know how often you should eat daily?
    [ ] No
    [ ] Yes

    If yes, how often should you eat?
    [ ] once
    [ ] twice
    [ ] thrice
    [ ] more than three times

14. Do you know when to check your blood pressure?
    [ ] No
    [ ] Yes
[  ] Don’t know

15. Can you tell when your blood pressure is high?
[  ] No
[  ] Yes
[  ] Don’t know

16. Are you aware of the reasons why your blood pressure gets high?
[  ] No
[  ] Yes
[  ] Don’t know

If yes, please state
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

17. What does your doctor or nurse ask you to do if your blood pressure is high? Please explain........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

18. When you visit your health clinic, who do you speak with?
[  ] nurse
[  ] doctor
[  ] other health professionals. Please indicate..............................................................

19. Do you ask questions about your blood pressure?
[  ] No
[  ] Yes
If yes, what things do you ask about?
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

Information Access

20. Do you think that sufficient information about your condition is provided from the Health Clinic?
[  ] No
[  ] Yes
[  ] Don’t know
If no, what additional information would you like?
21. Do you receive counseling sessions from a dietician / nutritionist?
[ ] No  
[ ] Yes

22. How helpful is the information you receive? Please explain

23. Do you have any problems trying to get the information you need?
[ ] No
[ ] Yes

24. What is your main source of information?
[ ] clinic
[ ] media (radio/television/newspapers)
[ ] internet
[ ] websites
[ ] Other. Please specify

Information Needs

25. Are there other things that you need to know about your blood pressure?
[ ] No
[ ] Yes

If yes, please explain

26. Has the information you received help to improve your condition?
[ ] No
[ ] Yes

If yes, explain how it has assisted you?
27. Would you be willing to share your experience of obtaining information with other persons who have hypertension?
[   ] No
[   ] Yes
If yes, what would you say to them?

........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

Thank you very much for participating in this important health research project.

GENERAL QUESTIONS

1. How clear was the questionnaire?
[   ] Not clear
[   ] Clear
[   ] Very clear

2. Is there anything that is not clear?
[   ] No
[   ] Yes
[   ] Other. Please explain..................................................................................................
........................................................................................................................................
........................................................................................................................................

3. Is there anything else that should be added?
[   ] No
[   ] Yes
[   ] Other. Please explain..................................................................................................
........................................................................................................................................
........................................................................................................................................

4. Were there any problems completing the form?..............................................................
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
APPENDIX

THREE
I confirm that I have read the current version of the University of Sheffield 'Ethics Policy Governing Research Involving Human Participants, Personal Data and Human Tissue', as shown on the University’s research ethics website at: http://www.shef.ac.uk/ris/other/gov-ethics/researchethics/index.html

A1. **Title of research project:** The Information Needs of hypertensive persons in St. Vincent and the Grenadines

A2. **Name of Student:** Colleen Thomas
    Department: Information School
    Email:cct_02@hotmail.com
    Tel.: 1784 4561514 / 1784 497 7050

    **Name of Supervisor:** Dr. Peter Bath

A3. **Proposed Project Duration:**
    Start date: September 2011
    End date: September 2012

A4. **Mark ‘X’ in one or more of the following boxes if your research:**

- involves no access to identifiable personal data and no direct contact with participants
- involves adults with mental incapacity or mental illness
- involves prisoners or others in custodial care (e.g. young offenders)
- involves children or young people aged under 18 years
- involves using samples of human biological material collected before for another purpose
- involves taking new samples of human biological material (e.g. blood, tissue) *
- involves testing a medicinal product *
- involves taking new samples of human biological material (e.g. blood, tissue) **
involves taking new samples of human biological material (e.g. blood, tissue) *

involves additional radiation above that required for clinical care *

involves investigating a medical device *

NONE OF THE ABOVE

A5. Briefly summarise:

i. The project's aims and objectives:
The main purpose of this project is to make an assessment as to whether or not the information needs of hypertensive persons are adequately met. From discussions held with the Health Planner and the Epidemiologist, it is realized that the emphasis is not placed on hypertensive persons since other diseases such as AIDS and cancer has demanded more attention.

ii. The project's methodology

Background

The Ministry of Health revealed that one of the most common lifestyle diseases in St Vincent and the Grenadines is hypertension or high blood pressure as it is commonly known. Each year, the Health Department strives to manage this issue by supplying information on the disease. However, the incidences of AIDS and cancer has captured the attention of the health care providers, hence not much emphasis is placed on hypertension.
Dr. Jennifer George, Epidemiologist, explained that there have not been sufficient human and financial resources available to effectively manage this disease, as a result. Hence, it was upon her recommendation that sparked the interest of the researcher to carry out an investigation on the topic chosen. The researcher was referred to Ms. Ferosa Roache, Senior Community Services Officer to engage in further discussions on the subject in an attempt to carry out a positivist methodology.

**Methodology**

This is a questionnaire study, which will be piloted with a small group before being used in the main study. In this study, the researcher will visit groups of persons with hypertension at the health clinics. Ethical approval for this will be granted by the Ethics Committee in St. Vincent and the Grenadines once ethics approval has been obtained from the University. The researcher will also ensure that the exercise is conducted in accordance with the University of Sheffield’s Ethics Policy.

The researcher will explain the purpose of the exercise which is to find out what are the information needs of persons with hypertension. Each person will be given the information sheet to read and keep. If the person agrees to participate in this study, then they will be given the questionnaire to complete and return to the researcher.

The persons with hypertension will be informed that the information supplied in the questionnaire will be held in strict confidence. The anonymised data will be analysed and presented in my Masters dissertation.

This exercise will be tested using the pilot study, and any amendments made before the main study.

Ms. Roache informed the researcher that there are approximately six (6) hypertensive groups consisting of about twenty persons each. She also agreed to introduce the researcher to these groups. The activities will then adopt the following steps:

- **Step 1:** The researcher will speak with the groups of persons with hypertension, explaining the purpose of the study as well as the ethical issues outlined in the university’s ethics policy. The information sheet will be handed to each participant.
- Step 2: If these persons agree to participate, a questionnaire will be given to them.

- Step 3: The form will be completed there and then and handed back to the researcher. The form includes a statement indicating that they are consenting to take part.

With the assistance of the Senior Community Services Officer, the researcher will be informed of the days for health care checks at the clinics hence visits will be scheduled accordingly, visiting one clinic at a time.

- Step 4: The analysis will be conducted thereafter and evaluated in the following categories: demographics, health status, nutrition, treatment and health practices and information needs.

Following the distribution of questionnaires at the health centres, if there are less than 100 questionnaires returned, then the district nurses and home helpers will be asked (by the researcher) to assist in identifying persons with the disease that are treated in their homes.

A6. What is the potential for physical and/or psychological harm / distress to participants?

Persons who consent to participate in this study will be given a questionnaire to complete basic information regarding their health status, nutrition, health practices and treatment and information needs. During this activity, there is minimal chance of psychological distress. However, the researcher will explain to participants that any discomfort experienced is not intended and they can withdraw from the activity if they so desire.

A7. Does your research raise any issues of personal safety for you or other researchers involved in the project? (especially if taking place outside working hours or off University premises)

There is no issue of personal safety since group meetings would be held at the clinics where other persons are present.
If yes, explain how these issues will be managed.

A8. How will the potential participants in the project be?

i. Identified?

Since the area of concentration pertains to persons with hypertension, Ms. Ferosa Roache, Senior Community Services Officer has identified the various groups throughout the country. Therefore at the group meetings, Ms. Roache will introduce the researcher. Everyone will be given an information sheet to read. Persons who are willing to take part in this exercise will be given the questionnaire.

ii. Approached?

The researcher will introduce herself to the target audience and describe the study and give a copy of the information sheet to each person. She will explain in detail the purpose for this activity and what she is expected to achieve.

iii. Recruited?

All persons at the group meetings who wish to take part will be given a questionnaire. These forms would be completed and returned to the researcher immediately. The researcher is seeking to recruit approximately 100 persons from the groups. If there are insufficient persons in the groups, then individual homes would be visited with health care workers. This process would be facilitated by the district nurses who would be instrumental in identifying persons with hypertension in their homes.
A9. Will informed consent be obtained from the participants?

YES ☑️  NO □

A9.1. How do you plan to obtain informed consent? (i.e. the proposed process?)

As previously mentioned, the Senior Nursing Officer would assist in spearheading this exercise. All potential participants would be told about the research project either at a meeting, or in their homes. They would be given the information sheet to read and people who wish to take part in the study would be given a questionnaire to complete. At the bottom of the questionnaire, the following statement would be used to gain their implicit consent to take part.

I HAVE READ THE INFORMATION SHEET. BY COMPLETING AND RETURNING THIS QUESTIONNAIRE, I AGREE TO TAKE PART IN THIS PROJECT.

A10. What measures will be put in place to ensure confidentiality of personal data, where appropriate?

The information sheet given to participants would explain that data collected would be used solely for research purposes and kept in strict confidence. A coded system would be designed to further protect the privacy and confidentiality of the respondents.
A11. Will financial / in kind payments (other than reasonable expenses and compensation for time) be offered to participants? (Indicate how much and on what basis this has been decided)

No financial assistance would be required for this activity.

A12. Will the research involve the production of recorded media such as audio and/or video recordings?

YES  NO  

A12.1. This question is only applicable if you are planning to produce recorded media:

How will you ensure that there is a clear agreement with participants as to how these recorded media may be stored, used and (if appropriate) destroyed?

Media recordings would not be produced in this project.
For Undergraduate & Postgraduate-Taught Students

**Student Declaration**

(The student completes Annex 1 if the Supervisor has classed the student’s proposed research project as ‘low risk’)

The Supervisor needs to receive an electronic copy of the form, and other documents where appropriate, plus a signed, dated paper copy of this Annex 1 ‘the Student Declaration’.

Full Research Project Title: How can the healthcare system meet the information needs of hypertensive persons in St. Vincent and the Grenadines?

In signing this Student Declaration I am confirming that:

- The research ethics application form for the above-named project is accurate to the best of my knowledge and belief.

- The above-named project will abide by the University’s ‘Good Research Practice Standards’: [http://www.shef.ac.uk/ris/other/gov-ethics/goodresearchpractice.html](http://www.shef.ac.uk/ris/other/gov-ethics/goodresearchpractice.html)

- The above-named project will abide by the University’s ‘Ethics Policy Governing Research Involving Human Participants, Personal Data and Human Tissue’: [http://www.shef.ac.uk/ris/other/gov-ethics/researchethics/index.html](http://www.shef.ac.uk/ris/other/gov-ethics/researchethics/index.html)

- Subject to the above-named project being ethically approved I undertake to adhere to any ethics conditions that may be set.

- I will inform my Supervisor of significant changes to the above-named project that have ethical consequences.

- I will inform my Supervisor if prospective participants make a complaint about the above-named project.
• I understand that personal data about me as a researcher on the research ethics application form will be held by those involved in the ethics review process (e.g. my Supervisor and the Ethics Administrator) and that this will be managed according to Data Protection Act principles.

• I understand that this project cannot be submitted for ethics approval in more than one department, and that if I wish to appeal against the decision made, this must be done through the original department.

Name of Supervisor: Dr. Peter Bath

Name of student: Colleen Thomas

Signature of student: C. Thomas

Date: 16/01/2012
For Undergraduate & Postgraduate-Taught Students

Supervisor Declaration

(The Supervisor completes Annex 2 if s/he has classed the student’s proposed research project as potentially ‘high risk’)

The Ethics Administrator needs to receive an electronic copy of the form, and other documents where appropriate, plus a signed, dated paper copy of this Annex 2 ‘the Supervisor Declaration’.

Full Research Project Title: How can the healthcare system meet the information needs of hypertensive persons in St. Vincent and the Grenadines?

In signing this Supervisor Declaration I am confirming that:

- The research ethics application form for the above-named project is accurate to the best of my knowledge and belief.

- The above-named project will abide by the University’s ‘Good Research Practice Standards’: [http://www.shef.ac.uk/ris/other/gov-ethics/goodresearchpractice.html](http://www.shef.ac.uk/ris/other/gov-ethics/goodresearchpractice.html)

- The above-named project will abide by the University’s ‘Ethics Policy for Research Involving Human Participants, Data and Tissue’: [http://www.shef.ac.uk/ris/other/gov-ethics/researchethics/index.html](http://www.shef.ac.uk/ris/other/gov-ethics/researchethics/index.html)

- Subject to the above-named project being ethically approved I will undertake to ensure that the student adheres to any ethics conditions that may be set.

- The student or the Supervisor will undertake to inform the Ethics Administrator of significant changes to the above-named project that have ethical consequences.

- The student or the Supervisor will undertake to inform the Ethics Administrator if prospective participants make a complaint about the above-named project.
- I understand that personal data about the student and/or myself on the research ethics application form will be held by those involved in the ethics review process (e.g. the Ethics Administrator and/or reviewers) and that this will be managed according to Data Protection Act principles.

- I understand that this project cannot be submitted for ethics approval in more than one department, and that if I and/or the student wish to appeal against the decision made, this must be done through the original department.

Name of Supervisor: Dr. Peter Bath

Name of student: Colleen Thomas

Signature of Supervisor: Peter Bath

Date: 23rd November, 2011
May 29, 2012

Ms. Colleen C. Thomas
MSC Health Information
University of Sheffield
ENGLAND

Dear Ms. Thomas,

**RE: APPLICATION TO CONDUCT NEEDS ASSESSMENT STUDY**

I wish to acknowledge receipt of your application to conduct the above captioned study.

Your application, including the details of the questionnaire was circulated to the members of our National Ethics Research Committee (NERC). Members give study to the documents.

We noted that the study consists essentially of a questionnaire to be administered to consenting adults. It is non-invasive.

I am please to inform you that the members of the NERC have given approval for you to conduct this study as outlined and presented in your application. You may commence same as soon as you are ready.

I would ask that, on the completion of your project, that you kindly present us a copy of your final report to be part of our archive’s collection.

I do wish you every success.

ST/Dr
APPENDIX

FOUR
Information Sheet

1. **Research Project Title:** The Information needs of People with Hypertension in St. Vincent and the Grenadines

2. **Invitation paragraph**

You are being invited to take part in a research project. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. The results would be used to develop an information management system for people with hypertension. Thank you for reading this.

3. **What is the project’s purpose?**

The purpose of this project is to assess the information needs of hypertensive individuals in St. Vincent and the Grenadines.

4. **Why have I been chosen?**

In this undertaking, I am looking for at least 100 persons with hypertension to take part in the study. The information you provide can assist us to better assess the needs of persons with hypertension. You have been chosen to participate because you have been diagnosed with hypertension.

5. **Do I have to take part?**

“It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and you can still withdraw at any time without it affecting any benefits that you are entitled to in any way. You do not have to give a reason.”
6. **What will happen to me if I take part?**

   If you are willing to take part in this activity, I will give you a questionnaire to complete. That is all you will be asked to do. The questionnaire will ask questions about your health and what information you may need.

7. **What do I have to do?**

   There is no lifestyle restriction to participating. All you need to do is complete the questionnaire and give it back to me.

8. **What are the possible disadvantages and risks of taking part?**

   The questionnaire will take a few minutes to complete. There is a slight chance that some questions may make you feel upset. If so, you do not have to complete the questionnaire. You may return it as it is.

9. **What are the possible benefits of taking part?**

   Whilst there are no immediate benefits for those people participating in the project, it is hoped that this work will provide support to the Ministry of Health providing better management and surveillance of the disease. The outcomes of this exercise can be used to make recommendations for an Information Management System.

10. **What happens if the research study stops earlier than expected?**

    If this is the case, it won’t make any difference to the person completing the questionnaire.

11. **What if something goes wrong?**

    If there is a problem with the research, please contact my local co-ordinator, Ms. Ferosa Roach at the Public Health Department, Telephone number 485 6133, or email ferosa.roache@hotmail.com. Alternatively, you may wish to contact Dr. Peter Bath, Supervisor & Programme Co-ordinator at the University of Sheffield. Telephone number
0044114 2222 636, or email at p.a.bath@sheffield.ac.uk. If your problem is not addressed to your satisfaction, you can contact the University’s Registrar & Secretary to deal with these matters.

12. **Will my taking part in this project be kept confidential?**

All information collected from the questionnaire will be kept strictly confidential. All data would be anonymised before they are analysed and no names will appear in the dissertation.

13. **What will happen to the results of the research project?**

This research will take place over a one year period, during which the anonymised data would be analysed and presented in my masters’ dissertation. The results will be used to guide the development of an Information Management System. However, for the purpose of this activity, the anonymised data would be analysed and presented in graphical and tabular formats.

14. **Who is organising and funding the research?**

The project would be funded by the researcher since it is part of my MSc. in Health Informatics at the University of Sheffield.

15. **Who has ethically reviewed the project?**

This project has been received ethical approval from the Information School Research Ethics Committee according to the University of Sheffield Research Ethics Policy and by the Ethics Committee in St. Vincent and the Grenadines.

16. **Contact for further information**

You may wish to contact Dr. Peter Bath, Programme Co-ordinator & Supervisor at the University of Sheffield, telephone number 00441142222636 and email p.a.bath@sheffield.ac.uk
This information sheet is for you to keep. Thank you for your time and kind assistance.