

An analysis of patient proactivity in selected areas of South Africa

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ABSTRACT

In this information driven society it is a given that the medical field are more explored to be able to live a sustainable healthy life well into the golden years.

Everyone is responsible for his or her own health, and as Abraham Lincoln said: “You cannot escape the responsibility of tomorrow by evading it today”. To be proactive in attitude and behaviour can be beneficial to avoid or suppress serious illnesses or diseases.

This study measures the proactive attitudes and behaviours of South Africans and then to compare it prior studies that was done in United States of America. Three major areas of change are explored namely: healthcare and delivery; construction of medical aid packages; information availability.

An extensive literature study about proactiveness and the major role players that influence and aid patients, to gather the necessary information to adopt a positive attitude towards health issues.

The results of the empirical data expressed that tendencies are similar regarding proactive attitudes and behaviour in selected areas of South Africa comparing to results in America.

Key terms: patient proactivity; positive attitudes regarding health; behaviour that display proactivity; influences on behaviour; satisfaction of healthcare givers; proactive actions.

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“I can do all things through Christ who strengthens me” Phil. 4:13, NKJV.

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LIST OF ABBREVIATIONS

ABC	American Botanical Council
AIDS	Acquired Immunodeficiency Syndrome
BMI	Body Mass Index
Bdlive	Business Day Live
CAGR	Compound Annual Growth Rate
CDC	Centre for Disease Control and Prevention
CPR	Cardiopulmonary Resuscitation
EHR	Electronic Health Record
ES	Effect Size
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus Infection
HPV	Human Papillomavirus
MBA	Master of Business Administration
MCC	Medicines Control Council
MD	Doctor of Medicine
NHC	National Health Care
NHI	National Health Insurance
OTC	Over the Counter
PnP	Pick n Pay
RSA	Republic of South Africa

SA South Africa

SAHPRA South African Health Products Regulatory Agency

SDSU San Diego State University

SEP Single Exit Price

USA United States of America

WHO World Health Organization

WHO SA World Health Organization: South Africa

XV Roman Fifteen

CHAPTER 1

NATURE OF STUDY

“Good health is worth more than the greatest wealth”

Marcus Tullius Cicero (1549),

1.1 INTRODUCTION

The quote by Cicero above has proven to be true over ages and is still relevant in our modern and knowledgeable society. People take more responsibility regarding their health. Tendencies to exercise more regularly and to be thoughtful about nutrition and consuming those that are more beneficial for health, seems to influence daily decisions. All in all, people take note of living a better lifestyle, to become more proactive and to take charge of their health issues. Worldwide awareness is starting to bloom in this aspect; this study will attempt to look at the average South African citizen, and their approach towards being proactive, and to avoid, or to manage serious illnesses in their lives for a longer, healthier existence on earth. Dr Craig Nossel, from Discovery Vitality, one of the largest medical aid funds positively influencing preventative medical care in South Africa, describes an overall wellness as being in a ‘good space’, referring to good habits and outlooks that are advantageous to a patient’s health (Nossel, 2014).

The South African population according to the 2012 census were an estimated 52 million people. For males, the probability of dying between the ages of 15 and 60, are 463 per 1000 of the population, whereby for females the probability is 350 per 1000. Total expenditure on health is 8.8 percent of the Gross Domestic Product (GDP). According to the World Health Organization of SA (WHO SA) the life expectancy for males is 56 years and for females it is 62 years (Barber, 2012)

Taking into account that such a large amount of money is spent on health in South Africa, and life expectancy is so short, a study into proactive health will be attempted. Investigating patient health, the history of being proactive regarding the health of patients and their attempts to stretch their healthier years will be researched. Another factor is also to determine their attitudes and satisfaction levels if they took

precautionary steps towards their health, and as a result they experience an improved healthier status.

In the past half-century, global changes took place to enhance productivity and efficiency in every thinkable area. The medical profession and service delivery is not excluded from this tendency. There have been noteworthy changes in the health care delivery system worldwide (Bangalore & Framingham, 2012).

Changes can be classified in mostly three identifiable areas namely:

- health care and delivery;
- construction of medical aid packages; and
- the abundance of information available on the Internet and on social networking sites for consumers to gather knowledge and then to apply for healthier lifestyles for themselves and for their families.

The intention of this study is to compare and to find similarities of this change phenomenon in South Africa, equal to the study done by McCullough (2014) in United States of America.

Medical aids and pharmaceutical producers as well as various other medical experts who keep consumers much more informed about medicine that are available on the market, can definitely benefit from this study. Continuous research in the medical field as well as the exploding of new available technology: mediums such as applications on tablets and android and smart cell phones, all contribute to this constant change that is only a click away, for patients to lead a proactive lifestyle (Bankmed, 2014a).

1.1.1 Patient Satisfaction

Satisfied patients talk favourably in casual conversations about advice or services, which they received, and recommend worthy providers to family and friends. Trustworthy providers can be assured of patient loyalty if medical attention is required in future. Dissatisfaction on the other hand causes negative attitudes and bad mouthing. This cognitive dissonance is caused by post procedure conflict. If patients feel that medical services and procedures were not what they expected it to

be, they simply won't return to that provider again, because they foster unfavourable attitudes towards that provider (Kotler & Armstrong, 2012:178, cited by Smith, 2014).

In the milieu of patient proactiveness and patient satisfactory levels, it is likely that a positive correlation exists between patient behaviour, attitudes and the relationship with contentment levels with the medical practitioners and medical service providers (Fullerton & McCullough, 2014)

1.1.2 Medical Aids and Partnerships

Medical aids act more informatively to ensure that their members positively contribute to enhance their health in general. The mentioned institutions strive to be more efficient as well as be financially viable. Partnerships developed in areas such as healthy living promoters (for example, Woolworths) and/or fitness centres (for example Discovery together with Virgin Active and Planet Fitness) and Insurance Institutions (for example, Old Mutual) whereby members can apply for a credit card or loyalty points scheme participation (Discovery Health, 2014).

Another area that changed somewhat over the last few decades is the design of member packages. Ranging from the more affordable / cheaper packages with the uttermost basic cover, up to a package for members who have the means to afford more medical and dental procedures, attempting to satisfy all members' needs (Discovery Health, 2014). Blue Cross and Blue Shield Association in America have the same commitment across their 37 independent companies to ensure satisfied patients (Blue Cross Blue Shield, 2014).

Informed and expert employees, employed by the medical aids, make sure that patients know what the recommended price of procedures are (as defined by the Department of Health), especially with services rendered by doctors who are contracted out, and charge more for visits due to the speciality of their medical fields (SA, 2012). These unnecessary costs can deplete the medical savings at the medical aid of a member very quickly, and leave them with no cover for other emergencies that might still occur in the same year. All of these services contribute to the advantage of both parties (Discovery Health, 2014). Aethna Health Fund in the United States of America gives advice on better management of health savings accounts (HSA):

- Make use of network of providers;
- Compare the charges of different service providers before making use of one;
- Keep track of tax deductible costs and fund balances;
- Pay only for qualified health care expenses;
- Use savings to pay for current health care or let the funds grow for later utilization (Aetnahealth, 2014).

Medical aids also work together with the partners to encourage members to exercise more for their own good health, but then, for that effort, they receive a cheaper premium or earning reward points, which they can use whenever they want. Strict control measures are in place to make sure that members, who commit themselves to these gyms, stick to their new lifestyles. Employers are also drawn into the partnership circle to ensure healthier lifestyles of their employees. Employers have the benefit of healthier employees and hopefully less absenteeism, whereas medical aids gain in the long run because healthier members have minimum doctor's visits and hopefully less payments from the contribution funds (CDC, 2013 cited by Discovery Health, 2014).

1.1.3 State Hospitals and Community Clinics

Currently the state hospitals and community clinics in South Africa provide medical advice, services, and medicine to individuals in need of health care. The National Health Insurance (NHI) is still in the planning phase, to bring equal medical services to everyone, regardless if they have a medical aid plan or not, driven by the Government resembling what United States of America has in their National Health Care (NHC) plan. This is not seen as a threat to the existence of medical aids in future. No law regarding this new proposed medical structure has passed as yet in South Africa (SA, 2012).

In the state hospitals, the system of first come first serve prevails. First patients have to sit in line for a file to be opened, and then again to see the doctor. If the doctor then sends them for x-rays, they have to go to another department and wait in another line. The same rules apply when collecting medicines if prescribed to a patient. A visit by a severe sick person can take a whole day, before being admitted (Moeti, 2012). Patients mostly complain about the long waiting times and

inadequate supplies available in these Institutions. Their satisfaction levels regarding the services they received are quite low (Makgai, 2012). To support this statement, in a study of the 394 hospitals that was audited by the Department of Health for various aspects such as: cleanliness; infection; drug stocks; staff attitude; patient safety and waiting times; only one met the accepted standards (Mapumulo, 2014; SA, 2012).

1.2 PROBLEM STATEMENT

Several of the illnesses that patients experience can be prevented if they focus on the cause and take action before it manifest in their bodies. Patients can benefit from being proactive into living healthier for longer and maintain a better quality of life. Between 2011 and 2012, two-thirds of adults were found to be overweight or obese and on average 24 pounds heavier than what they were in 1960 (Cook, 2014). Lancet released studies that over half of South Africa's adults were overweight or obese - 42 percent of women and 13 percent of men (Health24, 2014). Obesity is one aspect that can have various influences on a person's health situation. A paradigm shift of patients is essential to mend their health by taking actions to promote and achieve the goal of improved health. Self-education regarding risk factors as well as family history can be helpful to determine proactive measures that need to be taken in advance to prevent diseases in lives of people (News Medical, 2014).

In this regard, proactiveness can focus on a few different aspects such as:

- Maintain a healthy physical fitness to increase blood flow and oxygen to the brain, heart as well as other parts of the body;
- Preventative medicine for high cholesterol, blood sugar, or blood pressure;
- Getting a flu injection to prevent severe flu in the winter;
- To be informed about a sickness or disease through research before going to the doctor; and
- Intake of enough vitamins and minerals that the body require to function if nutrition is not adequate (Ranklin, 2013).

Patients with vitamin deficiency can sense: weakness, tiredness, or light-headedness; rapid heartbeat and breathing; sore tongue; easy bruising or bleeding, including bleeding gums; stomach upset and weight loss; diarrhoea or constipation (Last, 2013).

Taking care of the physique when younger can help a person to live healthier for longer. Diseases like Alzheimer's (Dementia) or Parkinson's disease can in some cases be postponed if managed properly and if care is taken accordingly. The brain can be protected with some of the same strategies used to protect a heart – don't smoke; take steps to control your blood pressure, cholesterol and blood sugar and to keep them within recommended limits; and maintain a healthy weight (Alzheimer's Association, 2014).

Medical doctors confirm that being proactive in the consultation room has less medical complications and adverse events than when being reactive (except it is more time consuming). Discussing the different options with patients, guiding them, but then leaving the decision for them to decide what option suits them better. Patients are all very unique, taking time and effort to explain preventative evidence-based medicine is the focus point. The best results and satisfaction concerning their treatment is the ultimate aim (Young, 2011).

Various vaccines are available for various serious illnesses to improve patients' immunity towards a particular disease. A vaccine normally contains an inactivated or weakened disease-causing microorganism that is introduced to a body to prevent disease to manifest and cause illness. After vaccination a microorganism is recognised by the anti-bodies and the body uses its own immune system to combat and protect the body from that disease (Harvard Health Publications, 2000-2014). The Centre for Disease Control and Prevention (CDC) also recommends taking the influenza vaccine every year to protect patients from infection. In the United States of America the estimates of flu-associated deaths, range from a low of about 3.000 in 1997 to a high of approximately 49.000 people in 2007. Nearly 90 percent of deaths occur in people 65 years and older. The seasonal flu vaccine protects against the influenza viruses that research indicates will be most common during the upcoming season (Barber, 2014). *“The body's immune response from vaccination declines over time, so an annual vaccine is needed for optimal protection. Flu viruses are*

constantly changing; the formulation of the flu vaccine is reviewed each year and sometimes updated to keep up with changing flu viruses. Traditional flu vaccines (called trivalent vaccines) are made to protect against three flu viruses; an influenza A (H1N1) virus, an influenza A (H3N2) virus, and an influenza B virus. In addition, there is flu vaccines made to protect against four flu viruses (called “quadrivalent” vaccines). These vaccines protect against the same viruses as the trivalent vaccine and an additional B virus” (CDC, 2014).

There is controversy about nutrition, but a widely accepted healthy nutrition is displayed in the Mediterranean diet with fish, shellfish, whole grains, fruit, vegetables, nuts, healthy fats like olive oil, and very little red meat is recommendable. Moderate daily intake of all the mentioned food categories ensures natural health. This is also a relatively cheap diet for patients to follow (Mayo Clinic, 2013). Vegetarians replace the protein or amino acids that meat and fish provide to the body with nuts, dairy, eggs, hummus, hempseed, and buckwheat products (English, 2014).

D’Adamo (2014) emphasizes the importance of blood type, and categorise the best nutriment to consume for better body function of each of the blood types. According to him our blood type is the roadmap to our inner chemistry. Each blood type process food, handles stress and fight disease differently. Patients need to consume enough of all the food groups daily: water, vegetables, fruit and nuts, dairy and meat / fish / beans, to stay healthy.

Considering the patient’s family history, and proactive actions to help prevent early occurrence and controlling of these known diseases, nutrition play a vital role in lifestyle habits (Young, 2011). This global take-control-of-my-health attitude and that of regular wellness and medical action is thus a topic with many different facets and worthy of scientific investigation in South African environment.

The research hypotheses and objectives of this study are accordingly addressed.

1.3 RESEARCH HYPOTHESES

A hypothesis can be explained as an educated guess or proposition that attempts to explain a set of facts or natural phenomenon. It is used mostly in the field of science, where the scientific method is used to test theories. A hypothesis is a tentative solution / explanation of a research problem that the researcher investigates (Welman et al., 2011:12).

The following hypotheses are related to this study:

H₀₁: There **is no** strong inclination towards patient proactivity, behaviours and attitudes and the satisfaction with general medical care, of South Africans.

H_{A1}: There **is a** strong inclination towards patients' proactivity, behaviours and attitudes and the satisfaction with general medical health care, of South Africans.

H₀₂: There **is no** difference between the inclination towards patient proactivity between younger and older patients in South Africa.

H_{A2}: There **is** a significant difference between the inclination towards patient proactivity between younger and older patients in South Africa.

H₀₃: There **is no** difference between the inclination towards patient proactivity between male and female patients in South Africa.

H_{A3}: There **is** a significant difference between the inclination towards patient proactivity between male and female patients in South Africa.

H₀₄: There **is no** difference between the inclinations towards patient proactivity between the levels of education of patients in South Africa.

H_{A4}: There **is** a significant difference between the inclinations towards patient proactivity between the levels of education of patients in South Africa.

H₀₅: There **is no** difference between the inclination towards patient proactivity between SA patients and USA patients.

H_{A5}: There **is** a significant difference between the inclination towards patient proactivity between SA patients and USA patients.

1.4 RESEARCH OBJECTIVES

1.4.1 Primary Objective

The primary objective is to investigate South African patient proactivity and the behaviour and attitudes regarding the measures they currently take, to be prepared in advance to prevent common as well as life-threatening illnesses.

1.4.2 Specific Objectives

Specific objectives are to:

Objective 1: Compile a demographic profile of the respondents

Objective 2: Measure the proactiveness of patients in South Africa;

Objective 3: Measure the sample adequacy;

Objective 4: Determine the reliability of the data gathered from the questionnaire;

Objective 5: Determine if the variables education, gender, and age play a role in South African patient proactivity;

Objective 6: Compare the South African patient proactivity with that of their USA counterparts.

1.5 RESEARCH DESIGN

1.5.1 Research Approach

The purpose of this research is to find out how patient proactivity leads to more satisfaction with the outcome of their health treatments and care from their practitioner of choice. More specifically, a cross-sectional design is used because in the random selection of the sample in the population, race, gender, various age groups, and demography are well represented. A cross-sectional study takes place at a single point in time meaning that in a slice or cross-section of the subject that is being observed, or measured, to focus on Maree (2007:11). This research makes use of an existing and tested summated Likert scaled questionnaire (Fullerton &

McCullough, 2014). The questionnaire also measures demographic variables. The data were also subjected to reliability analysis using the coefficient Cronbach Alpha (Cronbach, 1951: 297).

1.5.2 Research Method

An adopted and tested questionnaire that included questions and statements allowed the research objectives to be obtained and was used to determine patients' point of view about their proactivity actions. The questionnaire originates from research done in 1991 on Patient proactivity, satisfaction and the sense that they have control over their health decisions linked to their feeling of contentment of the service provided by the health care provider (Fullerton & Davidson, 1991), and improved in follow-up research by Fullerton and McCullough (2014) on Patient Proactivity: Behaviours, Attitudes, and its Relationship with satisfaction with the American Health Care Delivery System.

A general medical practitioner was used to examine the questionnaire for construct validity, and in the process the comments led to modification and the adding a few questions. Each of the items was measured using a balanced 6-point Likert-type rating scale that was anchored by strongly agree and strongly disagree options. Demographic data concluded this instrument (Fullerton & McCullough, 2014).

The sampling frame of this study consists of managers studying towards:

- Part-time MBA (Master in Business Administration);
- Managers studying towards the Middle Management Programme; and
- Managers studying towards the Advanced Management Programme at the North-West University in South Africa; as well as
- A random sample of willing participants who volunteered to complete the questionnaire.

These people consist of any race, gender, or age, as long as they are interested in being proactive about their health. The sample size of 180 participants in various areas in South Africa completed the questionnaire. The participants' views on their current health status, general health approach, medical knowledge, preventative

actions and their loyalty in the following prescriptions given to them by the doctor, were acquired.

1.5.3 Statistical Analysis

The following statistical techniques are employed:

- Inferential statistics such as the Mean and Standard Deviation (which determine the spread of values around the mean) (Welman *et al.*, 2011:228);
- Cronbach's coefficient alpha measure (1951) is a measure of internal consistency of a measure or test. It refers to the degree to which all the items in a measure or test measure the same attribute (Welman *et al.*, 2011:147); both the variance on the total measurement scores and the variances of the individual items are required. Accordingly the reliability of the data is tested.
- The Effect Size is a quantitative measure of strength of a phenomenon measuring data in two different ways: the standard difference between two means or as the correlation between the independent variable classification and the individual scores of the dependent variable. It is an easy way to purely quantifying the difference between two groups.

Equation of the Effect Size (ES):
$$d = \frac{\bar{X}_R - \bar{X}_U}{S_R}$$

Where: d = Effect Size, \bar{X}_R = RSA Mean, \bar{X}_U = USA Mean, S_R = RSA Questionnaire Standard Deviation

The sizes were defined by Cohen (1988) as small $d=0.2$, medium as $d=0.5$ and large as $d=0.8$.

1.6 ETHICAL CONSIDERATIONS

Ethical issues as per Walliman (2011) come down to honesty and personal integrity as well as treating the respondents with dignity, getting proper informed consent to use the data for research purposes. To keep information confidential, protect the anonymity of the people if they feel it is an important factor to them. The questionnaire that was completed is anonymous and purely for academic purposes.

The research project was also registered with and approved by the NWU Faculty Ethics Committee.

In addition, this study also adheres to the following additional ethical guidelines:

- Acknowledge sources to protect their intellectual ownership;
- Aim to use a language that is neutral, avoid being biased, prejudice, intolerant or discriminate against anything or anybody; and
- At all times act professional and be worthy of the name of being a researcher.

1.7 LAYOUT OF THE STUDY

Chapter 1 – Nature of the study

Chapter one explains the nature of the study regarding patient proactivity toward their own health. Behaviours, attitudes and the satisfaction levels with the services of medical / healthcare providers which patients receive, are analysed. Outlines of the research objectives, hypotheses, design, and sample size for this research exercise are discussed. Previous studies on this topic is revealed and described.

Chapter 2 – Literature Investigation

The valuable contributions of previous researchers is analysed and reviewed in this literature study. Many great persons investigated patients' satisfaction levels regarding the healthcare they received, and the stages a consumer go through when they first recognise the need to take action regarding their own health. The perspective of different medical aids has been examined and a few pharmacies were questioned about their selling of over-the-counter and proactive medicine direct to the public. A peak view into the vitamins and herbal medicine markets and their proactive value are also studied.

Chapter 3 – Empirical Study

The method of how the sampling are distributed and combined in South Africa is mentioned. A further discussion about the questionnaire and its measurement and the data collection methods is reviewed. Results of the research are analysed and discussed.

Chapter 4 - Conclusions and Recommendations

Patient proactivity regarding their healthcare does have an impact on their behaviour and attitudes as well as their satisfaction levels with the general healthcare providers and the system as a whole.

1.8 EXPECTED CONTRIBUTION OF THE STUDY

- For individuals who strive to be well-versed and on top of things all the time this study will give insight in the benefits of being proactive with their health situations;
- Proactivity can probably ensure greater satisfaction for patients and less disruption or severe medical expenses in their respective lives;
- Pharmaceutical companies can plan marketing campaigns and information seminars and make sure that the right audience are buttonholed;
- The academic and medical literature authors can contribute to make research and developments known to a broader spectrum of interested people;
- Comparisons with prior studies on this topic can be usefully analysed;
- Knowledge in this field can be of interest when approaching patients in future;
- Predictions of the trends and growth in patient proactivity sector;
- Researchers of new herbal and non-chemical healing products can determine whether new products are worthwhile to develop and which direction their research must focus on.

There is thus a wide spectrum of people who might find this study useful.

1.9 SUMMARY

This is interesting research of how people behave when they feel that the precautions they had taken considering their health, really paid off (seeing that their knowledge and investigation regarding health situations are handled in the manner that would benefit and comfort individuals the most). Knowing about procedures and getting the results that were projected, make people more at ease and they are more pleased with the results thereof. Prior research enables patients to have the knowledge about conditions and illnesses and to be able to join in the decision-

making process regarding the treatment, because they themselves know their body better than anybody else, and together with the practitioners' input, the satisfaction levels regarding the results received, are high.

The next chapter contains the literature study observing patient proactivity and supporting institutes that heighten and support patients and to influence healthier lifestyles.

CHAPTER 2

LITERATURE INVESTIGATION

2.1 INTRODUCTION

A proactive patient does independent research, and makes use of reliable resources to get the relative information regarding certain health issues.

Proactive behaviour stretch over a few categories, being informed about health, taking precautionary vaccines, taking just enough vitamins or herbal supplements, living and eating healthy and engaging in enough exercise. These categories are all valuable contributors regarding one's health (Stephens, 2013; Barber, 2014).

This chapter is a literature study on proactive behaviour focusing on all the different institutes that contribute to a patient's well-being regarding living a quality and healthy life. Each of the influential components is discussed and a summary at the end, conclude the findings.

2.2 PATIENT PROACTIVITY

Proactive behaviour involves acting in advance of a future situation, rather than just reacting to it. This means taking control and making things happen rather than just adjusting to a situation or waiting for something to happen. Behaviour is seen as the way a person responds to something. An attitude is a set way of thinking or feeling about something, typically one that is reflected in a person's behaviour (New Oxford American Dictionary, 2014). Therefore the behaviours and attitudes of people could probably be related to the satisfaction they experience regarding services, products, and healthcare. Satisfaction will then contribute to acceptance of that something (Fullerton & McCullough, 2014).

Patient proactivity can be viewed as exploring plenty of information available regarding health care systems on various platforms. Patients who make use of social networking to find out more about their health care is also on the increase, especially about pharmaceutical products that also make use of these networking to do advertising (Keckley, 2011).

Keckley (2011) also discloses that: *“In most countries, consumers are considered “patients” who lack the knowledge, skills, and resources to appropriately manage their health and reduce their financial exposure to health care cost. “ Patients” tend to be disengaged and dependent on their traditional health care system; in contrast, “consumers” are actively involved in decisions about their care and associated cost – they take initiative in improving their health, seek and use information, consider different care options, and make choices that meet their preferences”.*

Patients, in this study, are assumed to be informed and knowledgeable due to a lot of self-study regarding the medical conditions they are focusing on.

Patient-decision making focuses on analysing purchase motives, needs, buying habits, and attitudes toward brands, cultural and social influences and perception of health care providers (Hoyer & MacInnes, 2001:47). The question whether the satisfactory levels are linked to behaviours and attitudes, is still one that needs to be answered.

2.2.1 Proactivity

Being up-to-date about your disease before going to a doctor can help you to ask the right questions. Knowing about options for treatment of a health condition and brings involvement in the decisionmaking process, and contribute to the better care one will get. Patients must see medicine as a service industry and should evaluate products in that regard. Proactive patients - the ones who have the best health outcomes don't hesitate to ask their doctors questions, get second opinions, and switch health care providers if the fit isn't right. Asking the doctor for a differential diagnosis and to expand the scope of the diagnosis can leapfrog to optimal health sooner (Ranklin, 2013; Young, 2011).

2.2.2 Factors influencing patient proactivity

The same behaviour that inspires consumers to act in certain ways when deciding to purchase a product or service as explained by Kotler and Armstrong (2012), can be pulled through to actions of the proactive patient.

2.2.2.1 Cultural factors

Cultural factors have the deepest and strongest influence on patient behaviour. A culture is a learned behaviour through socializing with family to form a set of values, perceptions, and preferences acceptable for everyone in that culture. Subcultures refer to smaller groups within the larger community, with a more specific identification for instance: nationality, race, geographical areas, age, and religious groups (Kotler & Armstrong, 2012:159; Perreau, 2014). Social class is described as relative homogeneous and enduring divisions in a society, which are hierarchically ordered and whose members share similar values, interests, and behaviour. The new generation or youth culture are very active on the social media websites, mainly to voice their own opinions about personal feelings and topics that are bothering them. Discontent or contentment about anything gets entered for family and friends to see and to comment on (Riley, 2012).

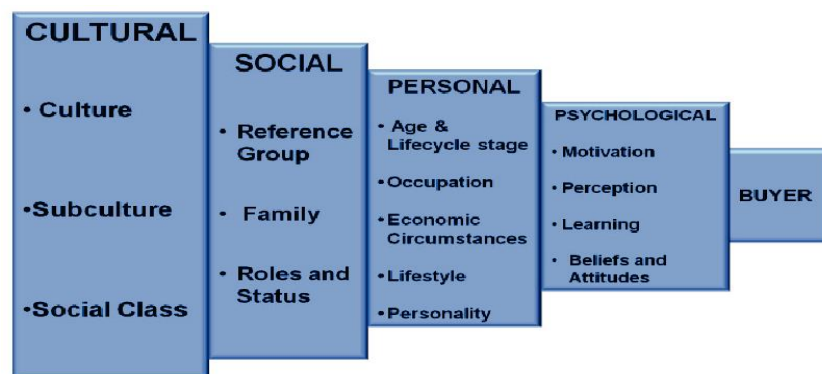
2.2.2.2 Social factors

Social factors include groups that have a direct or indirect influence on a person's attitude or behaviour. Groups can influence new behaviours or lifestyles, or the need to fit in as well as the pressure from group members to conform to group preferences, and all that determine the final choice of the individual to engage in healthy living devotions and perhaps to join a gym for exercise and the socialising with people with the same aspirations as themselves. Family such as parents (family of orientation), spouse, or children (family of procreation) have direct and strong influence on behaviour (Perner, 2008 cited by Kotler & Armstrong, 2012:163).

2.2.2.3 Personal factors

Personal factors consist of categories such as age and lifecycle stage, occupation, economic circumstances, lifestyle, personality, and membership at an institution / social party also have leverage when patients engage in proactive activities, but as can be seen in figure 1.1 below, even though it is not the strongest drive, it does influence their attempts. The urge to be seen in a certain way, or comparing one to an explicit reference group contribute to form general or specific values, attributes or a specific guide for behaviour (Lawrence, 2012)

Figure 1: Detailed model of factors influencing patient behaviour



Source: Adapted from Kotler and Armstrong (2012:159).

2.2.2.4 Psychological factors

Psychological factors are fourth in line but still have a strong place in the mind of a person making the decision to make use of the services of medical practitioners. Motivation and malaises can be seen as the drive behind the need to do something by themselves before gaining the opinion of a doctor. Needs can be classified in various categories of urgency: strong needs, i.e. needs to be satisfied immediately (to eat), the intensity fades slightly compared with needs of safety (protection), social (sense of belonging / love), esteem (recognition / status) to the final need of self-actualisation (self-development and realisation) occurs after all the other needs have been attended to. A motivated person is ready to take action; influenced by the perception they have regarding the position they tend to be in, to satisfy a specific need. Most human behaviour is learned, through experience, responses, stimuli, drives, and reinforcement of situations throughout their life span. Beliefs and attitudes also have an effect on a person's proactive behaviour. A belief is a descriptive thought that a person holds about something. Whereas, an attitude can be described as a favourable or unfavourable emotion or feeling towards something or someone, that determine the action towards it or them (Kotler & Armstrong, 2012:171; Perreau, 2014).

2.3 PATIENT BUYING BEHAVIOUR STAGES

After the previous discussion of factors that influence consumer behaviour before a person commit to a product, consumers are compared to patients who are

knowledgeable (Keckley, 2011). The process that take place in the brain when a person decide there is a need that they want to satisfy, it is also necessary to look at the stages the patient experience when making a decision (Kotler & Armstong, 2012:176 cited by Grimsley, 2014).

2.3.1 Problem or need recognition

In this stage the patient becomes aware of the current state of need they are in, and that they want to do something to attend to that need. To make the problem recognition more practical towards the study of patient proactivity, it can be explained as people who understand that their lifestyle needs to be altered, to be able to live a healthier life and to avoid future health risks for as long as possible.

2.3.2 Information search

The patient evaluates various options in their search for value to satisfy their need. (Middlebrook, 2013; Anon., 2014). This can involve an **internal search** in the form of:

- Scanning one's memory to recall previous experiences with products or brands;
- When in the past an experience or knowledge is remembered to be insufficient;
- Often sufficient or frequently used services, sometimes only out of habit;
- The risk of making a wrong purchase decision is high; and
- The cost of gathering information is low.

An **external search** can involve primary stimuli such as:

- Personal sources like the opinions of friends and family members;
- Public sources for instance various product-rating organisations such as consumer reports, medical aid information distributed to all their members as well as research on the internet to become more informed on certain themes and fields; and
- Marketing efforts such as advertising on television or other media sources, especially regarding the health industry (Lawrence, 2012; Middlebrook, 2013).

2.3.3 Evaluation of alternatives

The gathered information in stage two is now used to compare alternative actions. The individual then arrives at thoughts toward different health care services through an evaluation process. This assessing process depends on the individual / patient and the specific situation they are in. Sometimes patients take time and make careful calculated and logical thinking, mainly if the valuation conclusion touches their pockets and based on previous experience they had it the service provider / product range. In other epochs patients depends on intuition or impulse to come to decisions about the existing health services (Perner, 2008 cited by Kotler & Armstrong, 2012:177).

2.3.4 Action decision

There are two factors that can come between the action intention and the actual deed to make an appointment with the service provider. Firstly, the opinion and attitudes of other people regarding the new lifestyle might influence a patient's decision. Secondly, the unexpected situational factors such as a drastic change in their health, an alternative treatment or that became available or a turn in the economic environment. That is why preferences and even good intentions do not always result in actual change in behaviour (Kotler & Armstrong, 2012:178; Middlebrook, 2013).

2.3.5 Subsequent behaviour

In this last stage the patient tries to find the value in the consumption of proactive substances needed for the new lifestyle commitment. The San Diego State University USA (Anon., 2014) mentioned the following points regarding behaviour:

- After switching to the perceived healthier lifestyle, the consumer compares it with outcomes / expectations and is either satisfied or dissatisfied;
- Satisfaction or dissatisfaction affects the patients value perceptions, communications and behaviour;
- Many providers work to produce positive post-communications amongst patients to strengthen the relationship building between them;

- Cognitive dissonance can be described as the feelings of successive psychological tension or anxiety a patient often experience; and
- Some service providers often use advertisements or follow-up calls in this post-change stage, by which they try to convince the individuals that they made the right decision or to determine the patients' satisfaction levels.

2.4 SATISFACTION

Quality of service together with the price patients have to pay for it, play a huge role in the satisfaction they feel after the health care they have received. Porter and Teisberg (2006:XV) explained that there could be too much care, or too little care as well as the wrong care, and a total misalignment between the nature of competition and value for the patient. They make the following statement: "*value in health care is determined in addressing the patients' particular medical condition over the full cycle of care, from monitoring and prevention to treatment to ongoing disease management*" which is how most patients feel about health care (Porter & Teisberg, 2006:5).

2.5 BEHAVIOUR

Behaviour is seen as the manner or way a person reacts to things or objects. Behaviour is influenced by a few factors such as religion, faith, culture, emotions, age, values, ethics, persuasion, coercion, and genetics throughout a person's life span. People can react positively or negatively to certain things due to prior personal experience or what they have heard or seen in the current situation that relates to past knowledge.

2.6 MEDICAL AID REVIEW

A medical aid is a non-profit company registered under Section 21 of the Company Act (2008). Premiums are paid over to an administrator who handles all financial transactions. Medical aids have to keep 25 percent of a monthly premium income as a reserve for members' protection as prescribed by law (Phama Dynamics, 2014). A few of South Africa's medical aid schemes were analysed to determine their value

and encouragement given to members to be proactive and to designate to healthier lifestyles.

2.6.1 Discovery Health

Discovery Health started out 22 years ago in 1992 as a medical aid but evolved in a lifestyle entity. Their promise was to keep people healthy and to enhance a longer healthier life. Currently their market share is 40% of the total medical aid market. They can be seen as an administrator company with various smaller schemes under their name. They now have various sections where members can venture in and earn points or be rewarded for, to lock them into loyalty to the Discovery Health brand. These fields are: health, life, insurance, investment, vitality, and credit cards. The resulted in Discovery health to focus their products on some of the most fundamental areas of people's lives, namely their health and wellness and the financial security of their families. Innovation in all these fields enhanced their growth to almost six million clients over four continents (Discovery Health, 2014).

The vitality section is where members are rewarded for proactive behaviour. They get cash back paid into their bank accounts as reward for buying healthy food and active gear at certain retail stores, as well as when they join one of the two most prominent gymnasiums in South Africa. Their motto is: "*Prevention is better than cure*". When registering as a MedSaver, and purchase medicine over the counter also stretch the benefits of clients. In addition, regular health checks of all the important and potential risky chronic and lifestyle diseases by testing your blood pressure, glucose, cholesterol and weight are rewarded and don't have any impact on day-to-day benefits. Cash back benefits are also promised to clients that participate and complete a Vitality Health Check at one of the nationwide pharmacies in the Vitality Wellness Network (Discovery Health, 2014).

All these motivations are to keep people active and health conscious.

2.6.2 Medihelp Medical Scheme

Medihelp is viewed as one of the largest medical schemes in South Africa (220 000 members). They operate and fulfil in the subscriptions of the Medical Schemes Act, No 131 of 1998. As with all the other medical aids they also participate in

preventative care benefits;. mostly for pregnancy and baby benefits, immunisations (flu, tetanus and human papillomavirus (HPV) for cervical cancer vaccines). Other examples of preventative health tests are mammograms, pap smears, cholesterol-, blood sugar-, bone density- and prostate tests. Only the very basic proactive benefits are included in this scheme, similar to most of the top fifteen medical aids in South Africa (Medihelp, 2014).

As with most of the medical aid schemes, an informative magazine (Élan) is issued bi-annually about health and wellness, featuring:

- Easy-to-read articles focusing on food and nutrition, fitness and emotional well-being;
- Hints and tips on healthy living;
- News and views on the latest developments in healthcare; and
- Information about Medihelp's products and services.

Multivitamin and multi-mineral supplements, exercise guidance and obesity (with the exception of the treatment of obesity which is motivated by a medical specialist as life-threatening) are generally excluded of Medihelp's benefit scheme. They make up for this shortfall by educating members with articles in the magazine that is sent out to all members. All the issues of the magazine is available on-line for members to gain access to (Medihelp, 2014).

Since 15 November 2013, no new vitamin supplements can be introduced to the South African market unless it is registered at the Medical Control Council (MCC), (Carstens, 2014). In this regard the South African Minister of Health, Dr Aaron Motsoaledi, published new regulations in the Government Gazette, that all current supplements on the market have to be registered by December 2019. Supplements include vitamins, minerals, anti-oxidants and all alternative and complementary medicines. These regulations are widely welcomed by pharmaceutical departments of most universities in South Africa (Élan, 2014:25).

2.6.3 Bankmed

Bankmed was established in 1914 for members only in the Banking Industry. Bankmed have approximately 100.000 principal members within South Africa's

Financial Institutions. This translates to providing close to 200.000 South Africans with access to quality healthcare services.

Bankmed's preventative care includes prevention of disease through screenings, diet, exercise, and lifestyle factors. Another facet of preventative care is early detection of disease, which dramatically improves the success rate of treatment. Bankmed is providing members with access to a comprehensive range of health tests, screenings and vaccinations that focus on disease prevention and management, with direct cost implications to the benefit of the individual (Bankmed, 2014a).

With the Electronic Health Record (EHR) a patient's personal clinical history, based on analysing their previous medical claims, can help the proactive patient before and during consultation with a doctor. These records are available through easy-to-use digital interfaces such as a PC, tablet, or smartphone. Keeping track of important health information can assist doctors with prescribing the correct disease prevention medicine. Healthcare providers can thus improve their ability to make more informed treatment decisions, quickly and safely (Bankmed, 2014b).

2.7 INVESTIGATING SUPERMARKET PHARMACIES

Speciality pharmacies in the United States of America help to close communication gaps, providing patients with clinically relevant information to help control diseases knowledgeable, and adding value to proactive engagement in the Speciality Care Model (Smith, 2014). Pharmacies also play a vital role in health and providing of preventative advice and medication to a large number of the citizens of South Africa. They are authorised to replace the role that doctors and community clinics play in assisting people with health issues under certain conditions such as:

- Primary Healthcare Services;
- Wellness Consultations;
- Adult Immunisations and Injections;
- Mother and Baby Services; and
- Family planning.

Clicks, Pick n Pay and Shoprite Checkers pharmacies also employ qualified pharmacists who can supply prescription medicine from these in-store pharmacies as well as over-the-counter medicine for minor illnesses. Some of these retail stores also have value-added services such as clinic facilities to assist patients with preventative screenings, testing their blood sugar and cholesterol and supply of flu vaccines. Pharmacies help to deliver care to patients. They are also part of the larger health care team who assist patients with experience and information on proactive health issues (Smith, 2014).

2.7.1 Clicks Pharmacies and Clinics

In conjunction with various medical aid schemes, their services include proactive and preventative value added programs. These include the following:

- **Primary Healthcare Services**

Primary Healthcare services include: Peak flow measurement; Treatment of Burns & Wounds; Specimen Collection for Laboratory Tests; Weight Loss Management; Ear Syringing/Irrigation; Minor Ailment Consultation; Urine Tests; Uric Acid Testing.

- **Wellness Consultations**

Wellness consultations incorporate: Blood Pressure; Blood Glucose; Cholesterol & Lipogram; Human Immunodeficiency Virus (HIV) Counselling & Testing; Haemoglobin Test (Anaemia); Comprehensive Health Risk Assessment (Blood Pressure, Blood Glucose, Cholesterol, Body Mass Index (BMI), Lifestyle Report, Meal & Exercise plan);and Basic Health Screenings (Blood Pressure, BMI, Lifestyle Report).

- **Adult Immunisations and Injections**

Adult Vaccinations (Flu, Measles, Tetanus); Injections (Immune Boosters & Pain Medication) are mainly supplied.

- **Mother and Baby Services**

For mother and babies, services such as: Baby Immunisations; Baby

Wellness Consultations (Breastfeeding, Nutrition, Teething advice); Pregnancy and Mother wellness; Pap Smears; Pregnancy tests; Breast Examination; Contraceptive injections and tablets administered as per a Doctor's prescription, are supplied.

- **Family Planning**

Family planning include: Consultations and injections: Contraception, Cycles, Hormonal and Fertility; Contraceptive and Fertility injections administered as per your Doctor's prescription.

Only the basic preventative and proactive care is provided. Vitamins and herbal supplements are freely available on the shelves in Clicks stores (Clicks, 2014).

2.7.2 Pick n Pay Pharmacies

Pick n Pay Pharmacies employ a knowledgeable and professional Vitamin Advisor who is available on the floor at all times for expert advice on vitamin therapy and natural supplements for ailments. Well-being and preventative medicine are the way of the future and many of these vitamins and supplements can help to keep individuals healthier on a daily basis.

Pick n Pay Clinic sisters in each store offer a wide range of different services at an affordable fee. The sisters attend courses on new innovations at least four times a year and are often seen at diabetic marathons and awareness days, where they get involved with the communities and help to diagnose symptoms and offer proactive health care advice.

Their preventative clinic services include: Baby immunizations; Baby wellness and milestones; Family planning; Glucose tests; Blood pressure tests; Cholesterol tests; Vitamin B injections; Pregnancy tests; Human Immunodeficiency Virus (HIV) tests and counselling; Wound care; Dietary advice; The Ascot diet plan is available in all clinics: a natural, healthy way to lose weight and change your lifestyle; first aid courses for parents and domestics which include what to do in case of Cardiopulmonary Resuscitation (CPR), drowning and choking as well as monthly talks on different ailments.

It is clearly visible that patients' care as well as preventative advice is given to help patients to become vigorous and stay healthier for longer (Pick n Pay, 2014).

2.7.3 MediRite Pharmacies

MediRite also promises to provide proactive health advice other benefits supplied by in-store pharmacies are as follows:

- At MediRite, they will conveniently fill your prescriptions while you shop;
- They employ fully qualified pharmacists, guaranteeing expert advice and assistance;
- They are knowledgeable and advise on facts about generic versus brand name medicines, saving on costly medication;
- They assist in saving money on Medical schemes;
- They tend to charging lower than the government regulated price on chronic and acute medication, mainly due to their bargaining and purchasing power;
- They perform administrative functions like sending chronic applications to medical aids, also updating chronic profiles of patients with their medical aids.

Other preventative vitamins and supplements are available on the shelves in the store aisles (MediRite, 2014).

2.8 GOVERNMENT OF SOUTH AFRICA

The South African government are also sold out to the fact of prevention of diseases and the promotion of their inhabitants' health. The National Health Insurance (NHI) as a medical financing system currently under construction will supply the citizens as well as legal long-term residents with essential healthcare. Benefits of the fund will include: preventative, curative, rehabilitative, and promotive health services (SA, 2012). This project is expected to be developed over a five-year period and hopefully be presented to parliament to pass as a bill in 2017.

Business day live (Bdlive) explained another new initiative of the government i.e. South African Health Products Regulatory Agency (SAPRA), which will be an entity with a much wider scope than the previous Medicines Control Council (MCC). The new regulatory agency will also be responsible for foodstuffs, cosmetic, disinfectants,

and diagnostics (Kahn, 2013). This will ensure a faster and more efficient and effective approval of medicines and clinical procedures similar to the European and United Kingdom regulators, who takes a much shorter period to release products in their markets, than the time it takes in South Africa to do the same.

2.9 NON-HERBAL AND HERBAL SUPPLEMENTS

Patients tend to take supplements if they feel that their nutrition is not sufficient due to busy and stressful lifestyles. Proactive health care in the form of herbal and non-herbal supplements are consumed to ensure that their bodies are not neglected even if eating habits are not up to standard and to insure that the immune system is functioning effectively in fighting off illnesses. Even though there is no scientific evidence that these supplements improve health, the uniqueness of the body and the belief of the effect it has on the bodies of patients, can't be denied or confirmed (Harvard Health Publications, 2000 - 2014). Taking non-herbal and / or herbal supplements are perceived contributors to the overall health and efficient functioning of the body, if taking into account the amount of income spent on it (8.8 percent of the SA GDP).

2.9.1 Non-Herbal Supplements

The traditional definition of a vitamin, according to a medical dictionary: *“a general term for a number of unrelated organic substances that occur in many foods in small amounts and that are necessary for the normal metabolic functioning of the body”* (Campbell, 1996).

The word "vitamin" was coined in 1911 by the Warsaw-born biochemist Casimir Funk (1884-1967). At the Lister Institute in London, Funk isolated a substance that prevented nerve inflammation (neuritis) in chickens raised on a diet deficient in that substance. He named the substance "vitamine" because he believed it was necessary to live and it was a chemical amine. The "e" at the end was later removed when it was recognized that vitamins need not be amines. The letters (A, B, C and so on) were assigned to the vitamins in the order of their discovery. The one exception was vitamin K, which was assigned the "K" from "Koagulation" by the

Danish researcher Henrik Dam (MedicineNet.com, 2012).

According to Euromonitor International (2014a) – a world leader in strategy research for consumer markets since 1972 – the most sales for vitamins and dietary supplements are between the middle- to higher-income earners. Higher income is linked to higher education.

Educated people see the first line of defence in fighting viruses and boosting the body's immune system is to choose a healthy and modified lifestyle. Scientists' and researchers' view is that less incidence of diseases, implies a stronger immune system. Even though there is no scientific prove of a direct link to a certain lifestyle and an improved immune system, there is evidence that there might be some link (Harvard Health Publications, 2000 - 2104)

2.9.2 Herbal / Traditional Supplements

Herbal remedy or medicine as per definition is a plant or plant part or an extract or mixture of these used to prevent, alleviate, or cure disease (Merriam-Webster, 2014).

Since 1988, the American Botanical Council (ABC) has been educating consumers, healthcare professionals, researchers, educators, the industry, and the media on the safe and effective and proactive use of herbs and medicinal plants. Botanicals are also known as plant medicine or substances obtained from plants and used in food supplements, personal care products, or pharmaceuticals. ABC's mission is to provide education using science-based and traditional information to promote responsible use of herbal medicine — serving the public, researchers, educators, healthcare professionals, industry and media (American Botanical Council, 2014).

MedicineNet.Com (2103) explains that a herbal remedy is a medication prepared from plants, including most of the world's traditional remedies for disease. Many of the medicines purchased over the counter (OTC) for prevention or cure are based on ingredients originally derived from plants, including aspirin and digoxin. Careful use of herbal remedies is advisable due to the fact that it can interact with other medicines. Over dosage and misuse can be harmful if patients are not cautious

when taking these remedies. Laboratory tests have shown that some herbal remedies are indeed effective against illness (MedicineNet.com, 2013).

Euromonitor forecasts an increase in demand for herbal / traditional products, particularly amongst patients who are seeking safer, healthier and proactive alternatives to standard over the counter (OTC) drugs (Euromonitor International, 2014a).

The competitive landscape in South Africa for 2013 regarding herbal / traditional products (as per Euromonitor International, 2014b) in-country team were between: Pharma Natura; Procter & Gamble and Reckitt Benckiser.

Pharma Natura is aiming to educate both the patients and their healthcare providers in the art of natural preventative healthcare, while providing both preventative and curative medicaments (Euromonitor International, 2014b)

As an alleged healthier substitute to vitamins and minerals with a more chemical manufacturing side, herbal substitutes jump to the front. With the recent advertising and awareness campaigns patients are attentive of the benefits of herbal products. Herbal products relate strongly back to traditional remedies that our forefathers used for healing at times before vitamins and supplements were conveniently available in supermarkets and pharmacies. Many of the prior studies on the effectiveness of these supplements had design flaws, which mean that findings could not be neither confirmed nor rejected. Consequently, these proactive benefits should not be considered as universally applicable (Harvard Health Publications, 2000 – 2014).

Herbal and traditional supplements definitely have a perceived place in the proactiveness of patients.

2.10 SUMMARY

Patient proactivity is influenced by various factors as explained by Kotler. He also explains that patients go through various stages before they decide on taking an action to revise a lifestyle. The satisfaction level of knowledgeable, proactive patients seems to be higher than patients that are ignorant.

A review of a few of the medical aid schemes brought to light, that they do their best to keep members informed and healthier, and they all agree that prevention is better than cure.

Pharmacies and or clinics that are based in retail stores or supermarkets are also striving to help individuals with health care and vitamins and herbal supplements are widely available on store shelves. Trained sales persons are also readily available to give expert advice on this overwhelming amount of products that are offered.

The South African Government have a lot of regulatory plans and is working on new legislations to inform and protect citizens from exploitation by suppliers of supplements. All vitamins, minerals, anti-oxidants and alternative and complementary remedies should be registered at the Medical Control Council by December 2019.

An empirical study considering patient proactiveness in selected areas in South Africa will be conducted in the next chapter.

CHAPTER 3

EMPIRICAL STUDY

3.1 INTRODUCTION

This chapter presents the research methodology followed in the study and reports on the results. Focus areas are:

- Research methodology;
- Statistical analysis; and
- Results and discussion.

Research methodology explains the questionnaire and the method that was used to analyse the data. With statistical analysis the reliability and validity of data as well as the measuring instruments are explained. The results of the study are presented and discussed and closing with a summary of the areas investigated.

3.2 RESEARCH METHODOLOGY

3.2.1 Questionnaire Discussion

A 6-point Likert scale questionnaire was used to determine the multidimensional attitudes of South Africans in certain areas of the country (Welman et al. 2011:156). Prof Sam Fullerton has run a similar project in the USA. The same questionnaire that was used to gather data in the United States of America, was used in South Africa. The Article of Fullerton and McCullough – “Patient Proactivity: Behaviours, Attitudes, and its Relationship with Satisfaction with the American Health Care Delivery System” was published in *Health Marketing Quarterly* (31:78-96, 2014). This research ensured that the questionnaire is tested, it is reliable, and that it is valid.

The objectives of this research were firstly to analyse the South African environment and secondly, to compare it to the results obtained by Fullerton and McCullough. For the comparisons between: young and old, male and female, and education analyses the statistical measurement *Effect Size* was used. Both the South African and United States of America’s comparison was based on percentages of

agreement. Table 1 represents the Likert scale that was mostly used for questions 3 to 23, except for questions 17 and 19 that had 7 choices to choose from. Questions 17 and 23 were omitted from this study because it is not relevant in South Africa. Question 22 is similar to question 3 in Section A, and resultantly the responses to both of them are almost identical.

The interpretation of the 6-Point Likert scale is demonstrated in Table 1.1.

Table 1.1: 6-Point Likert Scale

Section					
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

3.3 STATISTICAL ANALYSIS

3.3.1 Measurement

The analysis follows the specific objectives mentioned in Chapter one (1.6.2).

3.3.1.1 Objective 1: Compile a demographic profile of the respondents

Respondents were generally healthy, 89 percent claims to have good health; whereas 10 percent had minor health problems, very few had major health conditions. The majority of 93.3 percent were on a medical aid, sponsored by their employers or by themselves. Patients with no medical aid amounts to 5 percent and a few (1.7 percent) make use of government programs for their health issues. Participants of the study family's relationships are as follows: 67.2 percent were married and living with their spouse, 24.4 percent were single, the other few participants that is not presented in these two major categories, were either widowed, divorced or living with their partners.

Most of the households (86.1 percent) consisted between 2 and 5 persons, 11.7 percent replied that only one person resided in the household, another 3 respondents' households were larger than 6 people.

Mainly the respondents were heterosexual presented by 82.2 percent, a percentage of 11.7 preferred not to answer the question, another 3.9 percent did not answer the question at all, a small percentage of 2.2 percent were homosexual, while none of the respondents were bi-sexual.

Racial orientation were dominated by Whites (70.6 percent); followed by Blacks (22.8 percent); Coloureds (4.4 percent) and Indians (1.7 percent).

Respondents indicated that 91.1 percent were employed full time, Table 2 below reveals the detail of the employment status that are of significance.

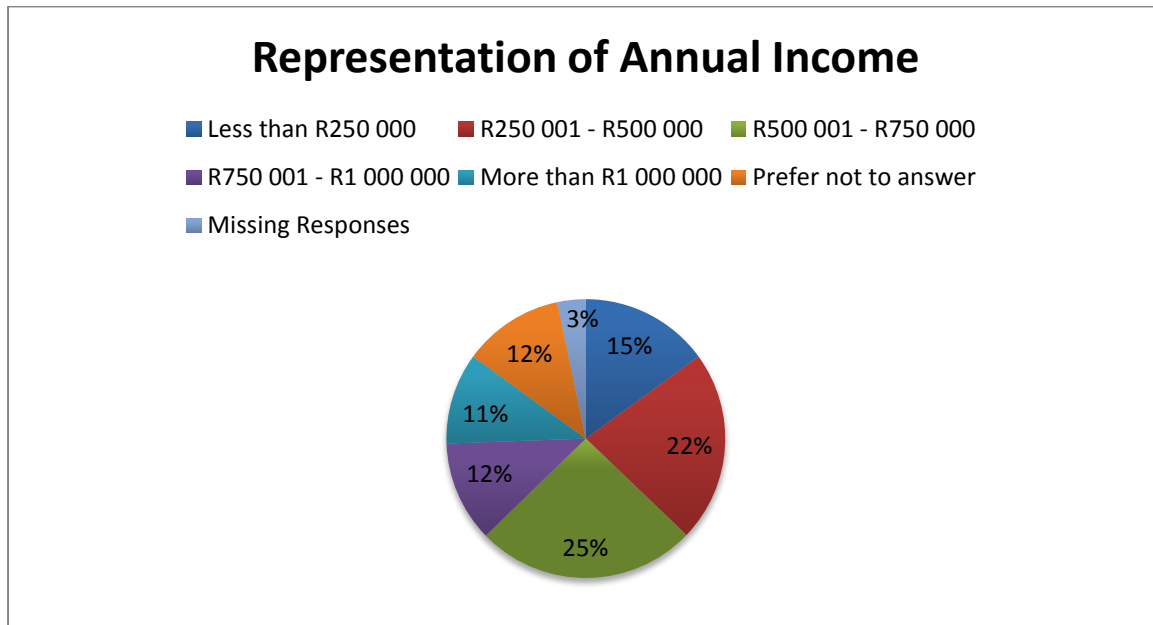
Table 2: Employment status of respondents

Employment status	Frequency	Normal %	Valid %	Cumulative %
Employed in a full-time position	164	91.1	93.7	93.7
Employed only part-time	5	2.8	2.9	96.6
Unemployed, but actively seeking work	4	2.2	2.3	98.9
Not employed outside the home	2	11.1	11.1	100.0
Total	175	97.2	100.0	
Missing System	5	2.8		
Total	180	100.0		

Figure 2 displays the representation of income. The most frequent income range of the participants was between R250 000 to R750 000 per annum (47.8 percent), representing middle to higher-income earners. A total of 15 percent earned less than R250 000 per annum. The frequency of occurrence declines the higher the income, 10.6 percent are privileged to earn more than a million rand per annum.

Fifteen percent preferred to either not answer the question or did not answer the question at all.

Figure 2: Representation of Annual Income



3.3.1.2 Objective 2: Measure the proactiveness of patients in South Africa

A few questions in the questionnaire relate to proactiveness regarding health. The frequency of choices will be dichotomised between those agreeing and of those disagreeing with the proactive statement. To exhibit the agree percentage all forms of agreement's percentage was added together (slightly agree, agree and strongly agree) and the same method was used to determine the disagreeing percentage. Fourteen statements could relate to patient pre-emptive actions and thoughts.

Table 3 exhibits the statements that relate to proactiveness in the South African study.

Table 3: Patient Proactivity in South Africa

Proactive question or statement	Agree %	Disagree %
I believe that I'm the person who is primarily responsible for my own health	100	0
It is important to recognize the early symptoms and warning signs of disease	99.4	0.6
It is important to know how to prevent diseases and illnesses from occurring	97.7	1.7
It is important to have a family physician	93.9	5.6
I often read articles from news sources & magazines which contain information on health, and how to maintain my health	80.5	19.4
I engage in self-examinations which will help me identify potential health problems	79.4	18.3
I take vitamins as a way of maintaining better health	73.9	26.1.1
I like to ask my doctor questions, and it is smart to take a written list of questions along	70.5	28.9
I have a physical exam on a regular basis	65.0	35.0
I use herbal supplements that are advertised to improve my health	48.9	51.1
I visit Internet sites such as WebMD to get information about illnesses and their cures	47.2	52.3
I have a flu shot most years	36.6	63.4
I sometimes visit social media / Facebook to get information about certain diseases and their treatments	29.0	71.0
I visit Internet chat rooms / blogs where illnesses are discussed	28.4	71.1

There is consensus that each participant is in principle responsible for his or her own health. A high percentage of respondents confirms that it is important to know how to prevent diseases and illnesses.

Knowledge of early symptoms and forewarning signs are considered important by almost all the partakers who completed the questionnaire (97 plus percent answered positively in this regard). Information is mostly gathered from reading news / magazine articles (80.5 percent) and probably also supplied by the family physician, seeing the 93.9 percentage of respondents that agree to the fact that it is important to have a family doctor. Internet sites such as WebMD are consulted by only 47.2 percent while 52.3 percent disagreed on visiting it for health related information. Two thirds of the participants did not visit other Internet sites such are Facebook / Chat Rooms / Blogs for information about illnesses or diseases to find information about treatments.

South Africans rather engage in taking vitamins to uphold health (73.9 percent) than herbal supplements (48.9 percent) as a way to improve their overall health.

Of the 180 participants, only a modest 36.6 percent agreed that they have a flu shot most years, thus most did not commit to this one kind of proactivity measure towards their health, but other proactive measures are positively supported.

Research hypothesis H_{A1} can thus be accepted that there is a strong inclination towards patients proactivity behaviours and attitudes and the satisfaction with general medical health care, of South Africans.

3.3.1.3 Objective 3: Measure the sample adequacy

Multivariate analysis

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) indicates the proportion of variance in variables that might be caused by underlying factors i.e. multivariate analysis. Measures fall between the range of 0 and 1. Values closer to 1 indicates that the sample is adequate for multivariate analysis, while data below 0.7 does not support advanced statistical analysis, and is inappropriate (Field, 2007:640).

Bartlett's test of sphericity tests the null hypothesis for correlation matrix, which is an identity matrix, uncovering the variables that are unrelated and therefore unsuitable for structure detection. Tests need to be significant. Small values (less than 0.05) of the significance level indicate that a factor analysis may be useful for the data. A significant test indicates that the R-matrix is not an identity matrix, and that there are some relationships between the variables that are included in the analysis (Field, 2007:652). The Bartlett's test is highly significant and its results support the KMO in selecting factor analysis as an appropriate statistical technique.

3.3.1.4 Objective 4: Determine the reliability of the data gathered from the questionnaire

Cronbach's Alpha (1951: 297-334) is generally used as a measure of reliability of a set of questions in a survey instrument or questionnaire. It measures interrelatedness of the set of data gathered. An acceptable level of reliability is usually seen as 0.7 or higher. A low level of alpha is often associated with multidimensional data. This questionnaire was used to gather the information in United States of America by (Fullerton & McCullough, 2014), therefore the reliability is assumed to be sufficient to replicate this test in South Africa.

3.3.1.5 Objective 5: Determine if the variables education, gender, and age play a role in South African patient proactivity

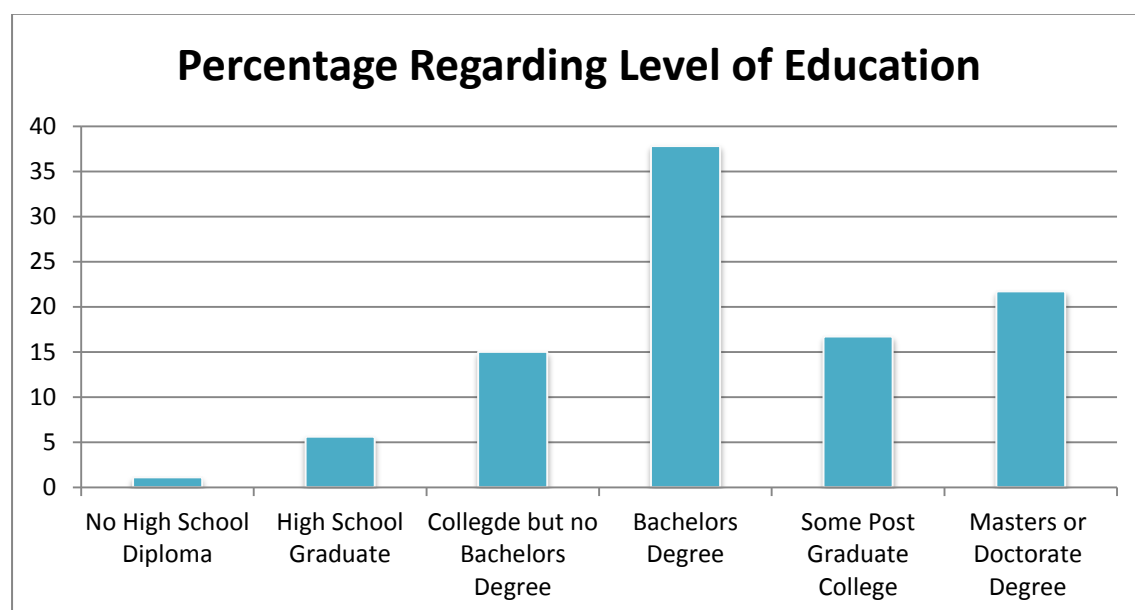
- **Education**

The largest portion of respondents has Bachelors and post graduate degrees. Of the 180 respondents only 176 answered this question relating to a 2.2 percent of missing replies. Persons with Bachelor's degrees comprised of 37.8 percent of the spread of respondents. Respondents with a post-graduate education consisted of 16.7 percent, whereas 21.7 percent have higher educational degrees such as masters or doctorates. When considering the Spearman's correlation coefficient to measure the strength of association of the education level and proactivity, there is a modest relation to the response on the questions and qualification. The respondents in this sample mostly attended a tertiary institution. In the census of 2011 only 11.8 percent of South Africans have a tertiary education (Blaine, 2012). Therefore the

information gathered only represents a small percentage of the South African citizens.

One can thus accept the fact that most respondents in this study have education and have the ability to do research regarding illnesses and diseases if they wish to. Testing the percentages against the correlation coefficient (Spearman) there seems to be a weak relationship between questions and qualifications. Research hypothesis H_{A4} can be accepted; there is a significant inclination towards education and proactivity of patients.

Figure 3: Education level of Respondents

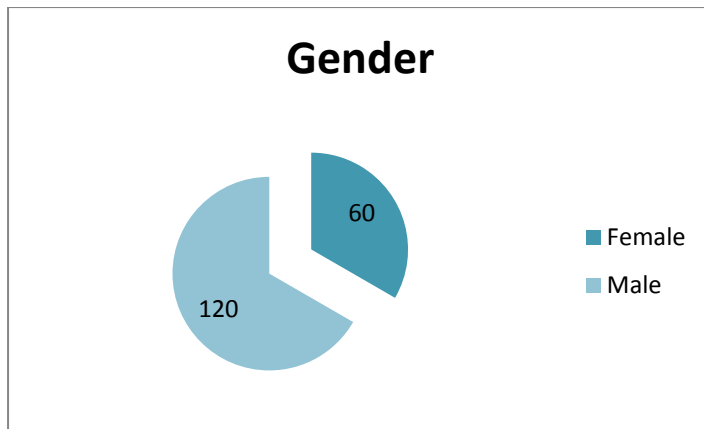


- **Gender**

The male respondents outnumbered the females in this research by two thirds compared to one third. Predominantly questions had a small effect size of 0.2. Only question 5 and 14 had a medium size effect. Question 5 requests the respondents if articles in news or magazines are read to know how to maintain health. Question 14 enquires if Internet sites such as WebMB are consulted to investigate illnesses and their cures. The mean for them lies between the 62nd and the 66th percentiles. Given the data tested by Effect Size, one can draw the conclusion that gender had such a small effect on proactive behaviour that is not a significant factor. Research hypothesis H_{A3} can be rejected, there is no significant difference or inclination of

proactiveness between males and females, and they all tend to be proactive regarding their health.

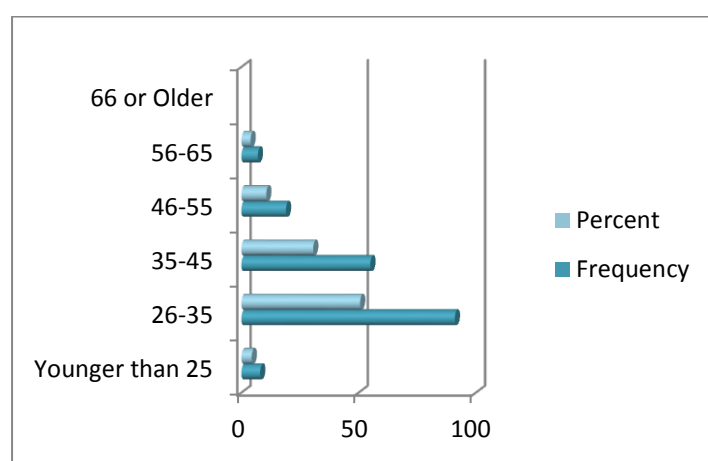
Figure 4: Gender Display



- **Age**

Figure 5 below displays a bar chart of the participant's age distribution. Age was divided at 35 years. Respondents that were younger than 35 years were categorised as young, and the other above 35 years were classified as older. The frequency table revealed that 99 respondents were 25 or younger but not older than 35 and 81 of the respondents were between 36 and 65 years. Using descriptive statistics to determine the differences by means of the effect size, questions 3 to 22 were assessed. The calculations of data have reproduced a small effect, revealing that age has a small effect on proactivity toward an individual's health. Research hypothesis H_{A2} can be rejected. There is no significant difference or inclination between patients younger than 35 and those older than 35.

Figure 5: Age distribution



3.3.1.6 Objective 6: Compare the South African patient proactivity with that of their USA counterparts

The mean was determined by using descriptive statistics for each question separately. All the levels of agreement were added together to delineate the percentage of respondents who agreed with the statement. The South African respondent's mean for most of the attitude statements exceeds 5.0, except for the statement of being prepared with a written list of questions to ask when visiting the doctor, which are 4.07 even though the percentage of 70.5 reflects that most agreed with the statement. This behaviour could relate to them trusting the doctor to have the best possible solution or cure for their illness due to his experience in that field. Americans' attitudes on the other hand, have a mean of above 5.0 for all the statements, reflecting that they agree with all the statements. Evaluating the high percentage of positive endorsements on behalf of both groups shows the tendency that they understand the benefits and the responsibility of taking charge of their own health. The sense of responsibility could incite proactive attitudes and behaviour.

Table 4: Attitudes Regarding Specific Behaviours Reflecting Patient Proactivity

Attitude regarding proactive behaviours	USA	USA	RSA	RSA
	M	% Agreeing	M	% Agreeing
I'm responsible for my own health	5.52	98.1	5.74	100.0
Important to recognise early symptoms and warnings	5.30	98.1	5.57	99.4
Important to have a regular primary care physician	5.28	96.6	5.16	93.9
Important to know how to prevent diseases / illnesses	5.25	98.0	5.39	97.7
Smart to take a list of questions to ask the doctor	5.02	94.9	4.07	70.5

Comparison of tendencies to participate in proactive behaviours between United States of America (USA) and the Republic of South Africa (RSA) enlighten several similarities. The mean in USA ranges from 2.13 to 5.37 whereas RSA's mean range from 2.54 to 5.48.

Three of America's behaviour statements produced mean scores with more than 5.0 and 92 percent of positive engagement in these behaviours. Only two proactive behaviours in RSA have means larger than 5.0 with percentage of agreement of more than 98 percent. Only one statement is the same for both countries that is, they fill and start prescriptions immediately. Some behaviour is more important for USA participants than for their equivalents in RSA. But mostly the tendencies are the same. Prescriptions get completed by over 82 percent of patients, 65 or more percent have a physical exam on a regular basis, more that 79 percent engage in self-examinations, more or less 74 percent take vitamins to maintain their health and lastly, more than 75 percent read up to become more knowledgeable about health issues.

Two statements had the complete opposite reactions to each other. USA participants agreed with 71.8 percent that they visit Internet sites such as WebMD for information; RSA partakers had only a 47.2 percent of agreement. The other statement that were different for both countries was that RSA citizens only see a doctor when they are actually sick (98.3 percent agreeing to this statement), whereas in the USA only 57.1 percent agreed to this statement.

Less South Africans have a flu shot every year (36.3 percent) compared to Americans (52.2 percent).

The patients who use herbal supplements to improve their health were less in USA (40.8 percent) compared to RSA (48.9 percent); the relative means are less than 3.28 due to the non-regulated nature of most of these products. With the average of less than 50 percent, one can assume that more patients rather take vitamins and conduct healthier lifestyles regarding nutrition than to take herbal supplements.

Both countries indicated a willingness to seek information from some Internet sources, but were averse to chat rooms, blogs and social media as indicated by Fullerton and McCullough (2014).

Table 3.5 displays the results of proactive behaviours per statement for both countries for a more in-depth viewing.

Table 3.5: Proclivities to Engage in Proactive Behaviours

Proactive behaviour	USA M	USA % Agreeing	RSA M	RSA % Agreeing
I fill and start prescriptions immediately	5.37	96.4	5.31	97.8
I complete prescription even if I feel better before it is finished	5.18	93.4	4.67	82.3
I like to ask my doctor questions	5.01	92.4	4.07	70.5
I have physical exam on a relatively regular basis	4.47	75.7	3.76	65.0
I engage in self-examinations when appropriate	4.38	83.6	4.48	79.4
I take vitamins as way of maintaining my health	4.38	74.8	4.34	73.9
I read articles on issues that help maintain good health	4.21	75.8	4.37	80.5
I visit Internet sites like WebMD to get health or disease information	4.05	71.8	3.21	47.2
I only see a doctor when I'm actually sick (USA data is reverse coded)	3.83	57.1	5.48	98.3
I have a flu shot most years	3.61	52.2	2.88	36.6
I use OTC herbal supplements to improve my health	2.99	40.8	3.28	48.9
I have visited Internet chat rooms and blogs for health info	2.51	28.3	2.56	28.4
I visit social media sites like Facebook for health info	2.13	17.5	2.54	29.0

Items are reverse coded so that the value above 3.5 midpoint represents positive outcome

Research hypothesis H_{A5} can be accepted; there is no difference between the inclination towards patient proactivity of South Africans and the Americans. Data revealed that high percentages of proactive behaviour and health consciousness occur in both countries.

3.4 RESULTS AND DISCUSSION

The primary objective is to investigate South African patient proactivity and the attitudes regarding their health measures and to compare it to the studies recently done in America.

The specific objectives mentioned in chapter 1 was linked to the research hypothesis, and conclusions were drawn. The sample consisted of part-time MBA-, Middle Management Programme-, Advanced Management Programme students, as well as a random sample of willing participants who volunteered to complete the questionnaire. This explains the high level of education in this study. The 5.6 percent missing the system could be due to the fact that the alternatives were not included (Professors; Bachelor's degree; College education; High school diploma or no High school diploma).

Table 3.6: Qualification Frequency Table

Qualification	Frequency	Normal %	Valid %	Cumulative %
PhD	1	0.6	0.6	0.6
MBA	119	66.1	70.0	70.6
Middle Management Programme	39	21.7	22.9	93.5
Advanced Management Programme	2	1.1	1.2	94.7
Short Course / Management Workshop	2	1.1	1.2	95.9
Other	7	3.9	4.1	100.0
Total	170	94.4	100.0	
Missing System	10	5.6		
Total	180			

Objective 1: Demographic profile of respondents

The overall health of patients were good, 88.9 percent were generally healthy.

Most patients (93.3 percent) belong to a healthcare plan.

Respondents were mainly married and living with their spouse (67.2 percent) and singles amounted to 24.4 percent. Households' members ranged mostly from 1 to 5.

Predominantly Whites completed the questionnaire (70.6 percent) trailed by Blacks (22.8 percent) the rest were Coloured and Indians.

Income scales were commonly between R250 000 and R750 000, and 10.6 percent were higher income earners and 15.0 percent were lower income earners, 15.0 percent did not want to disclose this information.

Objective 2: Measure the proactiveness of South Africans

Patients are in principal proactive regarding their health issues. They only go to a doctor when they are really sick and some go for regular check-ups.

Internet sites might be perceived as not trustworthy and seeing that the administrators are not always globally well-known with acknowledged qualifications. South Africans are cautious to gather health information on the Internet.

The high percentages of agreement indicate a strong inclination towards patient proactivity, behaviours, attitudes and satisfaction, hypothesis H_{A1} can be accepted.

Objective 3: Measure sample adequacy

The sample can be considered sufficient, 180 participants completed the questionnaire.

Objective 4: Determine the reliability of the questionnaire data

Fullerton and McCullough (2014) used this questionnaire in their article: "Patient Proactivity: Behaviours, Attitudes, and its Relationship with Satisfaction with the American Health Care Delivery System". As a result the results adopted for comparative purposes in this study are deemed to be reliable.

Objective 5: Determine if education, gender, and age play a role in South African proactivity

Patients with Bachelor's Degrees dominated this study; almost all the respondents were in the higher education bracket. The assumption could be made that their education enabled them to do research about their health questions. Using the correlation coefficient (Spearman), hypothesis H_{A4} could be accepted, there is a strong relationship between education and proactivity.

Almost 67 percent of the respondents were male; the rest were female. The Size Effect and Descriptive Statistics were used to determine what effect gender had on each of the proactive questions. Mostly small effects were reported, the statement regarding getting information from news and magazine sources had a medium effect as well as the statement of visiting Internet sites such as WebMD for medical information. Using the majority of information one can come to the conclusion that gender had a small effect on proactivity. Hypothesis H_{A3} could be scorned.

Observing whether age had an effect on patient proactivity in South Africa, using the Effect Size as measure, all the statements had a small effect. This means that there are marginal differences between the two populations. Hypothesis H_{A2} is therefore rejected.

Objective 6: Compare South African patient proactivity with that of their United States of America counterparts

Overviewing the attitudes of South Africans and Americans and comparing outcomes, great similarities are observed. Percentages of patients that agreed with the statements were mostly in the 90's for both countries. One statement was less agreed upon: only 70 percent of South Africans agreed that they take a written list to ask their doctor questions, compared to almost 95 percent of Americans who does that.

Proactive behaviours also had a similar trend. Americans as well as South Africans engage in proactive behaviours with high percentages of agreement to the statements in the questionnaire. The same trend is visible regarding the caution to

get information from Internet Chat Rooms, Blogs and Social Networks. Over the Counter (OTC) herbal supplements had lower percentages of agreement for both countries

Hypothesis H_{A1} : There is a strong inclination towards patients' proactivity, behaviours and attitudes and the satisfaction with general health care in South Africa, could be accepted due to the high percentage of the respondents agreeing to the statements in the questionnaire.

3.5 SUMMARY

The questionnaire was discussed and the scale that was used was explained. The demographic profiles of respondents regarding their current health status, relationship, sexual and racial orientation, as well as income were considered.

The proactiveness of South Africans were analysed and the sample adequacy were evaluated. The roles of various variables such as education, gender, and age in the South African context were examined.

Finally the comparison between South Africa and the United States of America was scrutinized to see if both countries have the same tendencies. The next and last chapter of this study draw inferences, offers suggestions and emphasises areas for possible opportunities for future research.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

4.1 INTRODUCTION

This is the final chapter of this study. Conclusions drawn from the study are presented, and suggestions for potential future studies are offered. The chapter is concluded with a summary of the study.

4.2 CONCLUSIONS AND RECOMMENDATIONS

The recommendations follow the conclusion of this study

4.2.1 Research methodology

In terms of the research methodology, statistical techniques, validity of the questionnaire and the reliability of the data it can be concluded that:

- **Conclusions**

1. The Kaizer-Meyer-Olkin measure of Sampling Adequacy (KMO) and the Bartlett's test of sphericity are suitable measures to determine if exploratory factor analysis could be employed to analyse data.
2. Cronbach Alpha coefficient determined the reliability.
3. Frequency tables and Effect Size calculations was the best resource methods to analyse data received from the questionnaires.

- **Recommendations**

1. The statistical process and techniques that was followed in this study are appropriate, and could be recommended for usage in similar future studies. The KMO successfully confirmed that the sample was adequate and that multivariate and descriptive statistics could be performed. The Barlett's test signified that the internal relationships can also be disregarded, and that progressive analysis is suitable.
2. The data collected by means of the questionnaire that was adopted from Fullerton and McCullough, who researched a similar topic, which was a published article in America. Conversely it is recommended that a few minor

alterations should be conducted to make statements more suitable for South African use.

4.2.2 South African proactivity

- **Conclusions**

1. Exploiting the percentage of the patients that agreed to the fourteen statements the global tendency is to be proactive towards health. A willingness to accept the responsibility as primary caretaker of his or her own health is observed. Also then to react and gather information about maintaining their good health and to recognise warning signs in advance before a disease actually occur.
2. The Internet resources are not popular to accumulate knowledge regarding diseases or illnesses and their cures, under South African citizens.
3. Education, gender, and age had a small effect on proactivity actions considering health, most participants agreed to the importance of being pre-emptive in the various forms vigilant towards health issues.

- **Recommendations**

1. It is recommended that healthcare givers should embolden proactivity regarding health. Doctors should guide and encourage patients to do research on their health conditions and to take part in the decisions of wellness, rather than taking advice only. The saying goes: "Two heads are better than one".
2. The questionnaire could also explore the facts to find out if patients indeed altered their habits to be healthier, after they obtained the information to maintain or improve their own health.
3. Statements to enquire about patient's reaction as soon as they recognise symptoms of a disease, do they then visit a doctor, or do they wait to become actually ill before the go to see their doctor, should be included in the questionnaire.

4.2.3 Comparing South African's proactivity to their American equivalents

- **Conclusions**

1. There is a strong positive proclivity towards patients' attitudes regarding specific behaviours that reflects patient proactivity for both countries. Respondents agreeing rate for the importance to know how to prevent diseases or illnesses; to be accountable for your own health; and to recognise early indications or threatening signs of a disease, was over 93 percent.
2. Actual engagement in proactive behaviour is also mostly positive with high percentages of agreement for both countries.
3. Both counterparts agree on the importance of starting prescriptions immediately and to complete the whole course of medication; engaging in self-analyses; asking the doctor prior prepared questions; to go for a physical examination on a regular basis; reading educational articles about health and taking vitamins as a way of maintaining health.
4. There are a few controversies between the two counties; South Africans only go to a doctor when they are actually sick, whereas Americans go to doctors for more reasons than illness. On the other side, Americans value a flu shot more that South Africans do. Americans are also more comfortable to visit Internet sites like WebMD than South Africans.
5. Both complements were not too keen to take herbal supplements to improve health and to visit informal social media networks and chat rooms. Low means and high percentages of disagreement are visible when analysing the data.

- **Recommendations**

1. It is recommended that more frequent studies in this regard should be conducted to monitor progress in proactivity toward health
2. Collect more data from individuals that don't have a tertiary education.
3. Gathering data from the same source, for example, the Internet, for both countries. Analysing the individual country as well as comparing to other countries' tendencies.

5.2.4 Achievement of the objectives of the study

- **Conclusions**

Objectives 1 to 6 were tested and evaluated, scientific hypotheses were used to aid in the evaluation process.

- **Recommendations**

It is recommended that this study be repeated on a larger scale and also in other geographic areas taking into account opinions of inhabitants of large and smaller cities, as well as more race groups.

4.3 RECOMMENDATIONS FOR FUTURE RESEARCH

- **Conclusions**

1. This topic and how the population of the world evolves in engaging in proactive behaviour could be researched in future.
2. Involvement of more countries and more continents to test their behaviour, to make more informed conclusions, would be interesting.

- **Recommendations**

Two important questions that could be included in future studies regarding the proactiveness in participants' health situation should definitely be:

1. Do they go to a doctor as soon as they see symptoms of a disease?
 2. Have they changed their behaviour to engage in healthier lifestyles?
- Why are people sceptical to get information from a WebMD?

It would be advisable to gather information where the distribution between educated with or without a high school certificate as well as those with a higher tertiary (post school) education such as Bachelor degrees, are more evenly spread.

The same medium such as the Internet could be used to ensure a more equal spread of participants.

4.4 SUMMARY

In this study, the proactive behaviour and attitudes were investigated for South Africans in the middle to higher income groups. All participants fall in the bracket of individuals with a higher tertiary education. South African attitudes and behaviour were compared with those of Americans.

This study also reveals that in most cases the attitudes and behaviour have the same tendency.

Chapter one was an introduction to the study revealing the problem statement and purpose together with the objectives.

Chapter two presented an in-depth literature study of patient proactivity and all the partakers and supplements to aid patients in adopting proactive behaviour.

Chapter three revealed the results of the study. Elaborations on the research methodology, descriptive statistics evaluation, and the interpretations of the outcomes, were exhibited. The Cronbach Alpha and exploratory factor analysis confirmed validity of the data used in the questionnaire. The Bartlett's test of sphericity confirmed the appropriateness of factor analysis; Kaiser-Mayer-Olkin measured the adequacy of the sample size. Six objectives were presented and five hypotheses were linked to it, applying statistical methods.

The study completes with chapter four. This chapter elaborates on conclusions; recommendations and possible future investigation.

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APPENDIX 1: QUESTIONNAIRE

Dear Respondent

Re: Research in health care

Prof Sam Fullerton and I are doing research on health care in South Africa. Prof Fullerton has run a similar project in the USA and we aim to repeat the project in South Africa. The objectives are to firstly analyse the South African environment, and secondly, to compare it to the USA counterparts.

The questionnaire is anonymous and the data is purely for academic research purposes. Please be so kind as to complete the attached questionnaire and submit it to the facilitator. If you have any queries, please feel free to contact me at the above-said number and email address.

C A Bisschoff

Professor: Marketing Management

SECTION A:

Please answer the following questions by clicking on the box that best reflects your current situation.

1. Which of the following best describes your current health care plan?
 - ☐ Health care plan paid entirely by my employer
 - ☐ Health care plan paid for entirely by myself
 - ☐ Health care plan where my employer and I share the cost
 - ☐ Health care plan provided by my spouse or another household member
 - ☐ Medicare or other government program (VA, Medicaid, etc.)
 - ☐ Other
 - ☐ I have no health care insurance or other coverage
2. How would you describe your health over the past year or so?
 - ☐ I have been extremely healthy
 - ☐ I have been generally healthy, but I could be better
 - ☐ I consider my health to have been a minor problem
 - ☐ I consider my health to have been a major problem
 - ☐ I prefer not to answer this question

Indicate your level of agreement or disagreement with each of the following statements by clicking on the box that corresponds to your opinion or your action as it relates to the statement under scrutiny.

3. I only see a doctor when I am really sick.
 - ☐ Strongly Agree
 - ☐ Agree
 - ☐ Slightly Agree
 - ☐ Slightly Disagree
 - ☐ Disagree
 - ☐ Strongly Disagree
4. I believe that I am the person who is primarily responsible for my own health.
 - ☐ Strongly Agree
 - ☐ Agree
 - ☐ Slightly Agree
 - ☐ Slightly Disagree
 - ☐ Disagree
 - ☐ Strongly Disagree

5. I often read articles from news resources and magazines which contain information on health – and how to maintain my health.
- ☐ Strongly Agree
 - ☐ Agree
 - ☐ Slightly Agree
 - ☐ Slightly Disagree
 - ☐ Disagree
 - ☐ Strongly Disagree
6. It is important to know how to prevent diseases and illnesses from occurring.
- ☐ Strongly Agree
 - ☐ Agree
 - ☐ Slightly Agree
 - ☐ Slightly Disagree
 - ☐ Disagree
 - ☐ Strongly Disagree
7. It is important to recognize the early symptoms and warning signs of disease.
- ☐ Strongly Agree
 - ☐ Agree
 - ☐ Slightly Agree
 - ☐ Slightly Disagree
 - ☐ Disagree
 - ☐ Strongly Disagree
8. It is important to have a family physician.
- ☐ Strongly Agree
 - ☐ Agree
 - ☐ Slightly Agree
 - ☐ Slightly Disagree
 - ☐ Disagree
 - ☐ Strongly Disagree
9. I have a physical exam on a relatively regular basis.
- ☐ Strongly Agree
 - ☐ Agree
 - ☐ Slightly Agree
 - ☐ Slightly Disagree
 - ☐ Disagree
 - ☐ Strongly Disagree

10. I like to ask my doctors questions; in fact I think it is smart to take a written list of questions when visiting a doctor.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

11. I have a flu shot most years.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

12. I take vitamins as a way of maintaining better health.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

13. I use herbal supplements that are advertised as a way to improve my health.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

14. I visit Internet sites such as WebMD to get information about illnesses and their cures.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

15. I have visited Internet chat rooms (and blogs) where specific illnesses are discussed.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

16. My current health insurance plan does a good job of meeting my needs.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

17. An HMO or PPO is superior to traditional health care insurance.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree
- ☐ I'm not certain

18. When a doctor gives me a prescription, I generally have it filled and begin taking it right away.
- ☐ Strongly Agree
 - ☐ Agree
 - ☐ Slightly Agree
 - ☐ Slightly Disagree
 - ☐ Disagree
 - ☐ Strongly Disagree
19. When appropriate, I engage in self-examinations which will help me identify potential health problems.
- ☐ Strongly Agree
 - ☐ Agree
 - ☐ Slightly Agree
 - ☐ Slightly Disagree
 - ☐ Disagree
 - ☐ Strongly Disagree
 - ☐ This is not really relevant to me
20. When a doctor gives me a prescription, I take it as instructed until I run out – even if I feel better before I have taken all of the prescribed medicine.
- ☐ Strongly Agree
 - ☐ Agree
 - ☐ Slightly Agree
 - ☐ Slightly Disagree
 - ☐ Disagree
 - ☐ Strongly Disagree
21. I sometimes visit social media sites such as Facebook to get information about certain diseases and their treatments.
- ☐ Strongly Agree
 - ☐ Agree
 - ☐ Slightly Agree
 - ☐ Slightly Disagree
 - ☐ Disagree
 - ☐ Strongly Disagree

22. I only go to the doctor when I am really sick

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

23. In general, I am satisfied with the health care system in the United States.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

SECTION B: PROFILE

The following questions are used to compare different groups of people. Your responses cannot be associated with you individually. Please indicate which groups you belong to by clicking on the box next to the answer that corresponds to your present status.

1. What is your gender?

- ☐ Female
- ☐ Male

2. What is the highest level of education that you have completed?

- ☐ Some high school, but no high school diploma
- ☐ High school graduate
- ☐ Some college, but no Bachelors degree
- ☐ Bachelors degree
- ☐ Some Post-Graduate College
- ☐ Graduate degree (i.e. Masters, Doctorate, JD, etc.)

3. What is your status regarding your current relationship?
- ☐ Single
 - ☐ Married; living with spouse
 - ☐ Married but separated
 - ☐ Widowed
 - ☐ Divorced
 - ☐ Living with domestic partner (significant other)
 - ☐ I prefer not to answer this question
4. Which of the following best describes your racial orientation?
- ☐ Black
 - ☐ White
 - ☐ Indian
 - ☐ Coloured
 - ☐ Non RSA citizen – Africa
 - ☐ Non RSA citizen – Rest of the world
5. Which of the following best describes your sexual orientation?
- ☐ Heterosexual
 - ☐ Homosexual
 - ☐ Bi-Sexual
 - ☐ I prefer not to answer this question
6. What is your current employment status?
- ☐ I am employed in a full-time position
 - ☐ I am employed part-time
 - ☐ I am unemployed, but I am actively seeking a job
 - ☐ I am not employed outside of my home
 - ☐ I am officially retired
7. How many people currently reside in your household?
- ☐ 1
 - ☐ 2
 - ☐ 3
 - ☐ 4
 - ☐ 5
 - ☐ 6
 - ☐ 6 or More

8. Which of the following categories includes your age today?

- ☐ 25 or younger
- ☐ 26-35
- ☐ 36-45
- ☐ 46-55
- ☐ 56-65
- ☐ 66 or Older

9. The total annual income for those living in my household is approximately:

- ☐ Less than R250.00
- ☐ R250.001 – R500.000
- ☐ R500.001 – R750.000
- ☐ R750.001 – R1.000.000
- ☐ More than R1.000.000
- ☐ I prefer not to answer this question

10. I am studying further towards:

- ☐ PhD
- ☐ A MBA
- ☐ Fundamental Management Programme
- ☐ Middle management Programme
- ☐ Advanced Management Programme
- ☐ Short course / Management workshop
- ☐ Other (Please mention below)

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THANK YOU FOR TAKING THE TIME TO COMPLETE THE QUESTIONNAIRE.

APPENDIX 2: LETTER FROM LANGUAGE EDITOR

October 20, 2014



TO WHOM IT MAY CONCERN

Re: Letter of confirmation of language editing

The dissertation "An analysis of patient proactivity in selected areas of South Africa" by Danita Cloete (23723807) was language, technically and typographically edited. The sources and referencing technique applied was checked to comply with the specific Harvard technique as per North-West University prescriptions. Final corrections as suggested remain the responsibility of the student.

Antoinette Bisschoff

Officially approved language editor of the NWU since 1998
Member of SA Translators Institute (no. 100181)