THE HOMEOPATHIC MARKET: PROFILING THE USE OF HOMEOPATHIC REMEDIES AT EARLY CHILDHOOD DEVELOPMENT CENTRES IN THE PRETORIA EAST REGION

BY

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DEDICATION

This study is dedicated to my children Aidan, Keera and Mia.

ABSTRACT

The purpose of this study was to determine the profile of parents with children in Early Childhood Development (ECD) centres using Over the Counter (OTC) homeopathic remedies, specific to the Pretoria East region. Secondary objectives included determining the extent of use of OTC homeopathic remedies, the perceptions of parents regarding homeopathy and natural remedies as well as the positioning of homeopathy. The research was designed around descriptive and exploratory methods using quantitative research techniques. Aspects such as demographic information and the general health of families, attitudes, perceptions and opinions specific to homeopathy, natural remedies and conventional medicine, as well as details on remedy usage and brands, were addressed.

From the findings of the study a clear profile could be identified. Further to the profile, the perceptions of respondents regarding OTC homeopathic remedies as well as reasons for using these remedies are discussed. The positioning of OTC homeopathic remedies was done based on spider graphs, exploratory factor analysis, cluster analysis and multidimensional scaling.

Several recommendations were made to the homeopathic industry, the Ministry of Health, medical professionals, Medical Aid Schemes, pharmacists and the pharmaceutical industry, as well as the Department of Social Development. The study concludes with details specific to the limitations of the study and further research suggestions.

Key terms: Profile, segmentation, targeting, positioning, Homeopathy, OTC homeopathic remedies, ECD centres, Complementary and Alternative Medicine.

DECLARATION

I declare that this dissertation titled: The Homeopathic market: Profiling the use of Homeopathic remedies at Early Childhood Development Centres in the Pretoria East region, is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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SIGNATURE DATE

(Ms)

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ABBREVIATIONS

AMA	American Medical Association
APUA	Alliance for the Prudent Use of Antibiotics
CAM	Complementary and Alternative Medicine
ECD	Early Childhood Development
EPI	Expanded Programme in Immunisation
FDA	Food and Drug Administration
GMP	Good Manufacturing Practice
LSM	Living Standards Measure
MDS	Multidimensional Scaling
ORS	Oral Rehydration Salts
ORT	Oral Replacement Therapy
OTC	Over-the-Counter
STP	Segmentation, Targeting & Positioning
UNICEF	United Nations Children's Fund
URTI	Upper Respiratory Tract Infection
WHO	World Health Organisation

GLOSSARY

Allopathic medicine/ Conventional medicine	A medicine system practised by holders of a degree in medicine. Symptoms of disease or illness are identified, followed by medicine or surgery, which does not include looking at the individual as a whole or determining the underlying cause for illness or disease
Ayurvedic medicine/Ayurveda	A holistic medical system within CAM originating from India, which aspires to integrate and balance the body, mind and spirit
Connected Generation	Generation X and Generation Y combined
ECD Centre	Any building or premises maintained or used, whether or not for gain, for the admission, protection and temporary or partial care of more than six children away from their parents. Depending on registration, an ECD Centre can admit babies (0-18 months), toddlers (18-36 months) and/or pre-school aged children. A pre-school child is a child under 6 years not attending formal school. The terms ECD Centre can refer to a crèche, day-care centre for young children, a playgroup, a pre-school, after hours care etc
Homeopathic remedies	Made from fauna, flora and minerals, these tinctures are repeatedly diluted and shaken vigorously (known as succusion) resulting in a micro-dosage of the original substance. Remedies are available in single remedies or combination remedies
Homeopathy	A biologically-based CAM, developed by Samuel Hahnemann, looks at a person as a whole and determines the underlying cause for an illness or disease, rather than merely the symptoms. Homeopathic remedies are then prepared or purchased and administered to stimulate the body to heal itself
Otitis media	Middle ear infection
Qi gong	A mind body medicine, under CAM, which incorporates posture, breathing techniques and mental focus; it includes Tai Chi and Kung Fu
Reiki	An Energy medicine, under CAM, where a practitioner's hands are placed lightly on or above a patient's body to transfer energy from the practitioner to patient
Tai Chi	A mind-body medicine, under CAM, originating from China also known as moving meditation, which requires participants to move their bodies slowly, gently, and with awareness, while breathing deeply

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND AND MOTIVATION FOR THE STUDY

The medicine market in South Africa is a contentious subject in most circles, with different aspects of the medical industry being the reason for its contentious nature. One of the most important concerns for medicine consumers is the cost of medicine and medical aid in South Africa. There are over 120 distinct medical aid schemes in South Africa, covering the various parts of the population (Ataguba & Akazili, 2010). In 2007, 15.6% of the population in South Africa belonged to a medical aid scheme, 71% of households with medical scheme cover had an income of R8000.00 per month (Eighty20, 2009). The health expenditure per capita for the year 2008 per medical scheme member was close to R10 000 (Anon 5, nd).

Contributions to medical schemes and the coverage members get vary from scheme to scheme, but a general phenomenon around the world is that members need to pay more membership fees and get less coverage. Various reasons for this are available, but most come down to the following:

- Members are more often sick than they are healthy.
  The prevalence of chronic diseases is increasing; doctors identify these illnesses quicker and treat them more aggressively. Medical schemes have a pool of sick members who are supported by the contributions of healthy members. The number of claims to medical schemes has outstripped the contribution increases (Comins, 2009). Medical scheme contribution increases for 2010 varied between 4% and 19%.
- Medical inflation
  Medical inflation is the increased cost of medicines and hospital costs, the increases in technological advancement made in private health care, as well as the increased cost in procedures (Comins, 2009). As seen from the increases mentioned above, South Africa's medical inflation rate is high.
- Pressure from consumers for better health care

> Consumers in private health care insist on having advanced technologies used on them, as well as more specialist care. This leads to the overuse of these technologies and specialised services. (Anon 4, 2007)

With these increased costs and concerns in medical care, consumers need to be more aware of how and where they spend their medical aid funds. Parents need to be aware of not only medical costs, but also general costs concerned with the raising of their children. A study commissioned by four South African insurance groups, namely Sanlam, Discovery Health, Metropolitan Life and Old Mutual found staggering results. Middle to higher income parents will have to pay round R3.5 million to house, mind, feed and educate a child, from birth to 18 years. Lower income parents may not spend as much, but the costs they incur are not that far behind those of middle to high income parents. It will cost parents about R300000.00 in medical care per child for the same period (Car and Home Insurance.net, 2011). This is quite a significant expense which starts adding up from infancy. As seen in later paragraphs children attending Early Childhood Development Centres seem to be ill more often than those who do not.

The national Department of Social Development defines Early Childhood Development Centres as any building or premises maintained or used, whether or not for gain, for the admission, protection and temporary or partial care of more than six children away from their parents. Depending on registration, an Early Childhood Development Centre can admit babies, toddlers and/or pre-school aged children, thus children between the ages of 0-6 years of age. The term Early Childhood Development Centre can refer to a crèche, a daycare centre for young children, a playgroup, a pre-school, after-school care etc. and is defined as an institution registered with the Department of Education as either an Early Childhood Development Centre or a nursery school (Department of Social Development, 2006).

Children in Early Childhood Development Centres are sick more often than those who stay at home. This is especially true in the first year of a child or infant being in daycare or Early Childhood Development Centres. According to the website paediatrics.com it is normal for young children to have six to eight upper respiratory tract infections and two to three gastro-intestinal infections each year (About.com, nd). This figure, however, rises for children in Early Childhood Development Centres. Babycentre.com warns that children in Early Childhood Development Centres could have as many as twelve colds per year (Babycentre advisory board, 2006). The reason for the increased number of illnesses in children is due to a number of

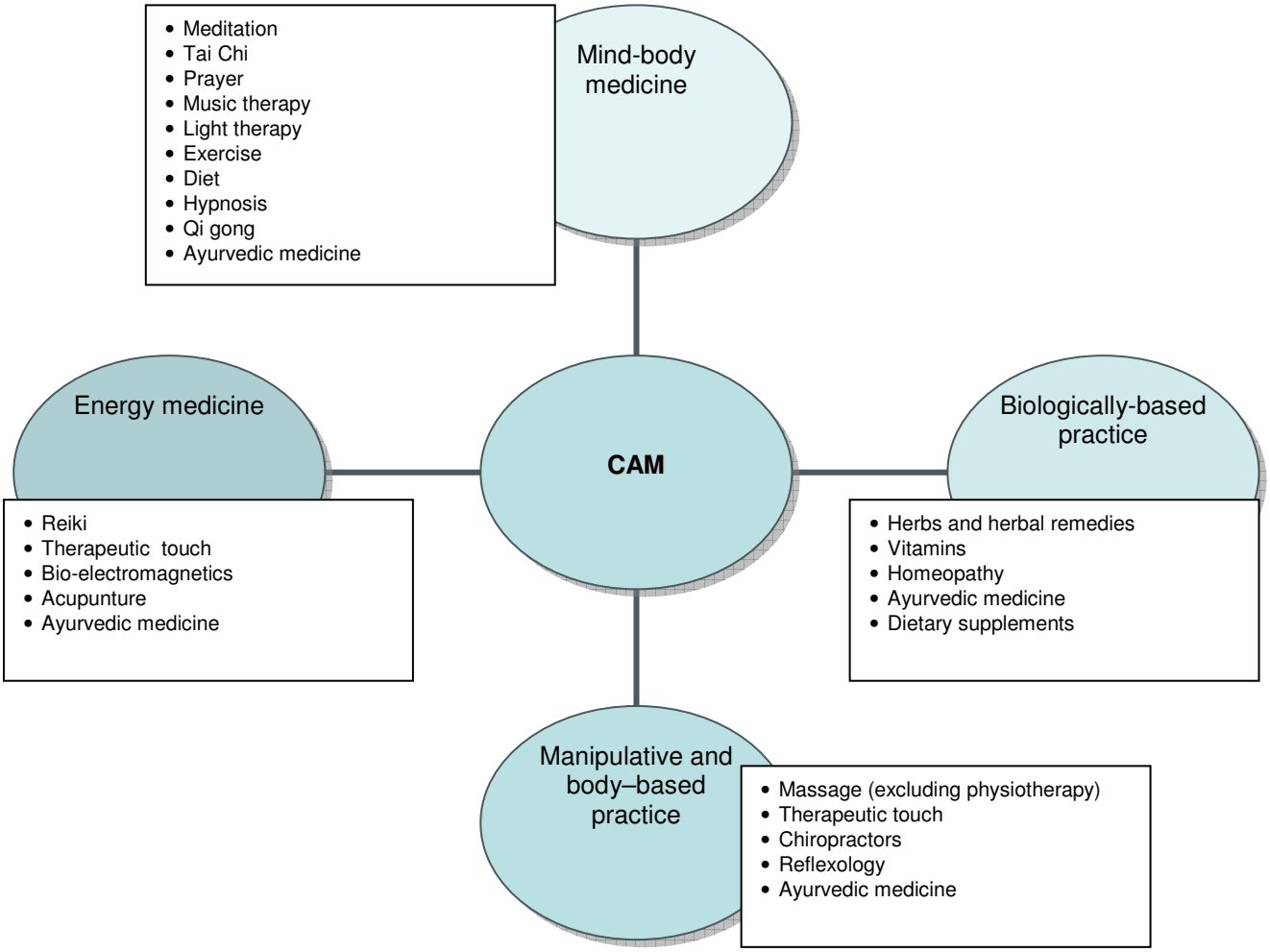
factors, including the close contact children in Early Childhood Development Centres have with caregivers and other children, the weak immune systems of children, weather conditions and their effect on the body, as well as the easy transmission of viruses, bacteria and fungi (Anon, nd). Parents at this stage have two alternatives regarding medication: namely, visiting a medical practitioner and using some form of complementary or alternative medicine.

1.2 THE RISE OF COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM)

Instead of following the usual route of an ill child visiting a doctor, receiving a diagnosis and a prescription of medication to be taken, some people prefer to self-care for their children with over-the-counter (OTC) medication. In the scenario of an ill child, self-care means that the parent(s) will take responsibility for the child's wellbeing. This includes self-recognition or diagnosis, based on emergent signs, symptoms and conditions and using conventional and alternative therapies to restore health (Soller, 1998). Conventional or alternative therapies are used for self-care.

Homeopathy is seen as a treatment within Complementary and Alternative Medicine (CAM). CAM does not have a strict definition, but it generally includes any practice to promote healing which is not widely taught in medical schools or frequently used by doctors in hospitals. See Figure 1.1. The National Centre for Complementary and Alternative medicine defines CAM in the same way and goes further in broadly placing CAM therapies in the categories below. (National Centre for Complementary and Alternative Medicine, 2010)

Figure 1.1: Complementary and Alternative Medicine (CAM)



Source: Author

Referring to Figure 1.1 and the National Centre for Complementary and Alternative Medicine, Complementary and Alternative Medicine, colloquially known as CAM, can be divided into four main areas. These areas include Mind-body medicine, Biologically-based practice, Manipulative and body-based practice and Energy medicine. These practices and therapies are loosely grouped into these categories. Some practices could fit into several categories and should not be taken as a formalised and certain grouping. Each of these categories will be briefly discussed in the paragraphs below

- Mind-body medicine

  Mind-body medicine focuses on the interactions between the brain, mind, body and behaviour, with the intention of using the mind to affect physical functioning and promote health. CAM therapies include meditation, hypnosis, prayer and yoga. Tai Chi is another CAM practice which is part of mind-body medicine. Tai Chi originated in China as a martial art and means of self-defence, and is sometimes referred to as "moving meditation". Practitioners move their bodies slowly, gently, and with awareness, while breathing deeply. There are many different styles, but all involve slow, relaxed, graceful movements, each flowing into the next. The body is in continuous motion, and posture is important. Participants in Tai Chi must also concentrate, putting aside distracting thoughts; and breathe in a deep and relaxed, but focused manner. Qi gong practices can be classified as martial, medical or spiritual. All styles have three things in common: they all involve a posture (whether moving or stationary), breathing techniques, and mental focus. Soft internal styles such as Tai Chi and more vigorous styles such as Kung Fu are incorporated into Qi gong (National Qigong Association, nd.).

- Biologically-based practice

  Biologically-based practices use substances which occur in nature to treat illnesses or to promote wellness. Homeopathy, herbs and herbal remedies, as well as vitamins, form part of these practices.

- Manipulative body-based practice

  These practices focus primarily on the structures and systems of the body, including the bones and joints, soft tissues, and circulatory and lymphatic systems. Some of these practices include spinal manipulation as would be used in chiropractics, reflexology and massage.

- Energy medicine

  According to the National Centre for Complementary and Alternative Medicine, some CAM practices involve manipulation of various energy fields to affect health. Such fields may be characterised as veritable (measurable) or putative (yet to be measured). Practices based on veritable forms of energy include those involving electromagnetic fields (e.g. magnet therapy). Practices based on putative energy fields (also called biofields) generally reflect the concept that human beings are infused with subtle forms

> of energy; Reiki and healing touch are examples of such practices. Reiki is an alternative healing practice in which practitioners place their hands lightly on or just above the person. The crux of Reiki rests in the belief in an energy that supports the body's innate or natural healing abilities and that energy flows from the practitioner to the patient through the practitioner's hands (National Centre for Complementary and Alternative Medicine, 2010)

Ayurvedic medicine, also known as Ayurveda, originated in India more than 2000 years ago. Ayurveda means 'the science of life'. Many therapies used in Ayurvedic medicine are also used on their own as CAM - for example, herbs, massage and specialised diets. Ayurvedic medicine aspires to integrate and balance the body, mind, and spirit; hence the reason that some view it as "holistic" or whole medical system. For this reason, Ayurveda occurs in all four categories, as seen in Figure 1.1. Ayurvedic medicine can also treat specific physical and mental health problems. Ayurvedic practices also aim to cleanse the body of substances that can cause disease, thus helping to re-establish harmony and balance. Ayurvedic treatment is tailored to each person individually. Practitioners expect patients to be active participants, owing to the many Ayurvedic treatments which require changes in diet, lifestyle, and habits (National Centre for Complementary and Alternative Medicine, 2010).

A study conducted in 2000/2001 found that the prevalence of CAM among the Indian community in Chatsworth, South Africa, was similar to that of the rest of the world. Various CAM therapies were used to treat chronic ailments which were complementary to allopathic medicines. Allopathic medicine relieved symptoms, but did not cure the underlying problem. 79% of CAM users in this study had positive outcomes with their treatments (Singh, Raidoo & Harries, 2004).

Homeopathy is a biologically-based treatment within CAM and is the focus of this study. Homeopathy as an alternative works in a different way from conventional medicine (also known as allopathic medicine). Allopathic medicine identifies symptoms and diseases, followed by treatment of these symptoms and diseases by means of medication and/or surgery without looking at the individual as a whole or determining the underlying cause of the disease (Cook, 2010). Homeopathy works together with the human body's natural processes to heal itself. By utilising minute doses of naturally-occurring substances that are specially prepared by the process of homeopathic potentisation, a person is treated at a bio-energetic level with the aim of

restoring health. Simply, homeopathy treats the person, not the disease. Homeopathic medicines aim to stimulate the body's innate healing ability to restore health rather than palliating the signs and symptoms of a disease (Anon 2, nd).

According to the World Health Organisation (WHO), homeopathy is seen as the second largest medicine system in the world, experiencing an annual growth of 20-25% (Tierney, McPhee & Papadakis, 2004). In South Africa, more and more medical doctors are interested in homeopathy (Anon 3, nd). Homeopathy is said to have arrived in South Africa with settlers in 1820, Dutch and German settlers being largely responsible for the introduction to homeopathy. Currently, homeopathic remedies in South Africa can be obtained in several ways. Firstly, by visiting a registered homeopath and having the homeopath provide his/her own remedies. Secondly, homeopathic remedies are available to the public over-the-counter (OTC). OTC homeopathic remedies are available in pharmacies, general food retail stores, online and in health stores. More detail on the homeopathic scenario in South Africa is discussed in Chapter 4.

This study will not put one method of medicine up against one another, but rather determine whether one segment in the market, namely parents with children in Early Childhood Development Centres, use OTC homeopathic remedies; to which extent homeopathic remedies are used and whether homeopathy is used as complementary or alternative treatment to allopathic medicine.

Ultimately this study proposes to build a profile of the homeopathic market, more specifically the market segment of parents with children in Early Childhood Development Centres. Profiling a market segment is crucial for the marketer, as it describes market segments according to size, demographics, psychographics, lifestyle, behaviour patterns and product usage (Strydom, 2004). Once this market segment has been profiled, it might become apparent whether it is at all a viable segment for the OTC homeopathic remedy manufacturers.

1.3 PROBLEM DEFINITION

1.3.1 The Research Problem

Consumers are under increased pressure financially to get the best medical care their money can buy. Homeopathy is a route which some parents might choose as either complementary or

alternative to the conventional medication currently being used. It is important to determine whether parents with children in Early Childhood Development Centres represent a target market for the homeopathic industry, and if so, what their attitudes and perceptions surrounding homeopathy might be. Not only will it be beneficial to determine whether parents with children in Early Childhood Development Centres use homeopathic remedies, but also of great importance to know to what extent parents use homeopathy.

Profiling a target market assists an industry in determining how a target market prefers to be marketed to. In this study, the question regarding the use of opinion leaders and reference groups in the marketing strategy of homeopathic remedy producers will be looked at. A closer inspection of the distribution channel(s) used by OTC homeopathic remedy producers will also be undertaken.

1.4 RESEARCH OBJECTIVES

1.4.1 Primary Objective

The primary objective of this study is to build a profile of the homeopathic market, looking at the use of OTC homeopathic remedies at Early Childhood Development (ECD) centres in the Pretoria East region. This study will focus on the parents of children attending ECD centres and not the ECD centres per se. A closer look will be taken at typical users and administrators of OTC homeopathic remedies in the Pretoria East region. Pretoria East will be defined as per the municipal boundaries set by local government.

1.4.2 Secondary Objectives

The secondary objectives of this study include the following:

- Measuring the perceptions and attitudes towards OTC homeopathic remedies of parents with children in Early Childhood Development Centres.
- Determining the extent of use of OTC homeopathic remedies among parents with children in Early Childhood Development Centres in the Pretoria East region.
- Evaluating whether parents with children in Early Childhood Development Centres in the Pretoria East region who use OTC homeopathic remedies view homeopathy as complementary or alternative to conventional medicine.

- Determining the brands of homeopathic remedies used by parents.
- Discussing the positioning of homeopathy in the minds of parents with children in ECD centres in the Pretoria East region.
- Identifying further areas for research regarding the homeopathic market in South Africa.

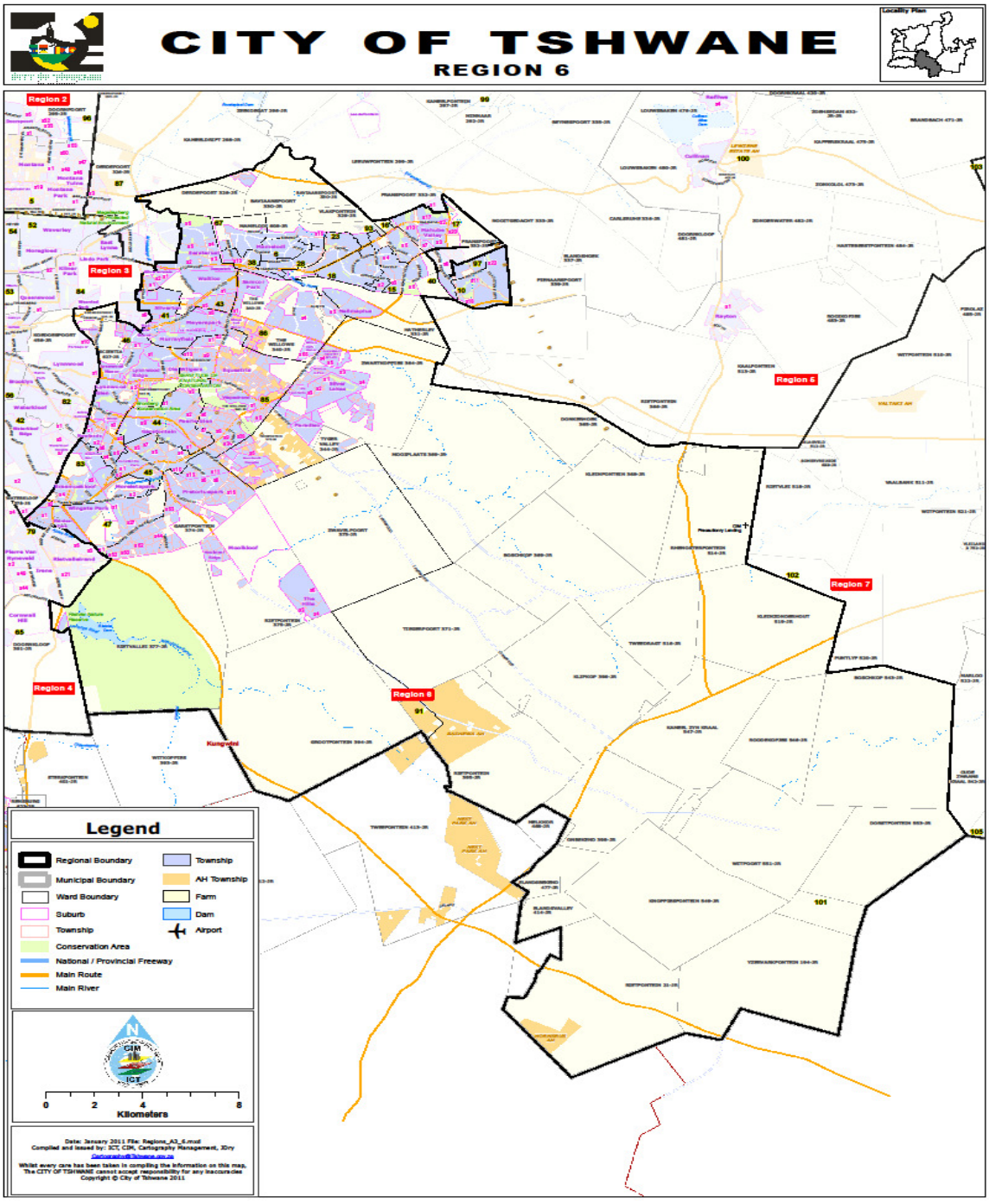
In the next section, the research methodology for this study will be discussed.

1.5 RESEARCH METHODOLOGY

In this section, a closer look will be taken at the research design and the methodology of this study.

In order to solve the research problem, the research design is a self-administered survey among parents with children in Early Childhood Development Centres in the Pretoria East region. The population for this study includes all Early Childhood Development Centres in the Pretoria East region. For the purposes of this study, the Pretoria East region will be classified as per the demarcation of the municipal area, according to local government. As can be seen from the map below, in Figure 1.2 the Pretoria East region is identified as Region 6 by the City of Tshwane. The Pretoria East region or Region 6 stretches to Derdepoort, Baviaanspoort and Mamelodi in the North and Rietvallei, Grootfontein and Rietfontein in the South, bordering on Centurion. In the East, the region lies below the Magaliesberg with areas including Boshkop, Yzervarkfontein and Dorstfontein. The West includes Lynnwood Manor, Newlands and Erasmuskloof, but excludes the Waterkloof area.

Figure 1.2: Map of Pretoria East (Region 6)



Source: City of Tshwane, 2011

The total number of Early Childhood Development Centres in the Pretoria East region is not clear. A request was sent to the Department of Social Development in order to obtain specific details. From these details, the total number of Early Childhood Development Centres in the Pretoria East region and a complete list of these centres, together with their contact details, were to be obtained. However, the list was outdated and incomplete, as mentioned in the limitations of the study in Chapter 7. It was therefore decided to make use of the Pretoria 2010/2011 telephone directory and to identify ECD centres with contact details in the directory to develop a sample frame. Once this was done, the sample frame was refined to fit in with the Pretoria East area as per the Tshwane local government area map. A census was used to contact all principals and owners of Early Childhood Development Centres, to determine whether they were willing and available to be part of the study. Once permission was granted, questionnaires were sent to parents, via the Early Childhood Development Centres. With the assistance of the school management, questionnaires were placed in the bags of the children. Parents willing to participate in the study had to complete the questionnaire and return it to the ECD centre. Specific details regarding the research methodology are provided in Chapter 5.

The research tool used for this study was self-administered questionnaires. The sections answered in the questionnaire included:

- Demographics of the household
- Attitude and perception towards homeopathy
- Usage of OTC homeopathic remedies
- The opinion of homeopathy as complementary or alternative to conventional medicine
- Brands of OTC homeopathic remedies used
- General health status of the family

The questionnaire design included closed and open-ended questions. Open-ended questions provide the researcher with a large amount of information on the use of homeopathy, although the answers might vary significantly and might be labour-intensive to code and analyse statistically (Tustin et.al., 2005). The closed-ended questions included various forms such as dichotomous questions, multiple-choice questions, and several scaled questions. With these methods, a possible profile could be determined of the OTC homeopathic market specific to the market segment of parents with children in Early Childhood Development Centres.

The approach to the fieldwork included making contact with all the possible Early Childhood Development Centres within the sample, to determine whether they would allow the researcher to place questionnaires in the bags of children in their care. These questionnaires were sent with a covering letter to parents, requesting them to complete the questionnaire and send it back to the Early Childhood Development Centres within a two-week time frame. The completion of the questionnaire was entirely voluntary and within the ethical requirements and guidelines, as set out by the Unisa research policy.

Once questionnaires were completed and received from respondents, data was captured, cleaned and edited. The assistance of a statistician was required to assist with the statistical analysis and interpretation of the results. The data analysis and findings are discussed in Chapter 6.

1.6 CHAPTER OUTLAY

The chapters for this study include:

Chapter 1: Introduction - where the background, problem statement and research methodology were discussed.

Chapter 2: Profiling a market segment - where the theoretical building blocks of segmentation were discussed.

Chapter 3: Illnesses, ailments and treatment of children in Early Childhood Development Centres.

Chapter 4: Overview of homeopathy as part of Complementary and Alternative Medicine.

Chapter 5: Research Methodology. In this chapter the research methodology was explained.

Chapter 6: Data Analysis and Findings. In this chapter the data generated were discussed and the main findings summarised.

Chapter 7: Conclusions and Recommendations.

CHAPTER 2:
PROFILING A MARKET SEGMENT

2.1 INTRODUCTION

It is not possible for an organisation to satisfy the needs of all possible consumers. The total market should be divided into segments that have similar characteristics and behaviour. The aim of segmentation is to create meaningful and manageable subgroups, which the organisation is able to satisfy with their marketing offering in a profitable way, as discussed by du Plessis, Strydom & Jooste (2012, p. 126). The segmentation process starts with the identification of markets by means of the STP process which encompasses segmentation, targeting and positioning, and is the focus of this chapter.

2.2 MARKETING AND CUSTOMER BEHAVIOUR

There are various definitions and descriptions which define marketing and marketing management. However, the definition provided by du Plessis, Strydom & Jooste (2012, p. 5) is succinct: Marketing is the process by which organisations create value for customers in the form of ideas, goods and services to facilitate satisfying exchange relationships and to capture value for customers. A similar definition is provided by Kotler & Keller (2006, p. 6), which states that marketing management is the art and science of choosing target markets and getting, keeping and growing customers through creating, delivering and communicating superior customer value.

From these definitions several concepts can be identified, which are important for all organisations to consider. Some of these aspects include the value that marketers need to create for their customers and the development of customer relationships. It all comes down to being customer-centred. Du Plessis, Strydom & Jooste (2012, p. 5) discuss several facets of customer centricity, which include the following:

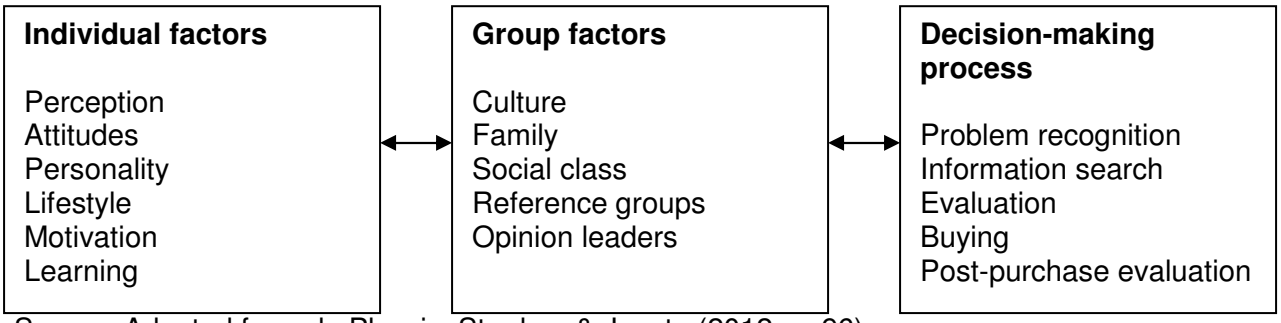
- Understanding the emotional experience customers have with the organisation's product, in order for the organisation to engage with its customers.

- Organisational orientation towards the needs of the customer instead of the organisation for itself
- Listening to the customers and responding to the information they provide regarding their needs, issues, complaints and suggestions etc.
- The development of relationships with customers and focusing on individual customer needs is key.
- The creation of customer value leads to a sustainable competitive advantage.

In order for organisations to become customer-centred and to benefit from it, they need to understand the behaviour of their customers. Jobber (2010, p. 109) emphasises that in-depth knowledge of customers is a prerequisite for successful marketing. Customer behaviour is defined by Brijball Parumasur & Roberts-Lambert (2012, p. 2) as a combination of activities and influences that occur before, during and after the purchase itself. The roles customers play could be divided into three, which includes the selector, payer and user. Brijball Parumasur & Roberts-Lambert (2012, p. 4) describe the selector as the person who participates in the procurement of the product, the payer is the person that pays for the purchase and the user is the actual consumer or user of the product. These three roles could be portrayed by one person or several, especially when looking at a household environment and purchases such as OTC homeopathic remedy purchases for children. The consumers are ultimately the children in the household, while the payers and selectors could be parents or other important figures in the household.

Customer behaviour also looks at the way decisions are made and also the factors which might influence the decisions customers make. In order to get a better understanding of these factors and the decision-making process, Figure 2.1 provides a concise view of customer behaviour.

Figure 2.1: Model of Customer behaviour



Source: Adapted from du Plessis, Strydom & Jooste (2012, p. 96)

Although the focus of this study is rather a profile of a market segment specific to the use of OTC homeopathic remedies in households with children attending ECD centres, it is necessary to understand how customers make decisions and what influences their decisions. For this purpose, the customer behaviour model will only be discussed in brief in the paragraphs to follow.

Referring to Figure 2.1 above, internal factors which could influence customer behaviour are those internal and unique aspects of a customer which could influence the customer's behaviour. Brijball Parumasur & Roberts-Lambert (2012, p. 2) refer to perception as the entire process through which a person becomes aware of his or her environment and interprets it in such a way that it will fit into his or her frame of reference. Attitude is described by Jobber (2010, p. 127) as an overall favourable or unfavourable evaluation of a product or service. Personality is a set of distinctive human psychological traits that lead to relatively consistent responses to environmental stimuli. It could be described in several terms, including self-confident, sociable, defensive, adaptable, autonomous etc (Kotler & Keller, 2006). Lifestyle refers to a customer's way of living (Brijball Parumasur & Roberts-Lambert, 2012). Motivation refers to a need that is sufficiently pressing to drive a person to act, as described by Kotler & Keller (2006, p. 194). Learning is defined as the result of a combination of motivation, attitude, experience and repetition (du Plessis, Strydom & Jooste 2012).

Group factors in turn are determined by other people who could influence a customer's behaviour. Culture refers to the fundamental determinant of a person's wants and behaviour. Children acquire a set of values, perceptions, preferences and behaviour through family and other key institutions such as schools and religious centres (Kotler & Keller, 2006). Du Plessis,

Strydom & Jooste (2012, p. 108) refer to family as a nuclear group whose members live in close contact with one another and act as a decision-making unit when they attempt to satisfy individual needs from one shared source (referring to family income). Social class is a group of people in a country who are considered equal in status, who might socialise together on a regular basis and who share similar behaviour patterns (Brijball Parumasur & Roberts-Lambert 2012, p. 99). The social classes in South Africa include the lower class, working class, middle class, upper middle class and the upper class. The most preferred method of determining social class in South Africa is by means of the Living Standards Measure (LSM). Details surrounding LSM as a possible segmentation tool is discussed later in this chapter.

Reference group refers to a group of people that influence a person's attitude and behaviour (Jobber, 2010). People refer to these groups in forming responses and comparing their behaviour. Reference groups could consist of family members, celebrities, friends, peers or work colleagues, to name but a few. An opinion leader is a person within a reference group from which other members seek guidance on a particular topic (Jobber, 2010). Kotler & Keller (2006, p. 177) go further in stating that opinion leaders offer advice and information on products, brands and how a product can be used in an informal way. Reference groups and opinion leaders play an important role in the decision-making of parents regarding the use of OTC homeopathic remedies for their children, as will be seen in the results of this study.

The customer decision-making process is a five-step process which ranges from problem recognition through to post-purchase evaluation. The steps shown in Figure 2.1 could occur in sequence, but customers could also enter the process at any stage and follow any order. It is important to note that both the individual and group factors could influence the customer decision-making process. An entire chapter could be dedicated to the customer decision-making process; however, this is not the focus of this study and will therefore only be briefly discussed. The customer decision-making process starts with the problem recognition, also referred to as the need recognition. A customer realises that there is an imbalance between his/her current state and desired state and wants to change the current state in which he/she finds himself into the desired state (Brijball Parumasur & Roberts-Lambert 2012). Kotler & Keller (2006, p. 191) note that a need can be triggered by either internal or external stimuli. Internal stimuli are a person's natural needs such as hunger or thirst. External stimuli could include advertisements, brand names mentioned by friends or the design of a product. From this point, the customer wants to fulfil the need he or she has and moves on to the next step.

The second step of the customer decision-making process refers to the search for information. McDaniel, Lamb & Hair (2008, p. 148) note that customers search for information on the various alternatives that might satisfy their needs. The search for information could occur internally, externally or both. Internal information search refers to a customer relying on previous experience to obtain information. External information search could include information obtained from personal sources (such as friends, family and work colleagues) or commercial sources (such as advertisements and salespeople). Another possible method of information search is third-party reports which include product-testing reports and blogs (Jobber, 2010).

The evaluation of possible alternatives is described in the third step of the customer decision-making process. Brijball Parumasur & Roberts-Lambert (2012, p. 259) discuss the way that the evaluation of possible alternatives is carried out, based on a pre-established set of criteria. Customers use different criteria when evaluating products and retail outlets and change the criteria to suit the situation or environment. The level of involvement in the evaluation of alternatives varies from person to person or even in different situations. The result of this step is that the customer is at a point where a decision can be made to act upon the need with a possible alternative.

The best alternative is chosen, with the customer making a decision to purchase that chosen alternative.

The last step in the customer decision-making process, as seen in Figure 2.1, is post-purchase evaluation. McDaniel, Lamb & Hair (2008, p. 151) note that customer satisfaction regarding the purchase decision is determined by how well their expectations are met with the purchase made. Should a customer feel uncertain about whether the purchase was the right decision, this is referred to as cognitive dissonance (Jobber, 2010, p. 116). It is usually as a result of rejecting other alternatives, which could have attractive features. Of course, the level of dissonance is not the same for all purchases made by customers, but could increase according to the following: the expense of the product, the difficulty of the decision for the customer, an irreversible decision and whether the customer has a tendency to experience anxiety.

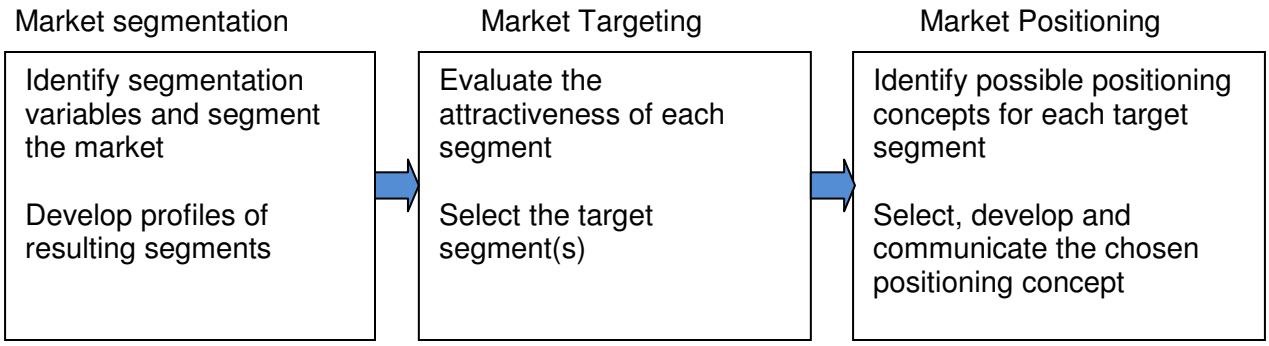
2.3 IDENTIFYING MARKETS: SEGMENTATION, TARGETING AND POSITIONING (STP) PROCESS

Du Plessis, Strydom & Jooste (2012, p. 125) describe the activity of identifying market segments as a process which involves three steps: namely, segmentation targeting and positioning. Strydom (2011, p. 97) goes further in saying that target marketing groups consumers with common interests and needs together. Marketers develop products and marketing programmes tailored to the selected segment(s), rather than trying to satisfy the entire market. Reasons for following a targeted approach seem self-evident, but will be looked at briefly below:

- Marketing is easier as a result of the targeted market, which is smaller than the entire market. It is therefore easier to address this smaller group.
- It is more cost-effective to market to a smaller group of customers who are more likely to need the product.
- Under-served or un-served markets can be identified, which leads to the possibility of increased profitable opportunities. This is known as niche marketing.
- Limited marketing resources can be used more efficiently to achieve a higher return on marketing investment.
- Customers have a higher likelihood of satisfaction when products are made with due consideration for the customers' needs, demands and preferences. This in turn leads to a better relationship with customers.

The target marketing approach consists of a three-step process. This process consists of market segmentation, targeting and positioning, also known as the STP process. See the adapted Figure 2.1 below, as described in Kotler (1994, p. 265), for a better idea of what these steps entail.

Figure 2.2: Steps in market segmentation, targeting and positioning



Source: Kotler (1994, p. 265)

A closer look will now be taken at each of the steps in the STP process.

2.3.1 Step One: Segmentation

Segmentation is a process whereby individuals within the broad mass market with similar characteristics, expectations or needs are grouped together (Strydom, 2011). Simpler still is the definition given by McDonald and Dunbar (2004, p.34) which is that market segmentation is the process of splitting customers or potential customers in a market into different groups or segments.

In order for a market segment to be potentially viable, the following characteristics must be considered (Perrault & McCarthy, 2002):

- Market segments need to be similar within
  Customers in a market segment should be as similar as possible with respect to their likely responses to the marketing mix.

- Market segments must be different from one another
  Customers in different segments should be as different as possible with respect to their likely responses to the marketing mix.

- Market segments must be big enough to be profitable

- Market segment dimensions must be useful enough to identify customers and to make a decision on the marketing strategy to be followed.

Strydom (2011, p.110) goes further in providing similar criteria to which each segment needs to be evaluated, in order to determine its attractiveness as a target market. These criteria include:

- Accessibility
  Marketers should be able to communicate with, as well as distribute to, their selected target markets.
- Defendability
  An organisation's product or service offering should be distinctively different in order to provide the organisation with a competitive advantage over its competitors.
- Tangibility
  The selected target market should be of sufficient size to make it profitable for a good return on investment.
- Distinctiveness
  The selected target segment should be different enough from other segments so that a clear product differential can be reached.

Segmentation takes place, based on several dimensions which the marketer can use. These dimensions include consumer-rooted and consumption-specific means. The adapted Figure 2.3 from Schiffman and Kanuk (2010, p. 76) below provides a visual understanding of these dimensions.

Figure 2.3: Market segmentation dimensions

	Consumer-rooted	**Consumption-specific**
Facts	Geographic location Demographics	Usage rate Usage situation User status
Cognitions	Psychographics LSM(Living Standards Measure)	Benefits wanted Perceived brand loyalty and relationship Buyer-readiness stage Attitude towards the product

Source: Schiffman and Kanuk (2010, p. 76)

Consumer-rooted segmentation methods look at two types of personal characteristics. The first is facts - that can be readily determined based on objective criteria - and the second is cognitions - which are determined through indirect tests dividing the market into subjective groups (Schiffman & Kanuk, 2010). Geographic and demographic segmentation methods are discussed under the factual aspects; psychographics and the Living Standards Measure (LSM) are discussed under the cognitions aspects. A brief discussion of each dimension will follow.

Geographic segmentation

According to Strydom (2011, pp.101-102), geographic segmentation looks at variables such as urban/rural areas, size of the city, density and climate. This method of segmentation is very basic, but is still relevant for marketing to the mass market and for the marketing of undifferentiated products in segments that are easily developed, based on location (Strydom, 2011). Geographic segmentation assumes that everyone within a predetermined area will react in the same manner (McDonald & Dunbar, 2004). This is not a very sure-footed assumption to make and use within marketing, but could be better applied when coupled with demographic segmentation.

Demographic segmentation

Segmentation based on demographics divides the market, based on variables such as age, gender, family size, family life cycle, income, occupation, religion, race and nationality (Kotler & Keller, 2006). Demographic segmentation is used extensively as a result of the customers' needs, preferences and usage being linked to these variables. However, McDonald and Dunbar (2004, p.35) warn that it is unrealistic to expect a stereotypical behaviour of someone just because they have turned a particular age. The authors do agree, however, that demographic segmentation is indeed an important tool with which marketers can segment markets. We will have a brief look at each of the most important variables under demographic segmentation.

- Gender

  McDaniel, Lamb & Hair (2008, p. 217) note that women make purchasing decisions regarding a large variety of goods and services, which includes goods that were not necessarily traditionally marketed to them, such as electronics, over-the-counter medication and new cars. Several industries have realised that segmenting markets based on gender has become somewhat blurred. Products such as cosmetics, which

had traditionally been segmented only to women, are now being segmented to men as well (Cant *et al.,* 2006a).

According to Strydom (2011, pp.103-104), more and more women are entering the labour market. Many of these women are single mothers. Due to this change, a large number of purchasing decisions, viewed in the past as a men's domain, now need to be taken by women. These include decisions around motor vehicles and insurance policies. Working mothers are also pressed for time, which influences decisions regarding convenience products, childcare services and food that is quick and easy to prepare. Women are also influencing the production and design of products and services. Some manufacturers, such as Volvo, are calling on women to assist in the design of vehicles that will appeal to those women making decisions about vehicle purchases (Gartner, 2004).

Besides the changing role of women, it is also important to look at the traditional role of women in the household: namely, that of caregiver, nurturer and mother. Along with the general duties of a mother, there is also the decision-making regarding the health of the family. Of course the decisions surrounding the health of the family, and more specifically that of children, do not necessarily lie solely with the mother of the household, but the mother's influence, knowledge and information in this regard will determine the medicine and healthcare-purchasing decision for the entire family. In a household where children are involved, mothers are mostly responsible for the purchasing of groceries in the household. There is a considerable increase in household expenditure on food, apparel, services and healthcare, once children are part of a family (Leeming & Trip, 1994). The authors also note that mothers today strive for camaraderie with other mothers and knowledge in order to make informed decisions for their family.

It is important for homeopathic manufacturers to take cognisance of the role of women in their market segments, especially when women are responsible for the purchasing decisions of a family.

- Family life-cycle

Kotler & Keller (2006, p. 181) discuss age and family life-cycle together. It is important for marketers to note that consumer wants and capacities change with age. The nutritional needs of a child will aid in explaining this. The nutritional needs of a newborn baby differ significantly from those of a 6-month old baby and from those of a toddler. Manufacturers of baby and toddler nutritional products, such as Elizabeth Anne's Purity, understand these different needs and have a wide range of products that fit each child's nutritional stage. As with nutrition, the healthcare needs of a family also differ with each stage of the family life-cycle.

Just as with age, the family life-cycle is an important and dynamic aspect of segmentation. The stages of the family life-cycle have changed over the last number of years, but loosely include the following traditional stages, as seen in Brijball Parumasur & Roberts-Lambert (2012, pp. 276-277) :

- Young, single (Bachelorhood)
- Young, married (Honeymooners)
- Young, married with young children (Parenthood)
- Older, married with older children living in
- Older, married without children living in (Post-Parenthood)
- Elderly married
- Elderly widowed (Dissolution)

The family life-cycle is a combination of demographic variables, such as marital status, family size and ages of family members, as well as employment status (Cant, Brink & Brijbal 2006b). Naturally, there have been a number of changes to the traditional family life-cycle which include the high rate of divorce in the world, delayed parenthood, children remaining in the parental household for longer and children from previous marriages being added to current families, to name but a few. These changes have encouraged researchers to look into redefining the traditional family life-cycle, as could already be seen several decades ago in Gilly & Enis (1982). For the purposes of this study, the life-cycle itself is not of importance, but rather the presence of young children in pre-school and day-care. Owing to the aforementioned changes to the family life-cycle

over the years, there could be young children in the household during several stages of a family's life-cycle.

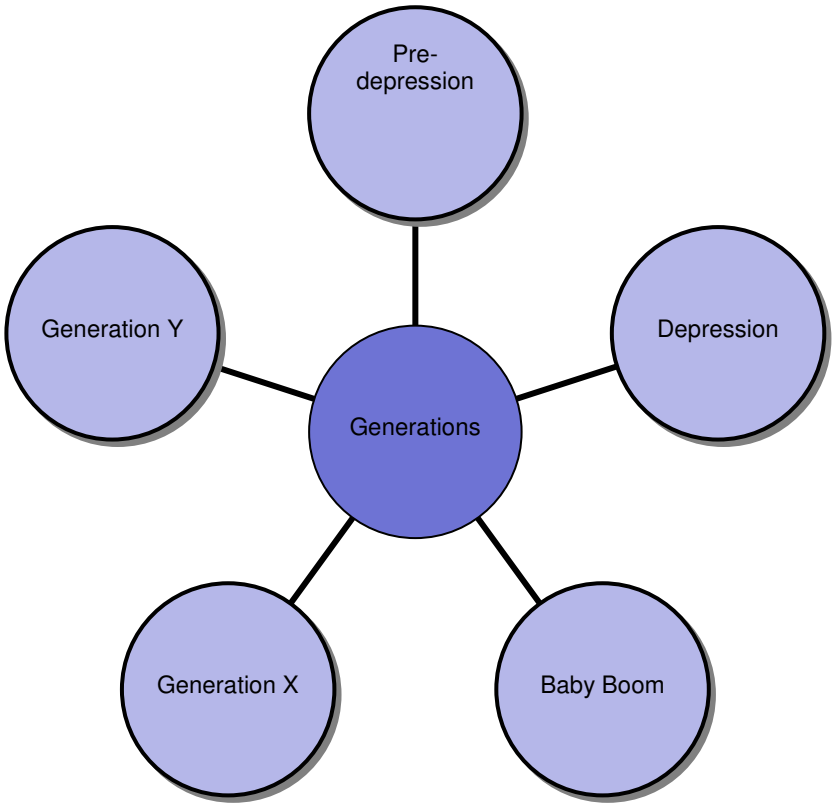
Perhaps a better means of segmenting would be that of generational segmentation, also known as age subcultures.

- Generational segmentation

A population can be divided into various age groups or generations. These groups of people experience a common social, political, historical and economic environment (Cant & Machado, 2005).

The major age cohorts or generations can be seen in Figure 2.4 below:

Figure 2.4: Generations



Source: Author

Each of these generations is unique in their decision-making and response to marketing efforts by organisations. A brief discussion on each of these generations will follow below.

- Pre-depression generation

  The pre-depression generation consists of members of society born before 1930; they experienced the Great Depression as children and were adults during World War II. They are the aged part of modern-day society, with unique needs regarding health care (Cant *et al.,* 2006a).

- Depression generation

  This generation was born between 1930 and 1946. They grew up during the affluent years of the 50's and 60's. They experienced Rock 'n Roll first-hand. Currently, they are heading towards, or are already in, the retirement phase of their lives. This is also known as the silent generation: they believe in hard work, they are conservative in nature, they like order and rules, as well as a clearly-defined hierarchy. This generation are also the grandparents of Generation Y. (Cant *et al.,* 2006a)

  Cant *et al.,* (2006b, pp. 101-104) discuss that even though these two generations (the pre-depression and depression generations) are seen as aged or elderly, there are a number of important aspects marketers should remember when marketing to these generations, as follows:

  - As a result of healthier lifestyles and improved healthcare, these two generations have longer life expectations
  - These two generations have enormous economic clout, especially in the USA and, as a result, marketers are targeting these two generations for products such as exercise facilities, tourism, cosmetic surgery and education.
  - These are not necessarily generations struggling to get by. In the USA, these two generations represent 50% of the discretionary income.

- These generations are the major consumers of luxury items, including cars, alcohol, holidays and financial products.
- Some members of these generations are still actively employed, doing volunteer work, or are looking after their grandchildren.
- The numerical ages of these generations are not necessarily the age they feel. Marketers are using people a little younger than this market to advertise the benefits of products rather than the appropriateness thereof.
- The ageing market is by no means homogeneous in nature. They are diverse in their opinions, interests and actions.

- Baby Boom generation

  The Baby Boomers were born between 1947 and 1964 and are one of the largest generations in the world, including South Africa. As the name suggests, there had been a boom in birth rates during this time. They experienced Apartheid, racial discrimination, Flower Power, Woodstock and the Hippie era, together with recreational drugs, as well as first-hand experience of divorce. This generation has a live-for-today attitude (Cant *et al.,* 2006a). This generation is comprised of 50% of people currently in managerial or professional occupations, with more than half having a college degree. This market is known for having high education levels, high incomes and dual career households. Due to this, the Baby Boomers struggle to cope with family and career responsibilities. Machado in Cant *et al.,* (2006b, p.104) mentions further marketing factors for this generation:

  - This is a very lucrative market, making important consumer-purchasing decisions. It contains a small sub-segment of trend-setting consumers, known as “yuppies”. Yuppies are financially well-off, focusing less on status products, wanting to travel more, wanting to be physically fit, planning a second career and searching for more enriching experiences.
  - Baby Boomers tend to dislike growing old. For this reason they are the ideal market for health club memberships, vitamins and supplements, as well as plastic surgery.
  - This is a highly consumption-motivated generation, buying for themselves, their homes and for others.

- Generation X

  Generation X was born between 1965 and 1978. Generation X[ers] - also known as Gen X - like options, flexibility and dislike close supervision in the workplace. They prefer an output-driven system, where the organisation they are employed by has bought their output. They like the freedom to get the work done in their own time and space (Cant *et al.,* 2006a).

  Gen X is hard to reach and categorise. It is fragmented because of the antagonistic relationship it has with the media and blatant brand-labelling. Gen X has been inundated over the years with advertisements, which has led to an independent and sometimes cynical thinking, making them a hard market to reach. As a result, many incorrect assumptions have been made about this generation, such as a generation of slackers with no drive (Cant *et al.,* 2006b). These assumptions lead organisations to ignore this market rather than engage it. However, this generation has pioneered the development of technologies now in daily use, such as BlackBerries®, laptops, email and the Internet. Companies wishing to reach this market need to embrace technology. A large portion of Gen X are currently experiencing parenthood, using technology as part of their parenting tools, whether it be to search for information or to keep track of their children, by means of GPS gadgets and mobile phone applications (Malone, 2007).

  Job satisfaction is of extreme importance to Gen X, but they will not sacrifice their family life for a job. Coughlin and Wong (2003, p.25-30) further describe this generation as self-sufficient, ambitious and independent, with a keen sense of family responsibility. This generation is seen as committed to the family, motivated to improve on their parenting and being more involved in the family. Gen X parents are very aware of childhood nutrition, obesity and health and are actively making decisions regarding the health of their families.

  This generation has been exposed to malls from an early age and has been subsequently preoccupied with shopping. There is a delay in this generation settling down, getting married and starting a family (Johnson, 2006). Malone (2007, p. 520) mirrors this, reporting that the average age for motherhood in New

South Wales, Australia, has increased in the 34-39 age group. Births among women aged 35 years and older have increased from 18.1% in 2001 to 20.1% in 2005. Gen X are currently parents of children in pre-school and day-care. Gen X, together with the older Gen Y, and their use of OTC homeopathic remedies, is the focus of this study.

- Generation Y

  Born during 1979 to 1994, these are the children of the Baby Boomers. They reaped the fruits of democracy in South Africa. Gen Y grew up with computers and the Internet, together with parents losing jobs and an economic downturn. Gen Y is independent and optimistic, confident and sociable (Cant *et al.,* 2006a). Despite being young, Gen Y is a very large demographic with a high level of brand loyalty. It is also found that due to this loyalty in brand choice, Gen Y can sway Gen X, provided that a younger age group is portrayed in advertisements aimed at Gen X. Due to the connected nature of Gen Y, new brands could have a make-or-break period shortly after introducing products to the market (Johnson, 2006).

  Gen Y will soon be entering adulthood and, as research is only presenting itself for the teenage Gen Y, more information needs to be gathered in order to understand the adult Gen Y's decision-making and purchasing behaviour.

Johnson (2006, pp.1-7) discusses Gen X and Gen Y as a combined group, also referred to as 'the connected generation'. This is the most technologically-fluent generation, embracing cellphones, texting (smsing) and other forms of communication. This generation is also known as the 'always on' generation. This generation is actively re-inventing the way organisations should market, as well as the rules of engagement between organisations and the market. Gen X members are heading for the forties and will, together with some members of Gen Y, be responsible for a large proportion of company decision-making, influencing not only Business to Consumer decisions, but also Business to Business decisions. The connected generation will be earning more and spending more on their families and themselves, making them a very attractive market. Companies need to realise that word-of-mouth and loyalty are crucial as never before.

Johnson (2006, pp. 7-13) states that the previously important characteristics such as age, income and geographical area are not relevant when marketing to the connected generation. The buying and decision-making behaviour of the connected generation is underpinned by the following five criteria:

- Experience

  It is imperative for the connected generation to have first-hand experience in what they do, from a wide range of activities that might be adventurous (eg kite boarding, mountain biking, rock climbing) or more sedate (eg gardening, attending a live concert or cooking a meal from scratch). This generation loves to feel alive in their experiences by engaging as many senses as possible. These experiences ignite conversation about it (Johnson, 2006). Sharing their experiences in a personal manner, using a public forum such as Facebook or Twitter, is what gets this generation excited.

- Transparency

  The connected generation detests anything artificial (Johnson, 2006). This generation insists upon transparency. Companies need to take responsibility and be accountable for their actions. This generation accepts that companies make errors or are flawed; what is unacceptable is denying errors or problems. The increase in blogging equates to the need for transparency from this generation. Companies are realising the importance of bloggers and their influence on the market. With bloggers sending information to and fro, referencing their opinions and exposing companies' good and bad areas, companies need to listen and respond.

- Reinvention

  Due to the rapid and constant change this generation is insisting upon, companies need to realise that they need to adapt, reinvent or they will fall by the wayside. Companies need to stay flexible and be willing to adapt (Johnson, 2006).

- Connection

  Cooperation is key for this generation. People are blending their talents with everyone, working together to improve the experience for everyone. This includes the cooperation between individuals and companies, with a true desire to share information and help improve the brand. It is the open sharing of information which is invaluable to the connected generation, from both the company aspect and the individual (Johnson, 2006).

- Expression

  The increase in reality TV shows mirrors this need to express oneself, regardless of the outcome, or the amateur nature thereof. The novel ways of expressing individuality goes beyond the traditional means, and extends to even the smallest of choices, such as jewellery and songs (Johnson, 2006).

Johnson (2006, pp.13-14) has developed a model which indicates the drivers for the decision-making of the connected generation. These 10 areas are the following:

1. Extreme personalisation in everything
2. Adventurous experiences beyond the day-to-day, including new learning-based adventures
3. Creating loose connections around brands, activities and specific passions and interests on social networks
4. Brands enticing the senses by means of experience and design
5. Filter out clutter: using editing filters to increase customer experience
6. Moving away from push advertising to networked customers who learn about products from one another and choose to pull the information that they find useful and interesting
7. Connected citizens are building a forum where consumers unite, share information and influence change
8. Everyday activities are orchestrated to a dramatic sense of theatre to create an emotional connection with the customer
9. Increased need for spiritual connections in informal and non-traditional but highly personal ways

10. Increased volunteerism and redefining giving back - the development of a social conscience

Seeing that the connected generation are currently the parents of young children in preschool and day-care, it is important to understand how this generation makes decisions and what influences their decisions. The connected generation is probably the most informed generation who use technology to look for and use information to support their thinking, base their decisions on, share experiences and connect with their peers. This will extend to their parenting decisions. The connected generation as parents look for information on the Internet, share their opinions with other parents using social networks, read and comment on various parenting blogs and share their experiences with their peers. These parenting decisions will include the healthcare of children, as well as the rest of the family. There are various websites and online support groups for parents on this very issue of family healthcare. Parenting magazines, such as Mamas and Papas, Baba en Kleuter and Your Baby and Toddler, dedicate sections of their monthly issues to family healthcare. More and more of these information sources concentrate on natural, herbal and homeopathic remedies and medicines as alternatives to conventional or allopathic medicines. Parents from the connected generations are informed, knowledgeable and share this information and their medical experiences with other parents. Due to the increased amounts of information, parents from the connected generation are aware and take a keen interest when it comes to the healthcare of their family. This extends to the medicines doctors prescribe to the children of this generation. Parents question medical practitioners on the prescription of medicines and discuss possible alternatives or different treatment options, specifically regarding possible natural alternatives to conventional medicine.

Segmenting by means of age subculture is not seen in literature internationally or even in South Africa. It is suspected that segmenting in this manner is not precise enough for marketers to base specific targeting and further marketing decisions on. Generational segmentation is perhaps too broad without any specific information based on income, education or other demographic markers, required by marketers today. Marketers may, however, use age sub-culture information to gain insights into the broad thinking patterns and customer behaviour of the various generations. Taking the vastly different backgrounds for the various racial groups in South Africa, it would be far-fetched to think

that in a country such as South Africa, all Gen Xers from the various racial backgrounds, income levels, geographic location and other demographics will respond homogeneously to marketing messages (Schenk & Seeking, 2010). However, it is important for marketers to look and understand the generations they market to, in order to get a broader understanding of possible market segments.

As mentioned in Chapter 1, in a household where there are young children, especially where children are in ECD centres, children will have a higher likelihood of contracting various illnesses and ailments. Segmenting homeopathic OTC products to this market segment can be viable for the manufacturers of homeopathic products.

- Income

Segmentation based on income is another method used throughout history. It is used often by marketers of leisure and luxury products and services. Examples of these include travel, clothing, cosmetics and motor companies (Kotler & Keller, 2006). Income, however, is not a pure indication of how consumers will behave or make decisions. Schiffman and Kanuk (2010, p. 80) suggest that combining income with other demographics such as age, education and occupation would define target markets more accurately.

Income cannot indicate whether a parent is willing to use or even try OTC homeopathic remedies. For the purposes of this study, income needs to be combined with other demographics. However, income can relate to the possibility of the family being covered by medical aid. 15.6% of the population in South Africa belonged to a medical scheme, 71% of households with cover had an income of R8000.00 per month (Eighty20, 2009).

- Education

Education, income and occupation tend to be closely correlated. Schiffman and Kanuk (2010, p. 80) and Cant *et al.* (2006b, p. 179) agree that high level occupations which produce high income, usually require advanced education. As with income, education needs to be included with other demographic dimensions in order for target markets to be defined more accurately.

There is a modern trend to delay parenting, as can already be seen in Gilly & Enis (1982, p. 3), which is especially true for today's parents of young children, as most commonly these parents are from Generation X. Mothers are also older and more educated (Leeming & Trip, 1994). There is a direct correlation between the age and education of women and their income. In the Official Guide to the American Marketplace, as discussed in Leeming & Trip (1994, p. 294), it can be seen that single mothers between the ages of 25-64 with a university or college education earn higher salaries than the under 25-year and over 65-year counterparts. Should these women be from Generation X, there might be a higher likelihood of them searching for information regarding the healthcare of their families by using various online tools including the Internet, blogs, discussion forums, social networks and online magazines. Searching for alternative treatment for recurring ailments and illnesses might lead some parents or mothers to Complementary and Alternative medicines, including homeopathy.

Psychographic segmentation

Segmentation based on psychographic variables involves breaking the market up, according to attributes such as social class, lifestyle and personality. The market is analysed, based on their activities, interests and opinions. Lifestyle categories are determined, based on consumers' activities, interests, opinions and lifestyles, subject to factor analysis in order to identify these categories. The internationally-used Values and Lifestyles (VALS) model is one of these measures to use in psychographic segmentation. Psychographic segmentation based on lifestyle has become increasingly popular, because it extends beyond demographic, geographic and social class measurements (Cant *et al.,* 2006b). Schiffman and Kanuk (2010, p. 84) go further in saying that demographics determine consumers' needs for products and the ability to buy these products, while psychographics explain buyers' purchasing decisions and the choices they make within the buying options available to them. McDonald and Dunbar (2004, p. 37) state that identifying the internal drivers of customer behaviour that can be associated with specific segments can help identify the most appropriate promotional stance in order to obtain the target market's engaged attention. Strydom (2011, p. 105) adds that psychographic segmentation provides increased understanding and the ability for marketers to build strong relationships with customers.

Living standards measure (LSM)

The South African Advertising Research Foundation (SAARF) has developed a method of dividing the entire South African Population into subgroups. The Living Standards Measure (LSM) was developed using a combination of non-personal variables. The non-personal variables include the level of urbanisation, preferred media, access to services, as well as the ownership of certain durables. Although income levels are apparent in the analysis of these LSMs, income per se is not used as a criterion for segmentation (Strydom, 2011). The LSM has become South Africa's leading method for segmenting markets, used by various industries and organisations within the South African marketplace. SAARF also encourages marketers to use the LSM together with other demographic tools such as education and income, in order to define the market even more accurately (SAARF, 2010a). The LSM groups have had various changes to them since their inception in the late 1980's. The last of these changes occurred in 2008, whereby the top 7 LSM groups were subdivided into high and low groupings, in order to provide marketers with a more refined tool (Consumer Scope, nd.). The different LSM groups can be seen below in Table 2.1, as taken from the SAARF website (SAARF, 2012).

Table 2.1: LSM groups

LSM 1 (2.1%)	**LSM 2 (5.7%)**
DEMOGRAPHICS	**DEMOGRAPHICS**
Male and female 15 – 24 and 50+ Primary Completed Small urban/ Rural Traditional Hut	Female 15 – 24 and 50+ Some High School Small urban/ Rural Squatter Hut Shack, Matchbox and Traditional Hut
R1 363 ave hh income per month	R1 929 ave hh income per month
MEDIA	**MEDIA**
Radio a major channel of media communication; mainly African Language Services (ALS) - Umhlobo Wenene FM, Ukhozi FM and community	Radio: Commercial, mainly ALS-Ukhozi FM, Umhlobo Wenene FM
GENERAL	**GENERAL**
	Communal access to water Minimal ownership of durables,

Minimal access to services Minimal ownership of durables, except radio sets Mzansi bank account Activities: minimal participation in activities, singing	except radio sets and stoves Mzansi bank account Activities: minimal participation in activities, singing
LSM 3 (6.5%) **DEMOGRAPHICS** Female 15 – 24 and 50+ Some High School Small Urban/ Rural Squatter Hut Shack, Matchbox and Traditional Hut R2 258 ave hh income per month **MEDIA** Radio: Mainly ALS stations, Ukhozi FM, Umhlobo Wenene FM TV: SABC 1 **GENERAL** Electricity, water on plot or communal Minimal ownership of durables, except radio sets and stoves Mzansi bank account Activities – singing	**LSM 4 (13.1%)** **DEMOGRAPHICS** Male and female 15- 34 and 50+ Some High School Small Urban/ Rural Squatter Hut Shack, Matchbox and Traditional Hut R3 138 ave hh income per month **MEDIA** Radio: Commercial mainly ALS, Gagasi, Motsweding, Ukhozi, Umhlobo Wenene FM,, Community Radio TV: SABC 1 **GENERAL** Electricity, water on plot or communal, non-flush toilet TV sets, electric hotplates Mzansi bank account Activities – attend gatherings, go to night clubs
LSM 5 (16.9%) **DEMOGRAPHICS** Male 15-49 Some High School Small urban/ rural R4 165 ave hh income per month **MEDIA** Radio: Commercial mainly ALS stations,	**LSM 6 (21%)** **DEMOGRAPHICS** Male 25-49 Up to Matric and higher Large Urban R6 322 ave hh income per month **MEDIA**

Lesedi FM, Motsweding FM, Ukhozi FM, community radio TV: SABC 1,2,3, e.tv, Daily Newspapers **GENERAL** Electricity, water, flush toilet outside / communal TV sets, hi-fi/radio set, stove, fridge Mzansi accounts Activities: take away in past 4 weeks, bake for pleasure, go to night clubs, attend gatherings, buy lottery tickets	Wide range of commercial and community radio TV: SABC 1,2,3, e.tv, Top TV, Community TV All print Outdoor **GENERAL** Electricity, water in home, flush toilet in home Ownership of a number of durables plus cell phone Savings and Mzansi accounts Activities: hire DVDs, go to night clubs, take away in the past 4 weeks, attend gatherings, buy lottery tickets
LSM 7 LOW (4.9%) **DEMOGRAPHICS** Female 25- 49 Matric and higher Urban R9 320 ave hh income per month **MEDIA** Wide range of commercial and community radio TV: SABC 1,2,3, e.tv, DStv, Top TV, Community TV All print Accessed internet past 7 days Cinema & Outdoor **GENERAL** Full access to services Savings accounts Increased ownership of durables plus DVD and motor vehicle Participation in all activities	**LSM 7 HIGH (5.3%)** **DEMOGRAPHICS** Male 25-49 Matric and higher Urban R11 263 ave hh income per month **MEDIA** Wide range of commercial and community radio TV: SABC 1,2,3, e.tv, M-Net, DStv, Top TV, Community TV All print Accessed internet past 7 days Cinema & Outdoor **GENERAL** Full access to services, including cheque and savings accounts Increased ownership of durables plus DVD and motor vehicle Participation in all activities

LSM 8 LOW (4.3%)	LSM 8 HIGH (3.9%)
DEMOGRAPHICS Female 35+ Matric and higher Urban R13 210 ave hh income per month **MEDIA** Wide range of commercial and community radio TV: SABC 1,2,3, e.tv, M-Net, DStv, Top TV, Community TV All print Accessed internet past 7 days Cinema & Outdoor **GENERAL** Full access to services and bank accounts Full ownership of durables, incl. PC Increased participation in activities	**DEMOGRAPHICS** Male 35+ Matric and higher Urban R14 882 ave hh income per month **MEDIA** Wide range of commercial and community radio TV: SABC 2,3, e.tv, M-Net, DStv, Top TV, Community TV All print Accessed internet past 7 days Cinema & Outdoor **GENERAL** Full access to services and bank accounts Full ownership of durables, incl. PC Increased participation in activities
LSM 9 LOW (4.6%)	**LSM 9 HIGH (4.6%)**
DEMOGRAPHICS Female 35+ Matric and higher Urban R17 988 ave hh income per month **MEDIA** Wide range of commercial and community radio TV: SABC 2,3, e.tv, M-Net, DStv, Top TV, Community TV Accessed internet past 7 days All print Cinema & Outdoor **GENERAL**	**DEMOGRAPHICS** Male 35+ Matric and higher Urban R21 328 ave hh income per month **MEDIA** Wide range of commercial radio TV: SABC 2,3, e.tv, M-Net, DStv, Top TV, Community TV Accessed internet past 7 days All print Cinema & Outdoor **GENERAL** Full access to services and bank accounts

Full access to services and bank accounts Full ownership of durables Increased participation in activities, excluding stokvel meetings	Full ownership of durables Increased participation in activities, excluding stokvel meetings
LSM 10 LOW (3.3%) **DEMOGRAPHICS** Male 35+ Matric and higher Urban R26 706 ave hh income per month **MEDIA** Wide range of commercial radio TV: SABC 3, M-Net, DStv, Top TV, Community TV All print Accessed internet past 7 days Cinema & Outdoor **GENERAL** Full access to services and bank accounts Full ownership of durables Increased participation in activities, excluding stokvel meetings	**LSM 10 HIGH (3.1%)** **DEMOGRAPHICS** Male 35+ Matric and higher Urban R32 521 ave hh income per month **MEDIA** Wide range of commercial radio TV: M-Net, DStv, Community TV All print Accessed internet past 7 days Cinema & Outdoor **GENERAL** Full access to services and bank accounts Full ownership of durables Increased participation in activities, excluding stokvel meetings

Source: South African Advertising Research Foundation, 2012

The spread of the various LSM groupings in the different South African provinces can be seen below in Table 2.2. (SAARF, 2010b) The Gauteng province accounts for the highest representation of LSM groups 6 to 10.

Table 2.2: LSM groups summary per province

PROVINCES	LSM1	LSM2	LSM3	LSM4	LSM5	LSM6	LSM7	LSM8	LSM9	LSM10
Western Cape	0	0.3	0.9	2.3	4.7	13.1	20.9	22	20.4	15.8
Northern Cape	0.8	2.5	3.6	2.9	2.6	1.7	1.3	1.1	2.1	1.4
Free State	1.9	0.9	3.8	6.4	13.1	8.2	4.5	4.3	4.2	4
Eastern Cape	50.2	33	19.8	16	11.7	11.2	8.3	7.4	7.7	5.8
Kwazulu-Natal	34.7	37.7	29.3	24.4	15.7	15.4	15.3	17.6	20.1	26.3
Mpumalanga	1.9	5.6	7.3	9.7	10.2	7.9	5.1	4.5	3.5	2.2
Limpopo	6.7	9.9	22	21.8	16.2	8.7	3.9	3.6	3	1.9
Gauteng	0	1.4	4.3	6.4	13.5	24.7	35.9	34.4	34.4	40.9
North West	3.7	8.7	9	10.1	12.2	9.1	4.9	4.9	4.5	1.7

Source: South African Advertising Research Foundation, 2010b

Marketingweb (2010) reported that the Pretoria East area is the area with the highest total household income in the whole of South Africa. The LSM groups represented in this area fall between LSM 6-10.

There is a link between the awareness and use of homeopathy and LSMs, which is noteworthy. The use and awareness of homeopathy among the lower LSMs (LSM groups 2-6) is low in comparison with the higher LSMs (LSM groups 7-10) (Holgreaves, 2007). LSM groups 9 and 10 have the highest awareness and use of homeopathy (Manga, 2007). Holgreaves (2007, pp.1-50) makes the assumption that the lower LSM groups make use of the public health system and are therefore not aware of homeopathy. Another permutation could be that these lower LSM groups make use of traditional medicine, which includes that of traditional healers. A further note is that the level of education and literacy influences the level of implementation and application of health education among the lower LSM groups. Literacy is lower in these lower LSM groups and therefore healthcare education is limited. An interesting statistic that came about from the research conducted was that of the small percentage of people from LSM groups 2-6, who were aware of homeopathy, 68% had children at home (Holgreaves, 2007).

Referring back to Figure 2.2, a brief discussion on the consumption-specific segmentation bases follows in the next section. Consumption-specific segmentation refers to the facts surrounding the actual consumption behaviour of consumers and the cognitions consumers

have about the product or service. These cognitions are seen in the attitudes and preferences of consumers (Schiffman & Kanuk, 2010).

Usage rate segmentation

Brijball Parumasur & Roberts-Lambert (2012, p. 221) differentiate between light, medium and heavy users as well as non-users of a specific product, brand or service. Although marketing to heavy users of a product might seem to be more profitable (Cant *et al.,* 2006a), understanding the behaviour of the non-users and medium and light users, will give a marketer better insights into new marketing opportunities or even market segments. For the purposes of this study, determining the usage rate of OTC homeopathic remedies among parents with children in ECD centres in the Pretoria East area will not only provide insight into the usage rate of the remedies, but also the prevalence of use, as well as the role the heavy users play in convincing the light or non-users to try OTC homeopathic remedies. Understanding the usage rate of OTC homeopathic remedies might give manufacturers a better understanding of the users of their products.

Usage-situation/occasion segmentation

A situation or occasion might determine what consumers will purchase or consume. Should the occasion not occur, the buying behaviour might not be the same (Schiffman & Kanuk, 2010). Kotler & Keller (2006, p. 255) argue that the need for the product could be expanded if marketers created a situation where their product or service might become of significant use to the consumer. In a South African context, Netflorist, the online flowers and gifts retailer, make customers aware of Valentine's Day and Mother's Day as special occasions to give flowers and gifts. Marketers could mark certain life passages to determine the need for certain products. For this study, a suggestion could be made to the manufacturers and marketers of OTC homeopathic remedies to make parents of newborns aware of their remedies as an alternative to allopathic medicines for everyday ailments. The arrival of a baby might create the need for parents to look at more natural remedies to treat their baby, rather than the allopathic route. Furthermore, parents enrolling their children into ECD centres could be another usage-situation segment to consider. Once children go to pre-school or day-care, they become ill more often (as will be discussed in the next chapter), creating another usage-situation for OTC homeopathic remedies. Perhaps the choice to include more natural elements in everyday living is another usage situation to be considered.

User status

Consumers can be segmented, based on their user status. User status could vary between non-users, ex-users, potential users and regular users. Organisations should focus their attention on regular as well as potential users. The regular users will ensure that the organisation will survive in the medium term, but the potential users will become paramount for future growth (Cant *et al.,* 2006a). Understanding the behaviour and reasoning of non-users of a product will give a marketer insight as to possible marketing opportunities or unsatisfied market segments. This is especially true for the marketers of OTC homeopathic remedies.

Benefit segmentation

McDaniel, Lamb & Hair (2008, p. 222) define benefit segmentation as a process of grouping customers into market segments according to the benefits they seek from a product. This method of segmentation looks at the needs of the customer rather than characteristics. Schiffman and Kanuk (2010, pp. 90-92) go further and name it the core of all segmentation methods, as it represents unfulfilled needs. Benefit segmentation provides marketers with insight into the expectations of consumers and with this knowledge organisations can respond with products and services which address customer needs better, thus satisfying their customers better (Cant *et al.,* 2006a).

Brand Loyalty and relationship

According to Schiffman and Kanuk (2010, pp. 92-94), brand loyalty consists of two components: behaviour and attitude. The behaviour component explains the frequency and the consistency of buying a particular brand. The attitude component regards the consumer's feeling of commitment to the brand. The authors go further in explaining that the most common application of brand loyalty is often manifested in frequency award programmes such as airline frequent flyer awards, most valued guest awards etc. The authors note, however, that the loyalty relationship consumers have with a brand is far from straightforward; it is extremely complex and multidimensional. Kotler & Keller (2006, p. 256) go further in dividing the level of brand loyalty into loyalty status groups. These groups include:

- hard-core loyals: consumers who buy one brand all the time
- split loyals: consumers who are loyal to two or three brands
- shifting loyals: consumers who shift from favouring one brand to another
- switchers: consumers who show no loyalty to any brand and are either seeking variety or bargains

Kotler & Keller (2006, p. 257) suggest that marketers can get a vast amount of information if they study their market loyalty. By doing so, marketers get a better understanding of who their competitors are, the characteristics of their hard-core loyals, as well as understanding their products' weaknesses.

Buyer Readiness stage

Kotler & Keller (2006, p. 256) note that a market is made up of people in different stages of readiness to purchase a product. Some people are unaware of the product, others are aware, some are informed and others are interested, some desire the product and others intend to buy. The marketing programme for each stage of buyer readiness should differ. In the case of this study, marketers of OTC homeopathic remedies should have an intense awareness campaign aimed at the unaware buyers, followed by a campaign to show the benefits of these remedies, in order to create a desire amongst consumers for these remedies.

Attitude towards the product

Kotler & Keller (2006, p. 257) mention five attitudes found in a market: namely, enthusiastic, positive, indifferent, negative and hostile. Cant *et al.* (2006a, p. 123) notes that efforts aimed at changing the attitude of negative and hostile segments should be limited, saving time and money. Persuasive techniques can be used on segments that are indifferent and encouragement techniques on those that are enthusiastic or positive. Attitude towards a product should be used, together with more descriptive demographics, to get a better description of the market segment

Cant *et al.* (2006a, p. 123) describes the act of profiling market segments as a complete description of every possible segment. The segments are described, based on the segment size, demographics, psychographics, lifestyle, behaviour patterns, attitude and product usage.

2.3.2 Step Two: Targeting

Once possible segments have been identified and profiled, marketers need to determine how many segments they will service with their product range and marketing communication. Three basic strategies can be used to determine target market coverage:

Undifferentiated marketing

Undifferentiated marketing is also referred to as mass marketing or market aggregation. This method is often used by companies who do not differentiate between the needs of their potential customers. These organisations usually have one marketing strategy for the whole market; they communicate using mass media and distribute in mass (Strydom, 2011).

Differentiated marketing

Differentiated marketing is also referred to as a multiple-segment strategy and requires the organisation to target different segments with a unique marketing strategy for each segment. Organisations hope to achieve a higher return of resource investment, even though segment marketing is seen as more costly (Strydom, 2011).

Concentrated marketing

Concentrated marketing is also referred to as a single-segment concentration strategy. This implies that the market offering is aimed at one specific target market. Even though this is viewed as high risk, the organisation's resources are used more effectively, and it forces the organisation to be aware of possible changes in the market (Strydom, 2011).

Microtargeting

The aggregation of individual consumers into relatively small groups, based on data available from various databases, and targeting them with tailor-made messages is called microtargeting. It is a relatively new concept and even more specific than niche targeting. The individual messages are done by means of narrowcasting (the opposite of broadcasting). Narrowcasting makes use of various technological means to reach their target customers with personalised messages, which include email, mobile devices and small screen presentations done on a door-to-door principle (Schiffman & Kanuk, 2010). This means of targeting speaks loudly to customers in the Gen X and Gen Y age subcultures. Schiffman and Kanuk (2010, pp. 97-99) predict that as new media emerges, so there will be an increase in marketers' ability to personalise the communication with customers, which will eventually lead to microtargeting becoming a more mainstream strategy.

2.3.3 Step Three: Positioning

Positioning is the final step of the STP process. Product positioning is defined as the place or position that the product holds in the minds of the consumers, relative to the offerings of other competitors (Strydom, 2011). Kotler & Keller (2006, p. 310) simplify it as the act of designing the organisation's offering and image so that it occupies a distinct and valued place in the minds of the target customers.

McDaniel, Lamb & Hair (2008, p. 231) note that marketing efforts which emphasise irrelevant features are likely to misfire. It is important to know how competing brands and products are viewed, to determine the important dimensions underlying these positions and to choose a position in the market where the organisation's entire marketing efforts will have the biggest impact. Brijball Parumasur & Roberts-Lambert (2012, p. 239-240) view this as a two-step process, consisting of analysing competitors' positions and identifying a competitive advantage. The analysis of competitor positions calls not only for an understanding of the target market's perception of direct competitors, but also its indirect competitors. A competitive advantage exists when an organisation's product or brand is perceived as better than that of a competitor by the target market.

In order to get an idea of how these products and brands are viewed by customers, marketers could use perceptual mapping. McDaniel, Lamb & Hair (2008, p. 232) discuss perceptual mapping as a means of displaying and locating how customers view products and brands, using two or more dimensions. Du Plessis, Strydom & Jooste (2012, p. 144) discuss how positioning maps are developed and include the following:

- Research is done on the actual and potential customer perceptions of current organisations, products and brands
- The most important attributes to customers are used as variables on the positioning maps. Marketers draw up maps and decide upon the labels for each axis which could include price, quality or comfort
- Customer perceptions are mapped out to each other on the map

Positioning maps are useful to marketers in that they assist marketers in identifying the organisation's closest competitors and segments of the market that the organisation can still

penetrate. They also assist marketers in understanding customer preferences and how products, services and brands should be differentiated.

An alternative method to perceptual mapping, used to understand the position of a brand or product in the marketplace, is spidergram analysis. Jobber (2010, p. 286) describes spidergram analysis as a visual representation of consumer perceptions of a brand and its competitors, using attributes or dimensions that are important to consumers when evaluating brands.

Positioning holds the key for the organisation, as it provides a description or image of what the organisation wants customers to think of when the product is mentioned, and indicates possible gaps where the organisation's product could be differentiated from that of the competitors. Positioning is done on various bases, including the following:

- Product attribute, where the organisation uses a distinctive attribute on which to position its product - for example, Tastic rice: 'Perfect, every time'.
- Product benefit, where the organisation selects a unique product benefit - for example, Duracell batteries that last even longer.
- Price vs quality: here the positioning strategy focuses on superior quality or the lowest price - for example, Woolworths positions itself as a clothing supplier of high quality garments, whereas Mr Price positions itself as best value for money.
- User or application positioning, where the organisation's product offering is positioned, based on the use of the product or the application thereof. For example, Radox bath products promise to look after your wellbeing when using their various herbal-infused products.
- Product user positioning refers to positioning based on the consumer or user of the product. An example could be where the user of a product is seen as a connoisseur or very successful, if that particular product is used or consumed. Marketers of Whisky or Cognac like to use this method of positioning in particular.
- Competitor positioning refers to where the organisation's product offering is placed directly against that of a competitor. Well-known examples are Coca-Cola/Pepsi and BMW/Mercedes Benz positioning.
- Origin positioning focuses on where the product came from. Ceres fruit juice has used this method for a very long time, focusing on the Ceres Valley in the Western Cape as the origin of their product.

The question arises how an organisation should approach the aspect of making their products distinguishable from those of competitors. This is also known as product differentiation. McDaniel, Lamb & Hair (2008, p. 231) note that the distinctions can be either perceived or real. Brijball Parumasur & Roberts-Lambert (2012, p. 240) go further and state that differentiation should not only be limited to that of a product, but could include service, personnel and image differentiation. Other organisations choose rather to focus on the similarities of products to competing products and brands.

Cant *et al.* (2006a, p.144), suggests that once the positioning statement and strategy have been decided upon, it should be communicated in all aspects of the marketing strategy. Some of the best-known positions promoted by organisations come across in their pay-off lines, which include 'best quality', 'best service', 'best value', 'lowest price'. Du Plessis, Strydom & Jooste (2012, p. 125) argue that a positioning statement must be aimed at capturing people's attention and winning a unique position in the mind of the customer. A positioning statement refers to a corporate statement that defines the benefit of a product or brand and how it is different from that of competitors. The authors go on to explain that a good positioning statement consists of four components: namely, customers, the key benefit derived from the product or brand compared to that of competitors, the competitors and the key reasons why the brand or product is better. Should the organisation be able to deliver convincingly on these positions they have declared, it will probably be best known for this strength, adding to its competitive advantage.

Jobber (2010, pp 285-286) discusses the keys to successful positioning as the following:

- Clarity

  The positioning ideas need to be clear in terms of the target market and the differential advantage. If the positioning statement is complicated, it is unlikely to be remembered. Simple and clear messages are more memorable.

- Consistency

  A consistent message is required in order for the message to cut through the marketing message clutter that customers get bombarded with every day. Simple and consistent messages have a higher likelihood of being remembered by customers instead of ever-changing messages.

- Credibility

  The differential advantage communicated in the positioning statement needs to be credible in the mind of the target customer.

- Competitiveness

  The differential advantage communicated in the positioning statement needs to have a competitive edge and be clear about the value customers get, which is lacking from competitors.

In some cases, it is necessary for marketers to reposition their products and brands. McDaniel, Lamb & Hair (2008, p. 232) define repositioning as changing the customer perceptions of a brand in relation to competing brands. Brijball Parumasur & Roberts-Lambert (2012, p. 241) describe it as changing the personality of a brand in order to appeal to a different market segment. Du Plessis, Strydom & Jooste (2012, p. 146) note that it might be necessary to reposition a product or brand due to a change in the product life-cycle, especially during the mature and decline phases as well as when sales are declining.

This study aims to *inter alia* determine the positioning of competing brands of homeopathic remedies in the Pretoria East region, as well as homeopathic remedies as a whole, in the minds of parents with children in ECD centres. See also the secondary objectives discussed in Section 1.4.

2.4 SUMMARY

In this chapter, a basic discussion followed on the segmentation, targeting and positioning of a market. In the next chapter, a broader discussion on the illnesses, ailments and treatment of children in ECD centres will follow.

CHAPTER 3:
ILLNESSES, AILMENTS AND TREATMENT OF CHILDREN IN EARLY CHILDHOOD DEVELOPMENT CENTRES (ECD CENTRES)

3.1 INTRODUCTION

In this chapter, a child is defined within the parameters of the Department of Social Developments and UNICEF. This is followed by a definition of an Early Childhood Development Centre, also referred to as an ECD centre. A brief discussion will elaborate on the major diseases which cause child mortality around the world. The diseases which are of major concern worldwide are pneumonia and diarrhoea. Common illnesses and ailments which children contract while attending an ECD centre will be looked at, as this is the main concern of this study. This discussion is closely followed by an investigation of the possible treatments for these common illnesses and ailments. The issue regarding antibiotic resistance will be discussed, as well as possible solutions and suggestions to antibiotic resistance.

3.2 DEFINING AN EARLY CHILDHOOD DEVELOPMENT CENTRE (ECD CENTRE)

A child, as defined by the Department of Social Development and UNICEF, is a person under the age of 18 years (UNICEF/Department of Social Development, 2006). Children make up 39% of the total South African population, which constitutes 18.7 million children (Hall, 2010). 18% of South African children live in the Gauteng province. The KwaZulu-Natal province has 22% of the country's children living within its boundaries. 85% of the country's children are Black, followed by 8% Coloured, 5% White and 2% Indian. The age groups of the country's children fall within the following categories: 33% are within the 0-5 year group, a further 33% are within the 6-11 year group and 34% fall within the last age group namely 12-17 years. The focus of this study falls within the 0-5 year age group (Richter, Dawes & De Kadt, 2010). In 2009, there were 5 million children aged 4 years or younger (Statistics South Africa, 2009).

The early years of a child's life, especially the period from infancy to pre-school, roughly 0-5 years of age, is of extreme importance in forming a child's personality and character. Even though this is a short period of time, it is the period of the most dynamic transformation of human development. It is during this time that a child develops physically and mentally at an extremely disproportionate rate. This development is the foundation for emotional, social and educational development, together with cognitive functionality in later life (Richter *et al.,* 2010). Biersteker, Kvalsvig, van der Merwe, Dawes & Bray (nd. p. 5) caution and explain that, should the context in which young children grow up not be supportive, later participation and inclusion in society might be severely compromised. Early childhood development envelops all of these critical aspects in its definition by the Department of Social Development guideline which is: 'the process of emotional, mental, spiritual, moral, physical and social development of children from birth to nine years' (UNICEF/Department of Social Development, 2006).

The key role-players in the early development of a child are mostly that of the core family and caregivers. As mentioned in Chapter 2, the modern family life-cycle does not mean that the caregivers of children are young parents. In some cases grandparents, other family or community members or even siblings are responsible for the care of young children. This could not be truer than it is for South African households. The Children's Institute mentions that it is not uncommon for South African children to live separately from their biological parents, owing to labour migration and care arrangements that involve extended family members (Richter *et al.,* 2010).

Due to the effects of HIV/Aids and the search for employment in urban areas, a large portion of caregivers to young children are either elderly grandparents or older siblings, but this does not imply that all child-headed households are due to HIV/Aids. Child-headed households represent another phenomenon occurring in South Africa. The Children's Institute defines a child-headed household as a household with only children as household members, under the age of 18 years. 0.67% of all children in South Africa live in child-headed households. Not all of these households are due to HIV/Aids. Only 8% of children living in child-headed households are orphaned, 80% still have a living mother and 61% had both parents living. Only 1.5% of orphaned children (where both parents have died) live in child-headed households (Meintjies, Hall, Marera & Boulle, nd). Most child-headed households have between one and three members, with 88% of these households having at least one child aged 15 years (Children's Institute, 2009). 90% of all child-headed households occur in the Limpopo, KwaZulu-Natal and

Eastern Cape provinces (Meintjies *et al.,* nd). There has been no increase in the number of child-headed households from 2002 to 2006, but rather an increase in the number of double orphans (children who have lost both their parents) due to HIV/Aids (Hall, 2010).

The South African government realises the importance of early childhood development and views the development of young children as playing a crucial part in nation-building. The Early Childhood Development (ECD) policy is inter-sectoral, being dealt with at national, provincial, district and local levels. The major responsibilities lie with several ministries, being those of Education, Social Development and Health. These combined government ministries provide families with the necessary psychosocial support and care to promote learning and development.

The Health and Social Development Ministries are mainly responsible for early childhood development for children between the ages of 0-5 years of age. The Health Ministry implements a policy of free health care for pregnant women and children under six years, as well as immunisation, integrated nutrition programme, primary health care programmes, and several other health policies. The Ministry for Social Development makes provision for children between 0-3 years of age and highlights the importance of early childhood care within the family environment; it calls for inter-sectoral collaboration regarding early childhood development, as well as the registration of ECD service providers. The Department of Social Development is the main department responsible for the payment of child support grants for young children living in extreme poverty. The Department of Education, under the auspices of the Education Ministry, has a mandate to cover the full spectrum of ages 0-9 years, but usually steps up when formalised schooling starts when children at the age of 5 years enter the Foundation Phase up until they finish school in Grade 12. However, the Department of Education provides accreditation to ECD providers, as well as inter-sectoral programmes for pre-Grade R provision (0-4 years) (UNICEF/Department of Social Development, 2006).

Early Childhood Development Centres (ECD Centre) are defined by the Department of Social Development as any building or premises maintained or used, whether or not for gain, for the admission, protection and temporary or partial care of more than six children away from their parents. Depending on registration, an ECD Centre can admit babies (0-18 months), toddlers (18-36 months) and/or pre-school aged children. A pre-school child is a child under 6 years not attending formal school. The terms ECD Centre can refer to a crèche, day-care centre for young

children, a playgroup, a pre-school, after hours care etc. (UNICEF/Department of Social Development, 2006). 30% of children in South Africa aged 4 years and younger attend ECD centres during the daytime (Statistics South Africa, 2009). The highest attendance occurs in Gauteng (43.5%) and the Free State (36.8%) (Statistics South Africa, 2009).

There are various advantages in attending an ECD centre, but there are also unfortunately some disadvantages, such as the fact that children get ill more frequently with various illnesses in comparison to those children that do not attend. This was briefly discussed in Chapter 1. In the next section, a brief discussion on the illnesses and diseases children contract around the world will follow. The types of illnesses and ailments children get in ECD centres will be looked at in the subsequent section.

3.3 A BRIEF OVERVIEW OF MAJOR DISEASES WHICH CAUSE CHILD MORTALITY WORLDWIDE

The World Health Organisation (WHO) together with UNICEF compiles several reports on the health and wellbeing of children, causes of child mortality and morbidity across the world, as can be seen on the UNICEF website, namely www.unicef.org. In this section, a brief discussion of the major illnesses will follow, based on these reports.

Pneumonia kills more children than AIDS, malaria and measles combined. Over 2 million children die from pneumonia each year, which accounts for 1 out 5 deaths of children under the age of five years. The WHO is severely concerned about this statistic, as only 20% of children with pneumonia receive the correct treatment, which is an antibiotic. Pneumonia is a severe form of lower respiratory infection, usually caused by bacteria. A bacterium such as Streptococcus pneumoniae is the leading cause of severe pneumonia among children in the developing world. Haemophilus influenzae (Hib type B), also a bacterium, is another major cause. Viruses such as the respiratory synctial virus (commonly known as the RS virus), as well as influenza, could also play a role in children catching pneumonia, but are less common. Most acute respiratory infections result from mild illnesses, such as the common cold. In vulnerable children, the situation could change from a mild illness to a severe illness such as pneumonia, especially when it coincides with other illnesses such as diarrhoea or malaria. Vulnerable children, such as those with compromised immune systems due to undernourishment, suffer from other illnesses such as measles and AIDS and those exposed to environmental factors (crowded homes, exposure to parental smoking and indoor air pollution) are at risk of

developing pneumonia (UNICEF/WHO, 2006). Seeing that children are in close proximity to one another in an ECD Centre, pneumonia could become a problem for ECD centres.

The bacterium largely responsible for pneumonia among children, namely Streptococcus pneumonia, poses a concern regarding treatment. Children in ECD centres are more likely than not to be colonised with the Streptococcus pneumonia bacterium. The result of this bacterium is not only pneumonia, but also sinusitis, pharyngitis, otitis media (middle ear infection) and other respiratory infections (Brink, Cotton, Feldman, Finlayson Geffen, Green, Hendson, Hockman, Maartens & Madhi, 2009). More than thirty years ago, all pneumococcal strains were highly susceptible to penicillin, which was an extremely effective treatment for this bacterium. Several strains have developed since then, which have become resistant not only to penicillin, but also to other antibiotics as well. Several countries such as Spain and Hungary have up to 40-70% resistant strains. The same applies to South Africa. Brink *et al.* (2009, p. 109) notes that this is especially true for the majority of urban centres in South Africa, particularly in the private sector. When cold or rainy weather occurs, children are mostly indoors, making the spread of this bacterium a lot easier (Andersson, Ekdahl, Mölstad, Persson, Hansson & Giesecke, 2005).

South Asia and sub-Saharan Africa combined bear the burden of more than half of the total number of pneumonia episodes worldwide among children under the age of 5. Sub-Saharan Africa has the lowest levels of care-seeking for pneumonia. Children in urban areas and those whose mothers have more education are more likely to be taken to an appropriate health care provider. Children in poorer conditions and living in rural areas are less likely to get the appropriate treatment. In South Africa, 75% of children under the age of 5 with pneumonia were taken to an appropriate health care provider for treatment. Pneumonia is treated by means of a full course of antibiotics. This is also reflected in the use of antibiotics for pneumonia in rural areas compared to urban areas. The WHO warns that pneumonia could make the management of antibiotic resistance more difficult in the future and further warns that the prescribing of antibiotics to children with a simple cold or cough could increase antibiotic resistance. The issue of antibiotic resistance will be discussed in a later section of this chapter.

Pneumonia can be prevented by means of:

- Promoting adequate nourishment (including breastfeeding and zinc intake)
- Raising immunisation rates
- Reducing indoor pollution

- Hand-washing routines

Immunisation against possible pneumococcal serotypes is encouraged by UNICEF and the WHO. It is highly effective in the reduction of child deaths due to pneumonia (UNICEF/WHO, 2006). As from 2008, the South African Department of Health has included a conjugated pneumococcal vaccine as part of its Expanded Programme in Immunisation (EPI).

Diarrhoea is the second major cause of child deaths for children under the age of 5 years (UNICEF/WHO, 2009). About 1.5 million children die each year from diarrhoea. Diarrhoea, together with pneumonia, is responsible for 40% of child deaths around the world each year. Childhood diarrhoea has received international attention during the 1970's and 1980's and significant changes have been made, but efforts to decrease diarrhoea have lost momentum due to other global emergencies, which monopolised the world's attention. Only 39% of children with diarrhoea in developing countries receive the appropriate treatment. There has also been very little progress made since 2000. There is an estimate of 2.5 billion cases of diarrhoea among children under the age of 5. Most of these cases occur in Africa and South Asia, where 80% of child deaths due to diarrhoea occur. The incidence of diarrhoeal disease varies greatly with the seasons and a child's age. The youngest children are the most vulnerable. The incidence is the highest in the first two years of life and declines as children grow.

Diarrhoea is caused by a range of pathogens, varying from bacteria to viruses and protozoa. However, acute diarrhoea is caused by a couple of pathogens. The leading cause of acute diarrhoea is the rotavirus. In South Africa there are more than 10 000 deaths largely due to rotavirus per annum, mostly children under the age of 5. The rotavirus and other pathogens spread mostly in a faecal-oral manner (from the stool of one person to the mouth of another), whether it be direct or through water or the consumption of contaminated food.

Prevention of diarrhoea is a key factor and it is suggested by the WHO that it involves aspects such as:

- Water, sanitation and hygiene
- Adequate nutrition
- Breastfeeding
- Micronutrient supplementation
- Immunisation

Of these preventative measures, immunisation is the most important for this study. The WHO has recommended that all routine schedule immunisations include the rotavirus vaccine. As from 2008, the South African Department of Health has included the rotavirus vaccine as part of its Expanded Programme in Immunisation (EPI) (Baker, 2010).

Treatment for diarrhoea requires oral replacement therapy (ORT), with continued feeding to prevent dehydration, and zinc treatment. Fluid replacement using a solution from oral rehydration salts (ORS) is the primary therapy for diarrhoea treatment. A new formula has been developed known as low-osmolarity ORS, making the absorption of these salts in the human body even better. Using zinc tablets reduces the demand from parents and other caregivers for other less effective medicines, such as antibiotics and antidiarrhoeal medications. It also assists in better health, improved appetite and increased ORS uptake (UNICEF/WHO, 2009).

Children living in urban areas are more likely to receive recommended treatment for diarrhoea than those living in rural areas.

Pneumonia and diarrhoea are the primary and secondary causes of child deaths in the world, as reported by the WHO and UNICEF. Children in ECD centres are not exempt from these diseases. The WHO has placed immunisation as one of its biggest priorities to limit these illnesses worldwide. As from 2008, the South African Health Department has made both a conjugated pneumococcal vaccine and rotavirus vaccine available as part of its expanded immunisation programme. South Africa is the first country in Africa to do so (Baker, 2010).

A large portion of severe illnesses found in children and, even more specifically, among children attending ECD centres can be avoided by means of immunisation. Brady (2005, p. 282) agrees and argues that not only children, but caregivers should also be immunised against common childhood infections. Furthermore, it should be an admission requirement for child care centres. Additional measures should be taken to ensure that appropriate immunisations continue after admission. The WHO and UNICEF call on all governments to make life-saving immunisations available in their national plans, to prevent infant and child deaths due to these diseases. Various vaccines are available to assist the weak immune system of children to fight off dangerous viruses in South Africa. The South African government has made vaccination against

the following diseases part of its national immunisation plan (Vaccines for Africa, 2009), as can be seen below in Table 3.1.

Table 3.1: Vaccines available as part of the South African government's Expanded Programme on Immunisation (EPI)

Age of child	Vaccine	How and where given
At birth	BCG OPV	Intra-dermal, right arm Drops by mouth
6 weeks	OPV RV Hep B DTaP-IPV/Hib PCV_7	Drops by mouth Liquid by mouth Intramuscular, right thigh Intramuscular, left thigh Intramuscular, right thigh
10 weeks	Hep B DTaP-IPV/Hib	Intramuscular, right thigh Intramuscular, left thigh
14 weeks	RV* Hep B DTaP-IPV/Hib PCV_7	Liquid by mouth Intramuscular,right thigh Intramuscular, left thigh Intramuscular, right thigh
9 months	PCV_7 Measles	Intramuscular, right thigh Intramuscular, left thigh
18 months	Measles DTaP-IPV/Hib	Intramuscular, right arm Intramuscular, left arm
6 years	Td	Intramuscular, left arm
12 years	Td	Intramuscular, left arm

* Rotavirus vaccine should NOT be administered after 24 weeks

Abbreviations.
BCG - bacille Calmette Guérin
OPV – oral polio vaccine
RV- Rotavirus
Hep B – hepatitis B vaccine
DTaP-IPV/Hib - diphtheria, tetanus, acellular pertussis, inactivated polio combined with haemophilus influenzae type b
PCV_7 – Pneumococcal Conjugate Vaccine

Source: Vaccines for Africa, 2009

The vaccines provided above are given at all government clinics and medical care centres free of charge. These are not the only options available to children in South Africa, but are the absolute basics the Ministry of Health provides as part of its national immunisation plan. Private medical care providers provide additional or combination vaccines, which limits the number of clinic visits and immunisation trauma for infants and small children, but which are payable by parents either from their own personal funds or medical aid funds.

ECD centres can and should make up-to-date immunisations part of their admission policy and communicate this to caregivers. Doing so reduces the chances of these dangerous diseases breaking out in ECD centres and surrounding communities, to some degree. ECD centres need to have up-to-date records of all attending children's immunisations (UNICEF/Department of Social Development, 2006). Although these illnesses are severe, they can be managed and prevented in ECD centres by means of immunisations and management practices. In the next section, common illnesses and ailments in children in ECD centres will be discussed.

3.4 COMMON ILLNESSES AND AILMENTS CHILDREN CONTRACT IN ECD CENTRES

Illnesses most prevalent amongst children attending ECD centres, as discussed by Brady (2004), NICHD, (2001) & Dagan (2001), can be grouped under the following categories:

- Upper Respiratory Tract Illness, also known as URTI (eg. common colds and coughs)
- Skin complaints (eg. ezcema and hand, foot and mouth disease)
- Gastrointestinal illnesses (eg diarrhoea)
- Other infections (eg conjunctivitis or ear infection)

These illnesses are the most common, causing concern for parents. There are, however, more everyday ailments including bumps and bruises, rashes, teething and the like, which will be covered in this study. Table 3.2 below will be included in the questionnaire to be completed by parents, in order to determine the types of illnesses their children contract on an annual basis.

Table 3.2 Common childhood illnesses and complaints to be covered in this study

Illness/ailment	
Colds and Flu	Tummy aches
Ear infection	Vomiting
Coughs and croup	Upper respiratory infections
Headaches	Diarrhoea
Bumps, bruises, insect bites	Tonsillitis
Eye inflammation and infection	Rashes and eczema
Fungal infections	Teething problems

Source: Author

For parents the most concerning infections include URTI, otitis media (middle ear infection) and gastrointestinal illnesses. The health department from the government of Victoria, Australia, has indicated that children get between 10-12 viruses per year and that it is common for children to get better from one virus and fall sick with the next, making it seem that children are continuously sick. Viruses spread from person to person in several ways, including: droplets (from coughing or sneezing), vomit or faeces (especially when someone has diarrhoea) (Victoria State Government, 2008). Children attending non-maternal care (such as ECD centres) experience a higher incidence of ear infections, URTI and gastrointestinal illnesses during the first two years of life. By the age of three, the rate of illness for children attending childcare is no different from children reared exclusively at home (NICHD, 2001). Children are especially susceptible to these infections and common illnesses during infancy. The increased early rates of illness for children who attend childcare centres do not have adverse developmental consequences (NICHD, 2001).

A clear distinction needs to be made between pneumonia and URTI. Pneumonia as previously defined is a serious lower respiratory illness, where URTI occur in the upper respiratory system and it is not deemed as serious. URTI is mostly caused by viruses (Brink *et al., 2009*).

Dales, Cakmak, Brand & Judek (2004, p. 68) mention that the time children spend in childcare centres could be of significance with regard to their becoming ill with an URTI. The findings of the study suggest that every 9 hours of care in a childcare centre accounts for a 7-12% increase in the proportion of days with a respiratory illness. Children most at risk of contracting a URTI are those aged over 3 months of age and those without siblings. Children without siblings have a threefold increase in the incidence of a respiratory illness. Dales *et al.* (2004, p. 68) goes further to say that the presence of a sibling at home could minimise the difference between the exposure of viruses leading to URTI among children who do attend child care, compared to those who do not. After 6 months of being in childcare centres, there are significantly fewer URTIs, ear infections and conjunctivitis, compared with children who spend fewer than six months in daycare (Lang, 2009). The incidence in URTI in the first two years of life is greater for children being cared for in out-of-home centres such as ECD centres than it is for children cared for at home. It also important to note that this increase is especially relevant once the number of children attending a care centre goes beyond six children per centre, but does not increase in any significant degree as the size of a childcare centre increases (Brady, 2005). When looking at the definition of an ECD centre in South Africa, all ECD centres are thus at risk of becoming a haven for URTI to occur. There is a significant decline in URTI as children become older and stay in childcare centres for longer.

The greater frequency of acute viral URTI in young children might play a role in the 2-4 times higher prevalence of otitis media (middle ear infection/disease) among children younger than 4 years of age (Brady, 2005).

Most gastrointestinal illnesses in North America are caused by the rotavirus (Lang, 2009). Rotavirus is the number one cause of infantile diarrhoea in children younger than 5 years of age in developing countries, such as South Africa (UNICEF/WHO, 2006). Diarrhoea is the secondary cause of death in children under the age of 5 around the world. Nearly one in five children under the age of five dies as a result of dehydration, weakened immunity or malnutrition associated with diarrhoea, as discussed in the previous section. In ECD centres the following factors have been associated with the incidence of diarrhoea, as Brady (2005, p. 279) suggests:

- The presence of young non-toilet trained children.
- Staff members whose daily activities include nappy-changing and preparing food.
- High child to staff ratios.
- Cramped space and the lack of infection-control guidelines in child care centres.

The aspects mentioned above, however, are clearly manageable by the owners and management of ECD centres.

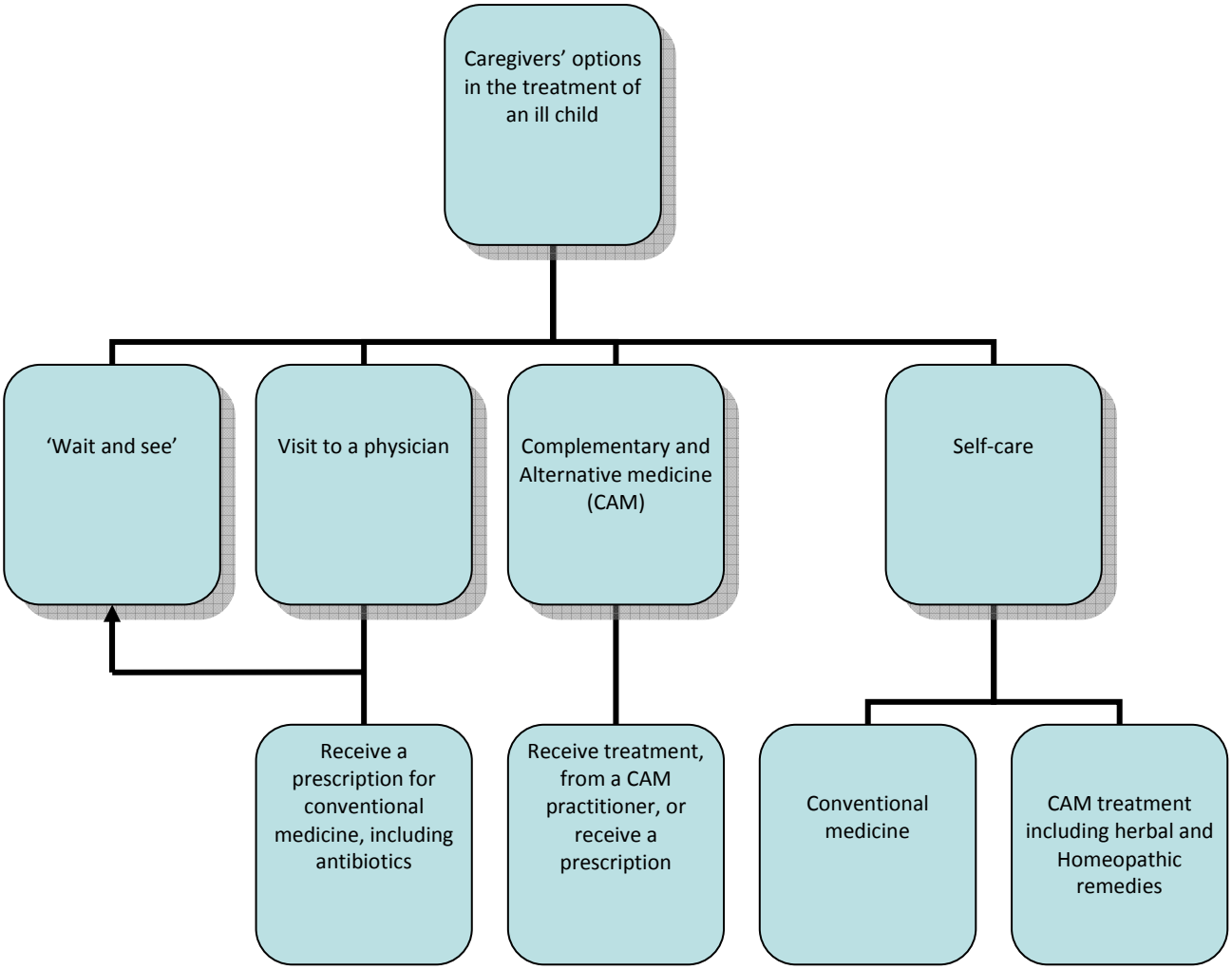
Children in childcare centres are more prone to becoming ill from viruses due to several reasons, as indicated by Brady (2005, p. 276):

- The close vicinity of children to one another is the ideal environment for spread of viruses, bacteria, parasites and fungi.
- Poor hygiene amongst caregivers and children
- Susceptibility of young children to many infections, due to weak immune systems

3.5 THE COMMON TREATMENTS FOR THESE COMMON ILLNESSES

Parents with ill children usually choose from several options how to treat their children, as seen below in Figure 3.1

Figure 3.1: Possible decisions of parents on treatment of ill children



Source: Author

The question arises as to when a child should be excluded from childcare when taken ill. Brady (2005, p. 281) mentions that mild URTI and gastrointestinal illnesses should not automatically exclude a child from a childcare centre such as ECD centres. Clear policies should be in place concerning the exclusion of ill children from these care centres and should be based on whether the attendance of an ill child will result in further illnesses (especially in the case of contagious and dangerous illnesses) and the ability of the centre to institute measures that will reduce the risk of transmission and the likelihood of the illness being life-threatening. It might also be necessary to evaluate exclusion on a case-by-case basis.

More often than not, the conventional medicine prescribed for common illnesses and infections is an antibiotic, together with several other medicines, in order to alleviate symptoms. The Department of Child and Adolescent Health and Development of the WHO has compiled a report regarding the remedies for coughs and colds as treatment for acute respiratory infections in young children. In this report, a cough is described as a natural symptom of most acute respiratory infections, whether it be upper or lower infection. It is a reaction the body has to enable it to clear the airway of irritation, or to clear secretions from the respiratory tract. It is therefore not advisable to take medication to eliminate the cough, but rather to use safe and soothing remedies. The milder upper respiratory infections include: colds, coryza, acute nasopharangitis or acute pharyngorhitis). More serious lower respiratory infections include: pneumonia, bronchitis and brongiolitis. Medicines for URTI are sought to relieve discomfort and for fear of the illness being potentially serious. The majority of respiratory illnesses are URTI, being common colds and simple coughs, and as mentioned before, are mostly caused by viruses.

Acute respiratory illness episodes in children occur between 6-8 times per year in both developed and developing countries and have a duration of between 7-9 days. There is very little proof that medication in general for these mild URTIs is effective. It is, however, a major cause for concern that medication for these mild conditions is responsible for a significant proportion of emergency calls to poison centres in the USA, owing to the undesirable effect these medicines have when taken at toxic levels. The Department of Child and Adolescent Health and Development in the WHO report warns once again that antibiotics for these mild conditions are ineffective and will not shorten the duration of the illness or prevent complications or the development of pneumonia. Even more severe illnesses such as bronchitis do not require antibiotic treatment, according the WHO, as it is seen as self-limiting. Furthermore, this report states that antihistamines and sympathomimetics do not reduce the incidence of otitis media (middle ear infection) following a cold (WHO, 2001).

3.6 WHY THE BIG CONCERN ABOUT ANTIBIOTICS?

There has been a global increase in the amount of medicines prescribed to patients. The increase in the National Health Service spending on prescription medication in the UK has been 60% over a period of a decade. It has doubled over twenty years, with an annual increase of about 4-5% per annum. This does not include OTC medication. This increase in the prescription

of medicine has been seen for illnesses such as depression, hypertension, cholesterol and asthma (Busfield, 2010). More than 50% of all medicines are prescribed, dispensed or sold inappropriately around the world (WHO, 2010). Busfield (2010, pp. 934-941) suggests several parties are to blame for this worrying trend, two of these being the pharmaceutical industry and doctors.

Pharmaceutical companies are spending less on research and development than on marketing. In the US, the spending of pharmaceutical companies on promotions was 24.4% of sales value, while only 13.4% was spent on research and development. In the UK, 23% was spent on promotion and 17% on research and development. Pharmaceutical companies are creating increased amounts of profit from medicines to be used over a long period of time and used in preventative treatments, rather than the development of short-term treatment medicines, such as new antibiotics (Busfield, 2009). Levy (2005, p.1446) and Wright (2010, p.4) agree and mention this as one of the key concerning elements in confronting antibiotic resistance. Details of antibiotic resistance will be discussed in later paragraphs.

In relation to medicine, Busfield (2010, p. 937) suggests that a doctor's main role regarding medicine is to assist with the development of medicine and to be an ally to the pharmaceutical industry. There is increased pressure on doctors from the pharmaceutical industry to promote and prescribe medication. Prescribing medicine has become general practice and in a rushed environment, a prescription is seen as the end of a medical examination as well as something a doctor has to offer, even if it is unlikely to make a difference to the patient's condition. Doctors also feel that they would rather treat a patient who might be ill, deeming it to be less dangerous to treat such a patient, than not to. Doctors also downplay the risks associated with certain medicines, making them less cautious in their prescribing. The pharmacological expertise of doctors is limited, making it a concern in determining whether the prescribed medicine is indeed the right treatment for the patient (Busfield, 2009). From a physician's point of view, there is a strong incentive to balance clinical appropriateness against the perceived patient satisfaction. From the patient's perspective, the desire to get better may be lined with a preconception (perhaps erroneously) that the best and fastest way of getting better is by means of antibiotics (The McDonnell Norms Group, 2008).

Several concerns regarding the prescription of medicine in general have been highlighted by a report from the WHO. The report looked at the use of medicine in primary care in developing

and transitional countries from 1990-2006. The report indicates that prescribing patterns have not improved consistently over time, and that the percentage of patients receiving an antibiotic has remained stable over this time, between 40-50%. A concern is that only 50% of patients receiving prescriptions for medication were prescribed according to the clinical guidelines (WHO, 2009). In a WHO factsheet, a surprising figure arises regarding the prescribing of medication, according to clinical guidelines, in developing countries: less than 40% of patients in the public sector and 30% in the private sector are treated according to clinical guidelines (WHO, 2010).

According to the WHO, there are several factors that contribute to the incorrect use of medicines by medical professionals. Several of these factors include the following (WHO, 2010):

- The lack of skills and knowledge, as a result of diagnostic uncertainty, lack of independent information such as clinical guidelines, limited opportunity for patient follow-up or the fear of possible litigation leads to the improper prescription and dispensing of medicines.
- Inappropriate unethical promotion of medicines by pharmaceutical companies. Most prescribers of medicine get information regarding medicines from pharmaceutical companies rather than clinical guidelines, leading to over-use. Direct-to-consumer advertising in some countries leads to consumers pressuring doctors for unnecessary medicines.
- Overworked health personnel. Many prescribers do not have enough time to spend on each patient they see, resulting in poor diagnosis and treatment. As a result, prescribers rely only on their previous prescribing habits instead of updating their knowledge of medicines.
- Lack of coordinated national pharmaceutical policy. Less than 50% of all countries implement the basic policies recommended by the WHO to ensure the correct use of medicines, including measures and infrastructure for the monitoring and regulation of medicine use.

Specific outcomes of the WHO report on the use of medicine in primary care in developing countries delve into acute respiratory illnesses and suggest that prescribing patterns have in fact deteriorated over time. Between 2004 and 2006, 71% of viral URTI were treated with antibiotics. Specifically, treatment in children under the age of 5 treated with antibiotics for viral URTI has doubled over 25 years to reach over 70% in 2004-2006. In Africa, over 70% of the

incorrect use of antibiotics for viral URTI was recorded. More medical doctors prescribed antibiotics for viral URTI than paramedical health workers or nurses. A further concern is that the percentage of private for-profit practices which treated viral URTI with antibiotics, was subsequently higher than in public facilities (WHO, 2009).

Encouraging feedback regarding the use of Oral rehydration therapy (ORT) has been found for the treatment of acute diarrhoea. 70% of diarrhoea cases were treated with ORT between 2004-2006. However, the prescribing of ORT for acute diarrhoea has increased over time and the prescribing of antibiotics has decreased in the mid-1990's, but has risen again since then, which corresponds with the findings of the WHO regarding the use of ORT, as discussed in an earlier part of the chapter. The WHO notes that more than 40% of children with acute diarrhoea receive unnecessary antibiotics. Better prescribing habits have again been found among physicians, nurses and paramedics in the public health-care facilities, than in private for-profit health-care facilities (WHO, 2009).

The more common illnesses which concern parents with children in daycare facilities, such as ECD centres, are in some instances also treated with antibiotics, which is not always the necessary treatment for the illness. Pre-school children consume more antibiotics than any other age group (Wye, Hay, Northstone, Bishop, Headley & Thompson, 2008). Acute otitis media is one of the most common childhood illnesses, with approximately 75% of children having more than one episode by 3 years of age. The prevalence thereof increases in children younger than 2 years of age, attending daycare facilities or exposed to passive smoking. Brink *et al.* (2009, p. 108) notes that acute otitis media is seldom correctly diagnosed. A survey of pediatricians attending a training session on otitis media from four countries, including South Africa, found that only 50% were able to make an accurate diagnosis after training (Brink *et al., 2009*).

Gray (2008, pp. 1-33) comments on the essential medicine priorities in ear, nose and throat conditions in children, specific to the South African context. For otitis media (middle ear infection), the standard South African treatment is an antibiotic. This is mirrored in a national trends review in emergency department antibiotic prescribing in the US, where 90% of children with otitis media received antibiotics (The McDonnell Norms Group, 2008). Gray (2008, p. 11) notes that the Australian Royal Children's Hospital (RCH) guideline mentions that acute otitis media in children resolves itself spontaneously, in most cases. Dagan (2001, p. S11) confirmed

the figure to be higher than 70% of cases in a study conducted. Furthermore, the RCH guidelines note that antibiotics provide children with a small reduction in pain beyond 24 hours in only 5% of children treated. The RCH guideline further questions whether the potential harm, related to the use of antibiotics, to the child patient and the risk of resistance to the community justifies the limited benefit. It also states that not using an antibiotic is acceptable to parents, provided that the reasons are clearly explained. Further to this, Gray (2008, p. 14) notes several Cochrane Reviews which agree that there is limited benefit to the use of antibiotics for otitis media and concludes that the use of antibiotics for otitis media does not influence other complications or the recurrence thereof (Gray, 2008). It has to be noted here that the major bacterial pathogens of acute otitis media in children include Streptococcus Pneumonia and Haemiphilus influenza, the former being exceptionally resistant to several classes of antibiotics, although vaccines exist for both pathogens. Otitis media is more often than not a complication due to an URTI, caused by viruses. This makes it difficult to determine the cause of otitis media and thus the treatment thereof becomes a hit-and-miss exercise, especially when treatment is carried out with antibiotics. Dagan (2001, p. S14) calls for increased efforts to reduce otitis media, which include the reduction of antibiotic use, choosing appropriate medicine and preventing otitis media. Suggestions regarding the prevention of otitis media include vaccines against viruses and bacteria (Dagan, 2001).

Gray (2008, p. 23) further notes that the absolute benefits of using an antibiotic for a sore throat are modest, as again reported by a Cochrane Review. The Scottish Intercollegiate guidelines mentioned in Gray (2008, p. 23) agree and state that there is insufficient information to support a recommendation on the routine use of antibiotics in acute sore throat.

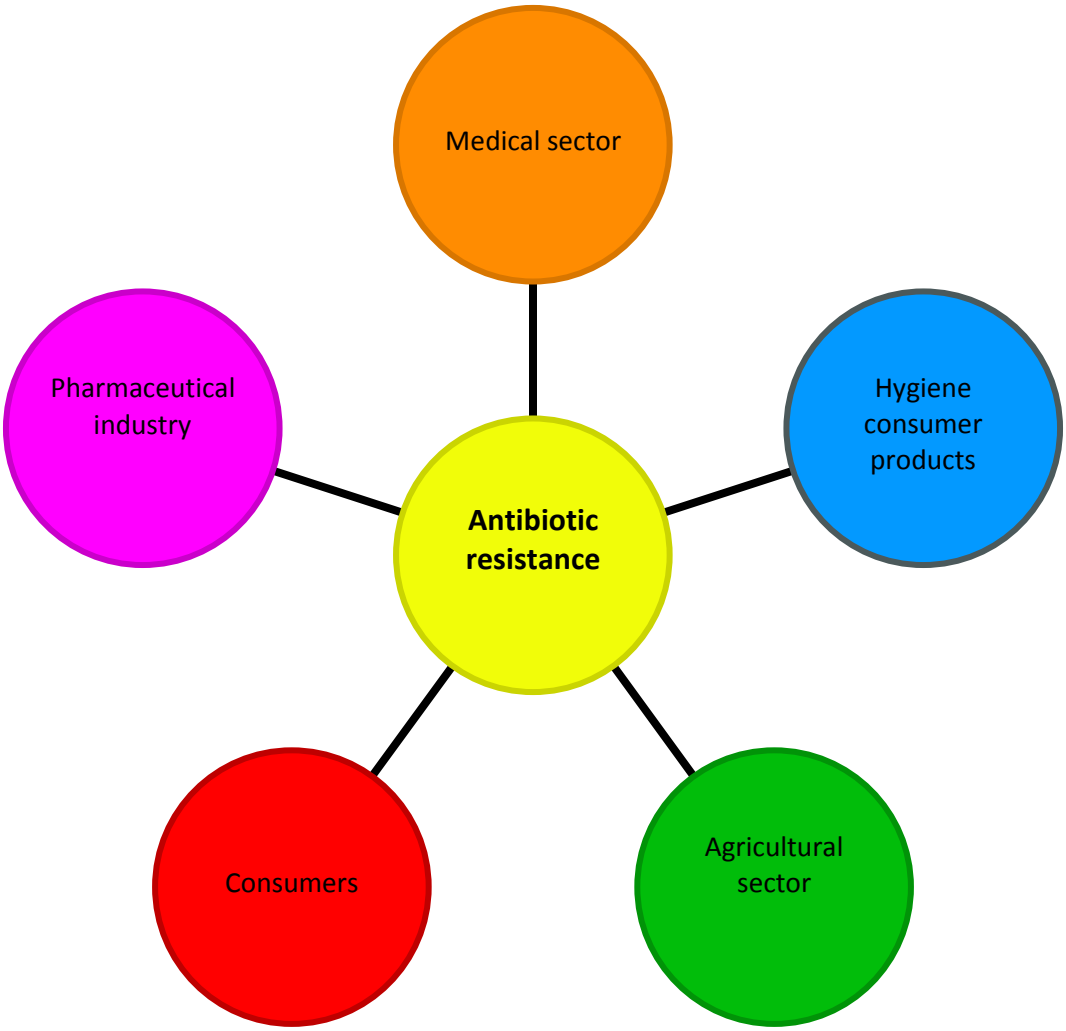
The WHO report on the use of medicines in primary care in developing countries suggests that the inappropriate prescribing of antibiotics was highest among medical doctors than other health care practitioners (WHO, 2009). An antibiotic is a wonderful medicine when used for the right diagnosis and treatment for the appropriate illness. The saying goes: too much of a good thing can be bad for you. The same applies to antibiotics. Antibiotics, as we know them today, were discovered by Alexander Fleming in 1929, with the discovery of penicillin (BBC News, 1999). The value of antibiotics was of extreme value during the years of world wars. After this era, there has been a surge in the use of antibiotics, which reached a peak during the 1980s and 1990s (BBC News, 1999). The unfortunate side-effect of such high usage is antibiotic resistance.

The question arises: what is antibiotic resistance? Wright (2010, pp. 1-6) answers questions surrounding antibiotics concisely and will be briefly noted here. Antibiotics work on the physiology and biochemistry of bacteria. The result is either microbial cell death or the termination of growth. Antibiotics do this by targeting several bacterial cell areas, including the bacterial cell wall, the cell membrane, protein synthesis, DNA and RNA synthesis and folic acid metabolism. Resistance to antibiotics occurs within bacteriums for each of these functions of antibiotics. These resistant bacteriums then spread as usual bacteria would, but with the added characteristic of being resistant to antibiotic treatment. This is not a static event, but rather a dynamic process, as resistance to several antibiotics now evolves within the bacterium.

Levy (2005, p.1446) discusses antibiotic resistance as a 'shadow epidemic', as it casts a shadow on the treatment of all microbial diseases. Resistance to antibiotics was recorded as early as 1940. In the years since then, there is not one antibiotic to which resistance does not exist to a lesser or larger degree. Antibiotic resistance is not only an occurrence in laboratories, but also in hospitals, homes and communities (Levy, 2005). Vila, Rodriguez-Banao & Cargallo-Viola (2010, p. 577) argue that the biological driving factors behind antibiotic resistance in developing countries are the same as in developed countries. The US-based Centre for Disease Control (CDC) noted that approximately 70% of infections acquired during hospitalisation are now resistant to at least one antibiotic (Vila *et al.,* 2010). The issue has now reached crisis levels. The solution seems simple: to create newer and better antibiotics. The problem, however, is that the development of new antibiotics cannot keep up with the rate of microbial evolution. Furthermore, as mentioned previously, pharmaceutical companies do not deem it profitable to research and develop antibiotics as they are used for short periods only. Greater profits lie within the development and marketing of chronic medication instead. Alanis (2005, p. 704) also stresses caution, stating that the continuous adaptation of bacteria will be a major challenge to the medical profession in general. The evolution within bacteria to even better and stronger antimicrobials, such as antibiotics, is inevitable. A call for preventative measures includes the rational use of antibiotics, better diagnostic tools and the broader use of vaccines (Alanis, 2005).

The medical and pharmaceutical sectors are not alone to blame for the resistance to antibiotics. It is rather a problem caused by the whole community. Figure 3.2 below provides a suggestion for this:

Figure 3.2: Who is to blame for antibiotic resistance?



Source: Author

The medical sector's and the pharmaceutical industry's share of responsibility has been covered in the discussion above. Where the medical sector over-uses and over-prescribes antibiotics and other medicines to patients, including children, the pharmaceutical industry deems it less profitable to continue developing new antibiotics. A closer look will be taken at the remaining areas of responsibility lying with the agricultural sector: consumers as well as producers and marketers of hygiene products. Within these three areas, the abuse of antibiotics will be discussed.

The use of antibiotics in the agricultural sector is well documented. Vila *et al.* (2010, p. 577) states that antibacterial agents, such as antibiotics, are used prophylactically or as treatment for infections for animals within the agricultural sector. Some highly-valued crops also get sprayed with antibiotics to prevent bacterial infections. Wright (2010, p.3) mentions that in the developing world the use of antibiotics in agriculture is often rampant. The use of antibiotics in animals is also a source of antibiotic compounds in the environment. Vila *et al.* (2010, p. 577) notes that over a million pounds of antibacterial agents are added to the environment per week. This is carried out in several ways. From an agricultural perspective, agricultural run-off and antibiotic spray contaminates rivers and ground water. These are not the only sources of environmental pollution by antibiotics. Not all consumed antibiotics are absorbed by the human body; some are expelled as waste, ending up in waste water plants. Hospital sewage, loaded with antibiotics, also contributes to the increased pressure of antibiotic resistance.

Huebner, Wasas & Klugman (2003, p. 505) note that the volume of antibiotic use impacts the prevalence of antibiotic resistance in the community directly. Furthermore, it seems in the study conducted that prolonged antibiotic use for some illnesses could contribute to the increasing levels of antibiotic resistance (WHO, 2009). Several reasons exist for the use of antibiotics, which Huebner *et al.* (2003, pp. 505-507) describes as being cultural and economical. Patients want to have some tangible treatment when they have taken the time to see a physician. Physicians in turn might not want to send patients away empty-handed and the choice of treatment might be influenced by the marketing efforts of pharmaceutical companies, promoting newer types of antibiotics.

There has also been a marked increase in the number of antibacterial products and the promotion of these products in a South African and global context. On average, during primetime television viewing on the general television stations in South Africa, there are at least 4-6 television advertisements per hour, relating to antibacterial products. The range of products within the Dettol brand, for instance, has gone far beyond the antiseptic solution we know it to be from long ago. Dettol's product range now includes liquid hand soap, body wash, hand sanitiser, multi-purpose cleaners and air neutralisers, to name but a few. Most of the Dettol products contain chloroxynelol, which is an antibacterial. Savlon has increased its product range to include body wash, liquid hand soap and several other products. Most of these products include an antibacterial called triclosan, which even occurs in various antibacterial toothpastes,

such as Colgate Total. All of these products use some type of tag-line, assuring the consumer that using the product will prevent germs from spreading or will avoid illness. Several other hygiene products such as Lifebuoy, which contains an antibacterial named phenol,,guarantee protection against ten types of illness. Even the laundry detergent industry has added its share of extra protection against germs. Vanish (a laundry product by Reckitt Benckiser) has also climbed on the antibacterial bandwagon by adding an antibacterial version to their current product range. The products and antibacterials mentioned here merely scratch the surface of possible products found in South African households.

Aiello & Larson (2003, p.501) question whether the widespread use of antibacterials as mentioned above could lead to the proliferation of antibacterial-resistant organisms and result in cross-resistance to one or more antibiotics in the home environment.

The concern regarding the use of antibacterials such as triclosan, is that there are no guidelines or recommendations in the use of these antibacterials in home hygiene products by any major US federal agency, including the Food and Drug Administration (FDA) or the American Medical Association (AMA).

A study conducted in the USA has found that 76% of all liquid soaps and 29% of all bar soaps contained antibacterial agents. Most liquid soaps contained triclosan. Triclosan has been seen to have mechanisms for killing bacteria similar to that of some antibiotics. Bacteria exposed to triclosan may confer resistance to antibiotics used to treat human diseases (APUA, nd.). A further study by Aiello *et al.* (2007, p. S146) notes that the use of triclosan at the concentration levels found in a community setting, were no more effective than plain soap in preventing infectious illness symptoms and reducing bacterial levels on hands. The antibiotic resistance that triclosan might cause in some bacteria needs to be weighed up against the limited benefit derived from using a product containing triclosan. This study also questions the marketing message of manufacturers of these products and the claims made proving efficacy beyond that of plain soap in a community setting (Aiello, *et al.,* 2007).

The Alliance for the Prudent Use of Antibiotics (APUA) has released guidelines for families and homes, creating awareness about the issue of antibacterial agents in consumer products. APUA agrees with the WHO that hand washing is the key to keeping the family healthy. However, APUA highlights studies which have compared families using antibacterial soap to families who

did not and have found no reduced risk of colds, flu or stomach infections for the families who used the antibacterial products. An alcohol-based hand sanitiser with a minimum of 60% alcohol content is a great addition to a hand-washing regime, and is especially useful when out in public when soap and water is not close at hand (which is still the best way to cleanse hands). Other areas inside the home, such as bathroom- and kitchen-counters, dishes and kitchen sponges as well as other places people touch often, such as taps, door handles, light switches and computer keyboards should be included in the general cleaning of the house. APUA does not recommend the use of antibacterial soap, dish soap or toothpaste, but it does state that it could be a good precaution to take for people who have lowered immunity (APUA, nd.).

Fraise (2002, p. 161S) concludes by noting that biocide resistance (resistance to antibacterial agents) is an important issue and may have links with antibiotic resistance. More and more antibacterial companies in South Africa are making statements on their product's effectiveness regarding the elimination and possible avoidance of disease. Could there be any truth in these claims made by marketers, or could it simply be marketing tactics? Is there any protection for consumers regarding fair and responsible marketing? The Consumer Protection Act of 2008 (CPA) really came into power in 2011. The Act makes South African consumers among the best protected by legislation in the world (Flawless, 2012). Besides a myriad of rights mentioned in the Act, it also makes provision for consumer rights specific to fair and responsible marketing (Government Gazette, 2009). Any marketer making claims specific to their products will have to provide sufficient evidence to prove the claims used in marketing material and campaigns. The watchdog of the CPA is the National Consumer Commission (NCC). Consumers can direct concerns and complaints to the National Consumer Commission, which will investigate and act on the consumer's behalf. Unresolved matters, after possible arbitration, could be referred to the National Consumer Tribunal or the judicial system of the country. In principle, the CPA seems an effective means for consumers to bring forth concerns specific to marketing claims made by organisations. However, the implementation of the CPA and the National Consumer Commission is a different matter, as was seen in a recent episode of Carte Blanche, which aired on the 19th of February 2012. The NCC Commissioner, Mamodupi Mohlala, admits that there are serious staffing, funding and general teething problems in getting the NCC to function properly in the interest of South African consumers (de Chaud & Schwegler, 2012).

There are additional vehicles which consumers and also industry members could use to question the marketing claims made by producers of antibacterial and also antimicrobial

products. The Medicines Control Council (MCC) and the Advertising Standards Authority of South Africa (ASA) together make it possible to question claims made by marketers. Any product which states that it is an antibacterial or antimicrobial must be registered as a medicine with the MCC. A soap (cosmetic) that advertises antibacterial properties needs to do so carefully, as was seen in the ASA ruling between Lifebuoy (Unilever) and Reckitt Benckiser. The ASA directorate ruled for a very slight change in the marketing message of Lifebuoy soap (Advertising Standards Authority of South Africa, 2011). Unilever accepted that the message in the advertisement, namely: "New Lifebuoy's Active 5 system protects from bacteria and viruses like swine flu" may be interpreted as anti-bacterial in the context of the advertisement. It undertook to change this claim to "Lifebuoy's New Active 5 system protects from germs and viruses, such as swine flu", and not to use the current claim again in future.

Unilever maintained that the commercial would not mislead consumers into thinking that the primary function of Lifebuoy is germ-reduction. Unilever argued that the hypothetical, reasonable person is aware that the primary function of Lifebuoy is to clean. Furthermore, it was argued that consumers do not conceptualise their interpretation of advertising in terms of primary and secondary claims. It is also common practice in the industry to advertise the disease-reduction properties of various soaps and cleansers, and consumers are familiar with these messages. The ASA Directorate requested an opinion from the Cosmetic, Toiletry and Fragrance Association of South Africa (the CTFA). The CTFA expressed the opinion that Unilever's claims contravene Section 6 of the CTFA Cosmetic Compendium and that the claims are phrased in a medicinal context. It also submitted that the respondent's proposed amendment does not address the concerns raised, as the mention of "viruses and swine flu" are the very medicinal claims that are in breach of the Code of Advertising Practice. Unilever submitted, in essence, that it did not agree with the CTFA's approach on this issue, but because it respected the CTFA as an industry body and self-regulator, it undertook to withdraw the television commercial and not to use it again in its current format. (Advertising Standards Authority of South Africa, 2011).

Lifebuoy's most recent advertising campaign declared protection against 10 different illnesses. The fact of the matter is that to the lay consumer, there would seem no difference in the message Unilever is promoting in their advertisement of Lifebuoy: namely, that using the soap will prevent a person from contracting various illnesses. Consumers are continuously

bombarded with similar messages and might find it difficult to determine what is true and representative of the product and what is not.

GlaxoSmithKline South Africa (Pty) Limited lodged a competitor complaint against a Colgate Total in-store promotion. The primary message of the advertisement was, “Stop using ordinary toothpaste. Start fighting germs for twelve hours,” and it included a number of statements regarding the particular efficacy of Colgate Total toothpaste, such as the fact that the product reduces 90% more germs than regular fluoride toothpaste twelve hours after brushing, and reduces gum problems by 88%. The advertisement also claimed that Colgate Total is the brand most used and recommended by dentists. The ASA ruled in favour of Colgate Total after several recent research reports and studies were submitted as proof of these marketing claims (Thompson, 2011).

Would turning to the ASA or even the CPA assist in getting the truth for consumers out of antibacterial producers? Unless there has been gross negligence or severe consequences after the use of these products, it is highly unlikely that steps such as these are beneficial to the consumer. Consumers will be hard-pressed firstly, to disprove the claims made by marketers of antibacterial products and, secondly, to get the official process on the roll, proving that marketers of antibacterial products marketed products in an irresponsible manner, using the CPA. Perhaps more public research should be done on the link between antibiotic resistance and the increased use of antibacterial products in homes to support consumer concerns.

When looking at the consumer’s share of the responsibility of antibiotic resistance, some might say that is not fair to place any blame on the consumer, but whether it be knowingly or not, the consumer still has an effect and influence on antibiotic resistance. Antibiotic resistance could spread if people find themselves in crowded settings, and children attending daycare is one such a scenario. Aiello & Larson (2003, p.502) argue that the use of broad-spectrum antibiotics in children attending daycare as therapy for infection and treatment for recurring infections contributes to the presence and transmission of antibiotic-resistant bacteria within the daycare environment, and home environment. Brady (2005, p. 281) agrees that childcare centres, such as ECD centres, have also played a role in the overuse of antibiotics and the enhancement of antibiotic resistance. It is essential that good sound judgment should be used when antibiotics are used to treat ill children. Parents should avoid requesting antibiotics to treat viral infections in the hope that it will limit the time children are unable to attend childcare (Brady, 2005). In the

USA, a study conducted by the APUA found that it is more common for parents to ask for antibiotics for their children than it is for themselves (21% vs 14%). 13% of parents prefer to give a child antibiotics for the early stages of a cold. The most common reason given for this is for the child to get better faster, followed by the prevention of developing other problems (APUA, 2006). As seen in early discussions, antibiotics cannot kill viruses, or prevent any further complications due to a cold. Doctors also run the risk of losing patients and goodwill, should the doctor decline a request for an antibiotic (The McDonnell Norms Group, 2008). However, doctors have also cemented the pattern of a patient's expectation, generated by repeat trips to the doctor, resulting in a prescription for antibiotics for illnesses with remote infectious symptoms. This reinforces the over-prescribing behaviour (The McDonnell Norms Group, 2008).

The increased use of antibacterial agents in the home environment increases the possibility of antibiotic resistance and should be avoided by consumers. Purchasing food products treated with antibiotics has also become second nature to consumers. The move to more natural organic products without the treatment of antibiotics is limited to only a small handful of retailers, and is not necessarily available to the larger population, due to the increased or perceived increased cost of these 'natural' products. Medical aids make it easier for patients to obtain medication such as antibiotics, as the medical aid will cover the expense in most cases. More and more medical aids are limiting the chronic medication service, rather than investigating the use of antibiotics by their members.

The parties seen as responsible for the burden of antibiotic resistance are all interlinked with one another and thus the change to a more prudent view on the use of antibiotics should be something that concerns all parties.

Although several world reports have asked for action, change and intervention is still limited on all levels of the responsibility spectrum. The Alliance for the Prudent Use of Antibiotics (APUA) noted in a US-based study that the awareness of antibiotic resistance increases gradually with level of income and education (APUA, 2006).

3.7 POSSIBLE SOLUTIONS AND SUGGESTIONS RELATING TO THE 'SHADOW EPIDEMIC'

In order to limit antibiotic resistance, several measures can be taken. Better diagnosis is the starting point of all prescriptions for antibiotics. It might be necessary to create laboratory cultures in order to determine whether the illness is indeed bacterial in nature, for which an

antibiotic is then prescribed. Brink *et al.* (2009, p. 106) warns that the widespread implementation of throat cultures for pharyngitis is unlikely to occur, due to the extensive infrastructure required for an easily-treated condition in South Africa. A further call is made, on providing a prescription with instruction to be given for otitis media, if there is no resolution within 48 hours. (Brink *et al., 2009*). The duration and dosage of antibiotics is critically important for the success of antibiotic treatment, as well as the emergence of resistance. In order to slow down the emergence of antibiotic resistance, Wright (2010, p.3) suggests limiting the exposure of microbes to antibiotics to reduce the opportunity for the selection and dissemination of resistance. Alternatives to new antibiotics include the discarding of existing antibiotics, a combination of antibiotics and other medicines to increase efficacy, as well as focusing on vaccines and the use of bacterial viruses (bacteriophages), used extensively in the former USSR (Wright, 2010). Vila *et al.* (2010, p. 578) further suggest:

- The rational use of antibiotics
- Infection control in hospitals
- Development of rapid diagnostic tests
- Research on antibiotic resistance
- Research and development of new antibiotics

Aiello & Larson (2003, p. 506) recommend the education of consumers to have a clear understanding of the delineation between hygiene and cleaning products containing ingredients that may contribute to antibiotic resistance, compared to broad spectrum hygiene and cleaning products that have not been linked to antibiotic resistance.

APUA calls on consumers to become informed about the products they purchase and use in their homes (APUA, nd.). Reading and understanding the meaning of product labels will give a consumer a better idea not only of what products contain, but also the effect they have on bacteria and viruses.

In a recent episode of the new television series, “Hello doctor”, on South African national television, a suggestion was made to consider Complementary and Alternative medication (CAM) when faced with illnesses such as colds and flu. Goldsmith (2005, p.1) notes that there has been a remarkable shift away from conventional allopathic medicines to a more holistic approach in the western world. As discussed in Chapter 1, homeopathy is one such treatment option. According to the World Health Organisation (WHO), homeopathy is seen as the second

largest medicine system in the world, experiencing an annual growth of 20-25% (Tierney, McPhee & Papadakis, 2004). 24% of children in South-West England use some form of CAM. The most common were chiropractic, homeopathy, naturopathy, osteopathy, acupuncture and aromatherapy. Thompson *et al.* (2010, p. 69) notes in the ALSPAC longitudinal study that 11.8% of children used homeopathic products at least once up to the age of 8.5 years. The greatest use occurred at 18 months and 103 months. Chamomilla (most commonly used for teething problems) was used at 18 months and Arnica (used most commonly for acute soft-tissue bruising) was the most popular product at all other time points. The other remedies which comprise the top five homeopathic remedies used, include: Belladonna, Calendula, and other homeopathic remedies. Belladonna was used for high fever, Calendula for eczema, Pulsatilla for acute otitis media. The highest number of illnesses that were treated with homeopathy in this study were colic, eczema, injuries, bruising, colds and coughs, but some parents treated their children's insomnia, nightmares, stress, anxiety, shock and fears with homeopathic products as well. 46.3% of parents using homeopathic products would select a homeopathic product for their children themselves. Parents treat their children's self-limiting complaints themselves, including bruising, colds and coughs, but would consult a qualified homeopath, or homeopathic doctor for ongoing chronic illnesses. The mother or female carer for the family would be responsible for the health of the family; the study reflects over-the-counter (OTC) use of homeopathic remedies. Use was motivated by word-of-mouth, from friends and family and by a fear of side-effects from conventional medication (Thompson *et al.,* 2010). The ALSPAC study mirrors the results of a study in Scotland around the prescribing of homeopathic remedies. Colic, cuts and bruises, teething, dermatological conditions, earache, flu and URTI, coughing, vomiting, irritability and diarrhoea were the most common conditions for which homeopathy was used (Ekins-Daukes *et al.,* 2004). From these studies it becomes apparent that homeopathy could be used by parents with children in ECD centres, who contract the everyday illnesses and ailments as discussed. Homeopathy could be considered as either complementary to allopathic medicines or perhaps as an alternative.

Factors which are associated with the use of homeopathic products in children include the following (Wye *et al.,* 2008):

- Higher maternal education
- Maternal use of homeopathic products
- Maternal lack of confidence in doctors

- Mothers reporting that they were less likely to see a doctor when the child is ill, but instead attempted to manage children's health through self-medication measures of which homeopathic products was one method
- Children receiving vitamins and watching less television

In the next chapter, a closer look will be taken at homeopathy in general and homeopathy in South Africa.

3.8 SUMMARY

In this chapter, Early Childhood Development (ECD) Centres were defined. The major causes of child mortality, namely pneumonia and diarrhoea, were discussed, together with the less concerning but more common illnesses children can contract while attending ECD centres. Antibiotics, although wonderful weapons in the medicinal arsenal, face antibiotic resistance due to the actions of several role players: namely, consumers, the medical sector, the agricultural sector, the pharmaceutical industry and the marketers and manufacturers of hygiene products. Due to this global issue, a possible solution might be Complementary and Alternative Medicines (CAM) for common illnesses and ailments.

CHAPTER 4:
THE USE OF HOMEOPATHY AS PART OF COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM)

4.1 INTRODUCTION

Several books can be filled with the details, history and use of homeopathy. However, this chapter will only provide a brief overview of the topic. A look at complementary and alternative medicine (CAM) will investigate its definition, uses and reasons for increased use. Homeopathy will be defined, followed by details on the manufacturing thereof, and a brief history of its development and use. The question on whether homeopathy can compete with conventional medicine is discussed. Homeopathy and its use on children will look at several common ailments and the successful use of homeopathic remedies to treat them. This chapter ends with a brief look at the South African homeopathic business environment.

4.2 COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM) DEFINED

Homeopathy is seen as a treatment within the realm of Complementary and Alternative Medicine (CAM). CAM does not have a strict definition, as a result of its dynamic nature, but it generally includes a group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine (National Centre for Complementary and Alternative Medicine nd.). Conventional medicine (also called Western or allopathic medicine) is medicine as practised by holders of a degree in medicine and by allied health professionals, such as physical therapists, psychologists and registered nurses. The boundaries between CAM and conventional medicine are not finite, and specific CAM practices may, over time, become widely accepted (National Centre for Complementary and Alternative Medicine nd.). The South African homeopathic product manufacturer, Natura, goes further in stating that conventional medicine has its roots in anatomy, physiology and chemistry-focused aspects such as biochemistry and microbiology. It attempts to treat symptoms which are common to most people suffering from a particular disease. Conventional medicine considers symptoms as an indication that the body has been overcome by disease. Medicines act as an

intervention 'against' the disease so that the body can be restored to health. If an example is used of a person suffering from diarrhoea, conventional medicine would use an anti-diarrhoeal to suppress or stop diarrhoea (Natura, nd.).

Using CAM in a complementary manner means that a CAM practice or medicine is used together with conventional medicine. Using CAM practices or medicine instead of conventional medicine is known as alternative medicine. Kemper (2001) suggests that CAM therapies are used mainly as add-ons to current treatments, rather than replacement thereof and also notes that pediatric use of CAM therapies is on the increase. Simpson and Roman (2001) agree and state further that homeopathy, aromatherapy and herbal medicines were the most frequently used CAM therapies for children. CAM was mainly used due to word-of-mouth recommendation, dissatisfaction with conventional medicine and fear of side-effects of conventional treatments. CAM is most often used for children for the following ailments (Simpson & Roman, 2001):

- Ear, nose and throat ailments
- Dermatological ailments
- Musculoskeletal problems
- Infantile ailments
- Respiratory complaints
- Emotional/behavioural health problems

Wiles and Rosenberg (2001, p. 209) note in the literature of a study conducted that greater use of CAM is related to individual characteristics such as gender, education, income and social class. Dr Alan Tomlinson of the Health Products Association of South Africa notes the following reasons for the increased use of CAM (Tomlinson, 2011):

- Increased responsibility for personal health
- Perceived high cost of health services and medicines
- Safety and low incidence of side effects
- Ease of access in front shop of pharmacy
- Increased education, knowledge and awareness of the benefits of nutrition and lifestyle

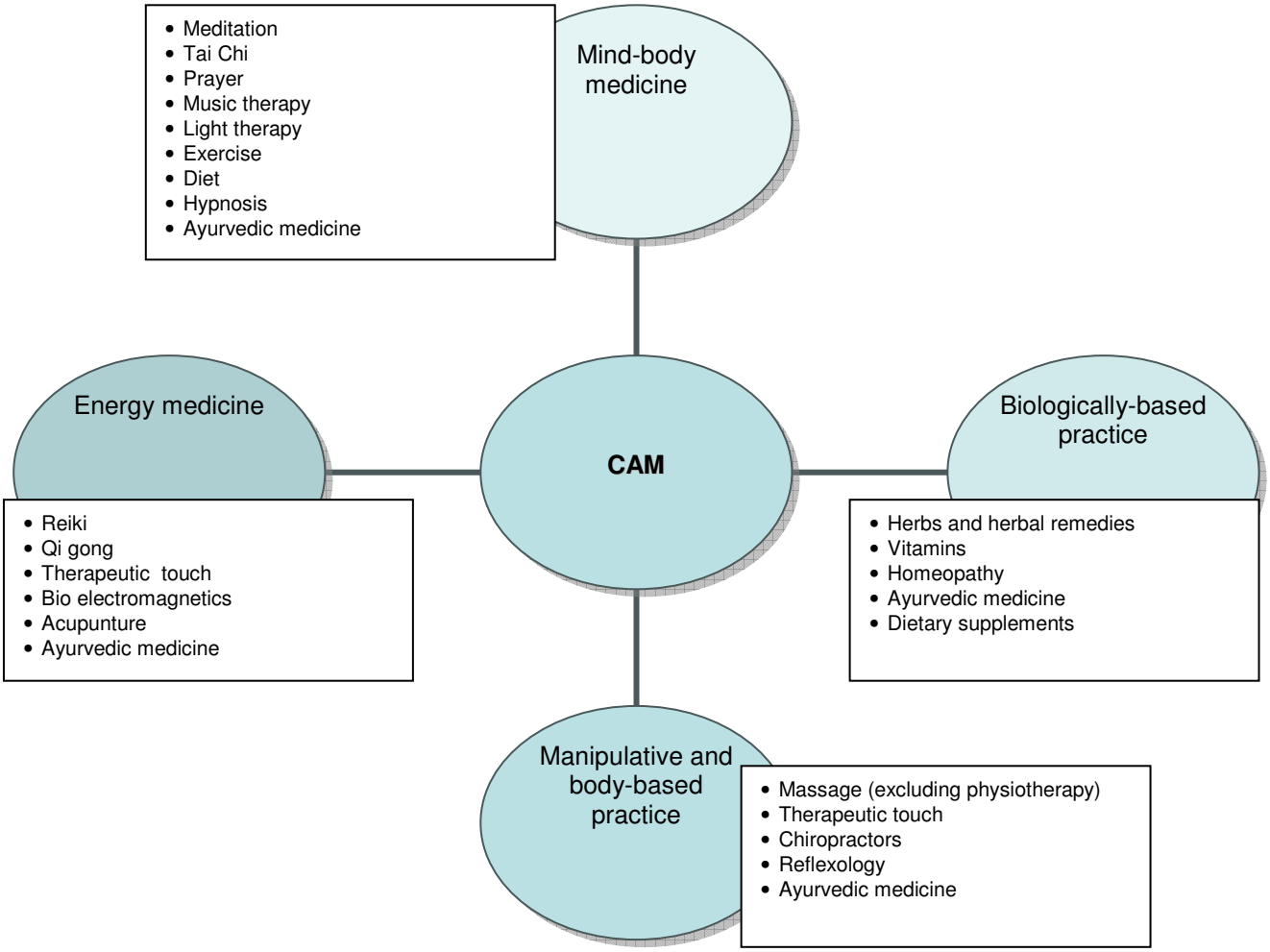
A study conducted in 2000/2001 found that the prevalence of CAM among the Indian community in Chatsworth, South Africa, would seem to be similar to that of the rest of the world. Various CAM therapies which were complementary to allopathic medicines were used to treat

certain chronic ailments. Allopathic medicine relieved the symptoms, but did not cure the underlying problem. 79% of CAM users in this study had positive outcomes with their treatments (Singh, Raidoo & Harries, 2004).

In 2000, the Health Products Association of South Africa (HPA) estimated that 50% of the turnover in complementary medicines occurred in pharmacies and 20% in health food stores. At that time there were 250 health food stores and 2500 pharmacies stocking complementary medicines. The balance of the market was made up of 600 supermarkets, chain stores and toiletry discount outlets. Despite the lack of comparative data, the amount spent on CAM medicines is considerably higher than the total amount spent on CAM practitioners. This would be in line with worldwide trends towards self-medication using complementary medicine (McLeod & Tomlinson, 2009). This is mirrored in a study by Cramer, Shaw, Wye, & Weiss (2010) which looked at the over-the-counter advice-seeking about CAM in community pharmacies and health shops. This study found that the majority of customers purchasing CAM products needed help with selecting an appropriate remedy or needed assistance in narrowing their choice down, should they already know the remedy they needed. Information sources which customers have used before seeking advice on products in a retail setting included CAM practitioners, friends and family, books, newspapers, magazines and the Internet. This raises implications for staff knowledge and training on OTC CAM products (Cramer, Shaw, Wye, & Weiss, 2010). This issue is of concern for OTC homeopathic remedies as well, as can be seen later in this chapter.

In order to get a better understanding of the different medicines and therapies within CAM, see Figure 4.1 below, which was also referred to in Chapter 1:

Figure 4.1: Complementary and Alternative Medicine (CAM) (See also Figure 1.1)



As can be seen from Figure 4.1 above, homeopathy is a biologically-based treatment within CAM, but could also be viewed as a whole body medical system, which not only looks at one facet of the body, but looks at the entire body and mind as one whole. Homeopathy is the crux of this study. According to the WHO, homeopathy is now the second largest system of medicine in the world, with an annual growth of 20-25% (Tierney, McPhee & Papadakis, 2004). In the next section, homeopathy will be defined and its history will be briefly discussed.

4.3 A BASIC DEFINITION AND HISTORY OF HOMEOPATHY

Homeopathy was developed by German physician, Samuel Hahnemann (1755-1843) in the 18th century. The term homeopathy is derived from the Greek words 'homoios' meaning similar and 'pathos' meaning suffering. Based on the principle of 'like cures like', also known as the law of similars, homeopathy works on the premise that a disease can be cured by a substance that could cause similar symptoms in a healthy person. An example would be where a person might be given *alium cepa* (red onion) for watery eyes caused by allergies. Allopathic medicine identifies symptoms and diseases, then treats these symptoms and diseases by means of medication and/or surgery without looking at the individual as a whole or determining the underlying cause of the disease (Cook, 2010). Homeopathy not only looks at the disease and its symptoms, but also at the person as a whole, looking for the underlying cause of the illness. Each person has a unique response to illnesses and thus each person's remedy might be different for the same illness.

According to Natura (a South African homeopathic product manufacturer), homeopathy has its roots in biophysics, which adopts a more holistic perspective and recommends that all variables in each person's experience of a disease are considered. The symptoms a person shows cannot be viewed in isolation, but rather as part of the person's entire wellbeing. The human body has the ability to heal itself and should be allowed to do so. The symptoms a person shows during illness are considered part of the body's attempt to heal itself. Homeopathic remedies do not suppress any of these symptoms, but rather work energetically with the body to stimulate the body's ability to heal itself. Homeopathic remedies do this by supporting or promoting the various organ systems. In the case of a person suffering from diarrhoea, it is believed that diarrhoea is considered the body's attempt to flush out toxic materials. Homeopathic remedies used in the treatment of diarrhoea will support the digestive system and will allow the body to completely rid itself of toxic materials. The diarrhoea will stop and the body will return to its healthy self (Natura, nd.).

Homeopathic remedies are manufactured by using natural materials found in fauna, flora and minerals. Repeatedly diluting the substances and shaking them, also referred to 'succusion', leads to remedies being referred to as potentised medicines. Remedies could be potentised various times such as 3, 12, 30, 200 or even more times. The potentised solution or remedy is

either sprayed or dropped onto blank sugar and lactose tablets, pillules or granules, or is used directly as an oral spray or as drops under the tongue or in water. It can also be added to creams, ointments and lotions for topical application (Rowson, nd.). This 'micro-dosis' of biochemically neutral, toxic or even poisonous substances activates the natural defence mechanisms of the human body (Halberstein, Sirkin, & Ojeda-Vaz, 2010).

There are several other principles which make up the core of homeopathy, including the homeopathic simillimum, which determines that there can only be one true remedy which can best match the patient's symptom, as explained by Dr David Lilley (2011). Homeopathic remedies can be either singular (also known as polychrest remedies) with only one potentised ingredient or a combination remedy which includes several potentised ingredients (either several single remedies administered at the same time, or a combination homeopathic product). Some classically-trained homeopaths strongly oppose the use of combination remedies, but from an OTC point of view, combination remedies make it a lot easier for consumers to pick a product specific to the ailment or illness which requires treatment, rather than find several single remedies. It also allows several potencies of various remedies to be combined into one product which suits a specific condition, illness or ailment. South African OTC homeopathic producers such as Sister Lilian and Natura have a large number of combination remedies, which consumers can choose from, specific to certain illnesses. Examples of these include Natura's Tonsilla (specific for tonsillitis and sore throat) and Rescue remedies (specific for the treatment of emotional shock, fear, nervous stress, feelings of desperation, tearfulness and grief, mild anxiety and sleeplessness due to emotional stress). Pictures of these combination remedies can be seen below in Figure 4.2

Figure 4.2: Combination remedies of Natura

Source: www.natura.co.za

The composition of Natura's Tonsilla combination remedy, for an example, includes various homeopathically-prepared ingredients and potencies:

Each 250mg Tonsilla tablet contains (Source: www.natura.co.za):

Ammonium bromatum D6
Atropa belladonna (Belladonna) D6
Calcarea iodata D6
Echinacea angustifolia D6
Hepar sulphuris calcareum D6
Lachesis mutus D6
Mentholum D6
Mercurius cyanatus D6

OTC homeopathic remedy manufacturers and brands have single and combination remedies in their product offerings and are not bound to supply only combination remedies. Sister Lilian's Chamomilla tablets (as seen below in Figure 4.3), is an example of a single remedy (also known as a polychrest remedy) for the treatment of nervous and digestive problems, as well as

recurrent ear infections. It is also used in the treatment of colic, teething, tantrum behaviour and provides mental calmness, rest and relaxation.

Figure 4.3: Single remedies by Sister Lilian remedies

Source: www.sisterlilian/remedies.htm

These two South African OTC homeopathic brands merely scratch the surface of what is available to consumers on the shelves of pharmacies, health shops, online and at various other retailers.

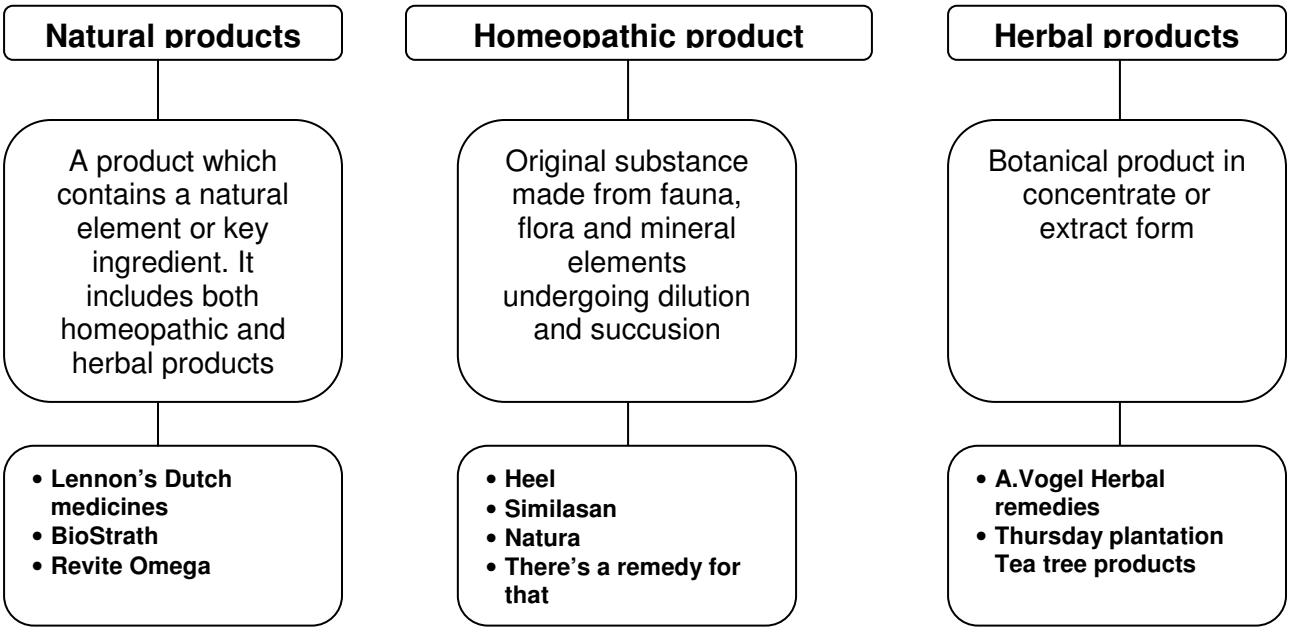
Homeopathy should not be confused with other natural or herbal substances. Frye (2003, p.159) warns that homeopathy is not a fancy word for 'natural' and does not include a mixture of vitamins, herbs, manual therapies, lifestyle changes, etc. The key to understanding the difference between these homeopathic, natural and herbal medicines is in the production of each medicine. As explained above, homeopathy involves dilution and succusion, with the end result of a micro-dosis of the original substance, which is then given at regular intervals to a patient. Homeopathic remedies can either be available as singular remedies or combination remedies. Well-known South African brand Natura is an example of a homeopathic brand. Other brands and producers include PharmaNatura, Similasan and Heel, to name but a few. In most cases, there are no known side-effects to homeopathic remedies or likelihood of over-dosage.

Herbal medication and products are made mainly from plant/botanical materials with either parts or the whole plant being used. Herbal medicines and remedies could occur in concentrated form or extract. Even though a large number of homeopathic medicines are made from plants, it is

the ultra-dilution which sets it apart from herbal medicine. It is quite ironic to note that some herbal plants are toxic to the extent that they could be fatal when taken in a herbal form, but therapeutic when in a homeopathic product, due to the micro-dosis of the original substance (Frye 2003). Herbal medication and products pose side-effects, contra-indications with other illnesses as well as complications when over-dosage occurs. Well-known herbal medicine, producers and brands available over-the-counter include Spasmopep Junior Antispasmodic syrup, Prospan Cough Syrup, Iberogast, A.Vogel's Herbal remedies and Thursday plantation Tea Tree products, to name but a few.

Natural products include both homeopathic and herbal products, but open the spectrum wider to include an even larger array of products which might include some natural element or key ingredient in their products. The number of brands and producers of natural products are endless, but include the various natural supplements such as BioStrath, Revite Omega and other medicines such as Lennon's Dutch medicines. For a clearer distinction on how homeopathy differs from other health products, see Figure 4.4 below:

Figure 4.4: Homeopathic, Natural and Herbal products



Source: Author

As mentioned before, the focus of this study is only on homeopathic remedies, products and medicines.

The development of homeopathy has been anything but smooth sailing, as discussed in Ullman's (nd.) condensed history of homeopathy. Ullman (nd.) notes that early homeopathy has posed a philosophical, clinical and economical threat to orthodox medicine. The American Medical Association (AMA), established in 1846, vowed to slow down the development of homeopathy. Actions such as purging all medical societies of physicians who were homeopaths and establishing a code of ethics which ensured that orthodox physicians would lose their AMA membership should they consult with a homeopath or other non-regular practitioner, was the order of the day. Case studies are discussed and examples are provided within the United States and European countries, which indicate that the exposure, use and education within the field of homeopathy was intentionally limited. Ironically, homeopathy has been at the forefront of dealing with severe epidemics, such as cholera, yellow fever and scarlet fever. During the 1849 Cincinnati cholera outbreak, homeopaths kept meticulous records of the number of patients who were treated and cured and of those who died, so much so that it was published in the daily newspaper of the time. Only 3% of the 1116 homeopathic patients died, while between 48-60% of those under orthodox medical treatment died. During the 1878 yellow fever epidemic, the death rate of patients under homeopathic treatment was about one third compared to those treated with orthodox medicine (Ullman nd.).

The fall of homeopathy occurred in 1910 when the Carnegie Foundation issued the Flexner report which in essence was designed to endorse orthodox medical schools and condemn homeopathic schools. The highest value was placed on medical schools which had a full-time teaching faculty, as well as those who taught a pathological and physiochemical analysis of the human body. Homeopathic colleges were allegedly faulted as a result of employing professors who were teachers and researchers, as well as being in clinical practice. The Flexner report considered pharmacology, as presented in homeopathic colleges, to be not worthwhile. It is quite ironic to note that pharmacology is a compulsory subject in most modern-day degrees in medicine. In order to ensure that homeopathy students were medically recognised and had the opportunity to take medical board examinations, homeopathic colleges responded to the onslaught by changing the curriculum to offer more education on pathology, chemistry, physiology and other medical sciences. The result was that homeopathic training suffered. Newly trained homeopaths were less able to practise homeopathy well and, instead of individualising medicines to a person's totality of symptoms and wellbeing, many homeopaths were prescribing medicines according to disease categories.

Further reasons for the sharp decline in homeopathy was that orthodox medicine was not viewed as barbaric, as it was in the 1800s, and did not drive as many patients away. Homeopaths require more time to assess a patient as a whole than orthodox physicians, making it easier for orthodox physicians to make more money than homeopaths. Ullman (nd.) shares that the loss of funding, especially in the USA, was another reason for the decline in homeopathy. He notes that the funds intended for homeopathic institutions, as sponsored by John D. Rockefeller (who was a strong advocate of homeopathy), was instead given to orthodox medical institutions. Rockefeller's financial advisor did not comply with his wishes to donate funds to homeopathic institutions, leading to a potential loss of between $300-$400 million, which could have boosted homeopathy significantly in the early 1900s. Another culprit in the fall of homeopathy was the pharmaceutical industry. Pharmaceutical companies at the time published medical journals, which acted as mouthpieces against homeopathy and in support of orthodox medicine. Homeopaths themselves were also partly responsible for the fall of homeopathy. Disagreements regarding the prescribing of remedies based on the totality of symptoms, rather than for the main complaints, as well as the various levels of potentised remedies, resulted in extremely diluted substances.

It is hard to believe that after such a history anything could come from homeopathy, but Ullman (nd.) notes that, owing to an increased use of homeopathy in the UK and the rest of Europe, there is a resurgence in homeopathy. In France, there has been a call from presidential to academic level for more research in homeopathy. Homeopathy is also extremely popular in Asian countries, such as India, Pakistan and Sri-Lanka, as well as in South America. It is also widely practised in Mexico, Greece, Italy, Spain, Australia, South Africa, Nigeria and the Soviet Union. Ullman (nd.) notes that growing numbers of consumers will also learn to self-prescribe homeopathic remedies for common acute conditions, as is the case with OTC homeopathic remedies - a point which is certainly most pertinent to this study. The primary objective of this study is to determine a profile of parents with children in ECD centres who use OTC homeopathic remedies for common ailments and illnesses, in the Pretoria East region.

Of course, homeopathy will not be entirely welcomed or even encouraged by the allopathic medical industry or even by scientists. Even modern-day onslaughts are common, as could be seen in the very public recommendation by the UK House of Commons Science and Technology Committee in 2009. It recommended that the UK Government stop all homeopathy

funding within the National Health System (House of Commons Science and Technology Committee, 2009-10, p.28). The scientific community has not supported the notion of homeopathy for centuries, as the mere idea that an ultra-diluted substance could be of any medicinal value is unfathomable. It is thus seen merely as water or a placebo, which has no therapeutic effect.

French virologist Luc Montagnier stunned the scientific community when he declared that water could retain the 'memory' of substances with which it came into contact and thus provide homeopathy with a firm scientific foundation. Montagnier received the Nobel Prize in 2008 for discovering the link between HIV and AIDS, during research done in the 1980s (Page, 2010). His breakthrough HIV/AIDS research has paved the way for new treatments, saving countless lives. During December 2010 in Science magazine, Professor Montagnier explained, "I can't say that homeopathy is right in everything. What I can say now is that the high dilutions (used in homeopathy) are right. High dilutions of something are not nothing. They are water structures which mimic the original molecules." (Enserink, 2009).

As discussed by Ullman (2011), Montagnier is making reference to his experimental research that confirms one of the controversial features of homeopathic medicine by which doses of substances undergo sequential dilution with vigorous shaking inbetween each dilution. Even though it is common for modern-day scientists to assume that none of the original molecules remain in the solution, Montagnier's research (and that of others) has verified that electromagnetic signals of the original medicine remain in the water and have dramatic biological effects.

Halberstein, Sirkin & Ojeda-Vaz (2010) note that homeopathy has been credited with benefiting patients with the following conditions, as seen below in Table 4.1:

Table 4.1: Conditions from which patients could benefit by using homeopathy

• Allergies • Arthritis • Asthma • Constipation • Respiratory and ear infections • Dysmenorrhoea • Digestive disorders, including food poisoning • Insomnia • Sinusitis • Urinary tract infections	• Motion sickness • Insect bites and stings • Incontinence • Headaches • Eczema • Influenza • Drug and alcohol overdose • Minor physical injuries such as sprains • Hypertension • Psychological disorders • Other acute and chronic health conditions

Source: Halberstein, Sirkin & Ojeda-Vaz, (2010)

If the conditions mentioned above can surely be treated by conventional medicine, what would be the reason for patients to choose homeopaths instead? A South African study undertaken by McIntosh and Ogubanjo (2008) found that participants to the study consulted a homeopath after their health problems were not solved by conventional medical treatment. Most people were concerned about the side-effects of long-term conventional medicine. A large number of participants were frustrated with conventional medicine consultation, including rushed consultations where doctors try to see as many patients as possible, in order to increase turnover. Participants also felt that they were asked too few questions and doctors were too quick to prescribe. Some participants felt that doctors were uncaring, judgmental and difficult to talk to, with a poor bedside manner. Participants continued to consult homeopaths, because they felt that the treatment was effective, natural and did not have side-effects. Participants felt that homeopathic treatment worked with the body, thereby solving problems long-term. Participants also felt that the homeopathic treatment was cost-effective, as the same problem does not need to be treated repeatedly (McIntosh & Ogunbanjo, 2008).

Ullman (2011) concludes that scepticism is healthy in the development of any science, but many scientists have a "pathological disbelief", as quoted by Nobelist Brian Josephson, in certain subjects that ultimately create an unhealthy and unscientific attitude which blocks real truth and

real science. Scepticism is at its best, when its advocates do not try to cut off research or close down conversation of a subject, but instead explore possible new (or old) ways to understand and verify strange but compelling phenomena (Ullman, 2011).

Having established what homeopathy is and the history surrounding its development, a closer look will be taken at homeopathy versus conventional medicine.

4.4 HOMEOPATHY VERSUS CONVENTIONAL MEDICINE?

The question arises as to whether homeopathy could be an alternative in a modern era of medicine, which includes the era of antibiotic resistance. As discussed in the previous chapter, antibiotic resistance is a medical dilemma facing not only certain countries or communities, but all people everywhere. As previously discussed, there are several contributing factors which led to the resistance of antibiotics. Viksveen (2003 p.100) agrees that there is a relationship between the overuse of antibiotics and antibiotic resistance. Overuse, incorrect prescription and the unnecessary use of antibiotics occurs especially for upper respiratory tract infections, acute and common colds, otitis media, sore throats, coughs and bronchitis. This occurs, despite the lack of efficacy that antibiotics provide for these illnesses. As mentioned in Chapter 3, children (especially those attending daycare and pre-school centres, such as ECD centres) are the largest consumers of antibiotics.

Children carry these antibiotic-resistant organisms to their daycare centres and family, thus starting the vicious cycle of spreading increased antibiotic resistance and decreased response, which subsequently leads to increased antibiotic use. This could lead to patients being recurrently infected. Viksveen (2003 p.102) notes that the most common problems parents consult a homeopath for are when children suffer from the following:

- Recurring ear infections (otitis media)
- Recurring respiratory tract infections
- Recurring skin diseases

The most frequently treated conditions with OTC homeopathic remedies were respiratory problems. Viksveen (2003) concluded that homeopathy was as effective as conventional medicine in treating upper respiratory tract complaints, lower respiratory tract complaints and ear complaints. Haidvogl, Riley, Heger, Brien, Jong, Fischer, Lewith, Jansen & Thurneysen

(2007) have taken it further and have assessed the effectiveness of homeopathy compared to conventional treatment in acute respiratory and ear complaints in a primary care setting, involving more than 1500 patients in at least 6 European countries. It was concluded that homeopathy was not at all inferior to conventional treatment and that the onset of improvement within the first 7 days after treatment was significantly faster within the homeopathic treatment group, which included adults and children (Haidvogl *et al*., 2007).

Besides the satisfaction patients receive from using homeopathic remedies, there is also a cost benefit which should be considered. Rossi, Crudeli, Endrizzi, & Garibaldi, (2009) comment on the significant reduction in the use and costs of conventional medicine compared with homeopathic treatment for respiratory diseases. The costs of homeopathic remedies are significantly lower than those for conventional pharmacological therapy. The use of homeopathy in children with recurrent acute respiratory infections was associated with a 50% reduction in conventional pharmacological expenses. This has become important for a country like South Africa where medical costs increase every year, at a rate higher than the official inflation figure for the country.

In the next section, a discussion on the use of homeopathic products specific to children will follow.

4.5. THE USE OF HOMEOPATHY AMONG CHILDREN

As discussed in Chapter 3, the focus of this study will be on the following common ailments/illnesses, as seen in Table 4.2

Table 4.2: Common ailments and illnesses to be the focus in this study

Illness/ailment	
Colds and Flu	Tummy aches
Ear infection	Vomiting
Coughs and croup	Upper respiratory infections
Headaches	Diarrhoea
Bumps, bruises, insect bites	Tonsillitis
Eye inflammation and infection	Rashes and eczema
Fungal infections	Teething problems

Source: Author

For parents, the most worrying infections include Upper Respiratory Tract Infections (URTIs), otitis media (middle ear infection) and gastrointestinal illnesses. In this section, a brief view of the use of homeopathy among children and the common illnesses/ailments that they get will be looked at.

Trichard, Chaufferin, & Nicoloyannis (2005 p.3) conducted a study to compare a homeopathy treatment strategy with an antibiotic treatment strategy on a pharmaco-economic level, in recurrent acute rhinopharyngitis in children. Rhinopharyngitis is an acute or chronic inflammation of the mucous membranes in the nose and throat**.** This provides a favourable terrain for the development of inflammation and microbial infections. It is usually caused by a virus (viral infection)(Sterimar, n.d.). Children under the age of 3 are most prone to contracting rhinopharyngitis and contract it even more often when in close contact with other children, such as at an ECD centre. The study by Trichardt, *et al.* (2005) was based on three terms, namely medical effectiveness, quality of life and cost. The homeopathic treatment strategy yielded better results than the antibiotic strategy in terms of effectiveness when looking at the number of episodes of rhinopharangitis, the number of complications, the quality of life and lower medical costs. Parents also used significantly less sick leave while children were treated homeopathically in comparison to antibiotic treatment (Trichard *et al*., 2005). This indicates that

homeopathy is a cost-effective means of treating one of the most common illnesses young children contract. Rhinopharyngitis is usually the starting point for many other common infections including laryngitis, bronchitis, otitis media (middle ear infection), tonsillitis, sinusitis, and several other URTIs.

Looking at Upper Respiratory Tract Infections (URTIs), Ramchandani (2010, p.101) notes that ECD centres where children are gathered in close proximity to one another makes an ideal breeding ground for URTIs, which are more commonly caused by viruses. These infections account for about 50% of all illnesses in children younger than 5. This study looked at 30 individual cases of children under the age of 5 with recurrent URTIs who were given homeopathic remedies based on a detailed diagnosis. Various infections such as tonsillitis, pharyngitis, sinusitis and otitis media were diagnosed and treated per individual, based on each child's particular 'whole body' diagnosis (Ramchandani, 2010). This is also mirrored in a study by Steinsbekk, Fønnebø, Lewith, & Bentzen (2005) which concluded that child patients receiving homeopathic treatment experienced fewer days of illness when contracting an URTI and also fewer symptoms. The results from these studies indicate that homeopathic remedies administered for treatment and prevention of URTIs in children are effective.

Frei and Thurneysen (2001, p.180) remark that in an acute disease, a well-chosen homeopathic remedy usually acts quickly, sometimes within minutes or within a few hours. When considering otitis media (middle ear infection), patients experience intolerable pain within the early onset of symptoms. As has been discussed in Chapter 3, otitis media in South Africa is often wrongly diagnosed, followed by an antibiotic which provides only a small reduction in pain within 24 hours. As explained in Frei and Thurneysen (2001, p.182), Friese *et al.* (1997) have proved that homeopathic treatment of acute otitis media leads to faster relief of pain and a lower rate of relapse than treatment with antibiotics. The study Frei and Thurneysen (2001, pp.180-182), have conducted has shown that 72% of patients have pain control with homeopathy within 12 hours. Again, this study has proved that homeopathy is a cost-effective means of treatment, due to fact that the relapse of acute otitis media after treatment with homeopathy was less frequent than with antibiotics.

Children suffering from eczema are affected in several ways, including: sleep disturbances due to itching, special clothes which are sometimes required, avoiding certain activities including swimming or playing in a sandpit, as well as frequent skin care and doctor's visits. Keil, Witt,

Roll, Vance, Weber, Wegscheider & Willich (2008, pp.15-21) conducted a comparative cohort study comparing homeopathic and conventional treatment for children with eczema over a 12-month period. Eczema symptoms and eczema-related quality of life was assessed by patients or their parents and it was found that there was no significant difference between conventional or homeopathic treatment. However, doctors assessing eczema signs and symptoms found more improvement under homeopathic treatment than conventional treatment.

The studies mentioned in this section are merely a drop in the ocean by way of proof of efficacy of homeopathic care and remedies. The studies mentioned here were specific to children, which is relevant to this study and is thus used for this chapter. A quick Internet search on scientific proof that homeopathy is effective will result in countless peer-reviewed, accredited journal articles, proving that homeopathy works.

Does this mean that homeopaths and homeopathy can cure all diseases, illnesses and ailments? Of course not. However, the same can be said for conventional medicine. Steinberg, Luyt, Pieterse, Van den Heever, & Van Staden (2008, p.71) found that South African homeopaths felt that they were better equipped than conventional medicine to treat asthma, rheumatism, chronic illnesses, skin conditions, weak immune systems and allergies. 95% of homeopaths felt that conventional medicine is better equipped for treating emergencies, hypertension, diabetes mellitus, orthopaedic conditions, surgical problems and cancer. 99% of South African homeopaths were in favour of possible co-operation between homeopathy and conventional medicine, while 83% were willing to inform conventional doctors about homeopathy. The authors conclude and recommend that the conventional medical fraternity make use of this dialogue opportunity. As mentioned before, no medical system is perfect, but the willingness to learn from one another could be of immense value to society. Each system should be granted a place in the sun by the other. Common ailments and illnesses in children need not be treated with all guns blazing, so to speak. OTC homeopathic remedies could be used by parents for these common ailments and illnesses which children contract, specifically those in ECD centres.

From the brief discussion above, it becomes clear that homeopathy can compete with conventional medicine in the treatment of common illnesses and ailments in children. Does this mean that homeopathy is in competition with conventional medicine for the attention of the parent/consumer? A study by Wye *et al.* (2008) suggests that homeopathic products are used

as complementary rather than alternative in pre-school children. All the studies mentioned in the above paragraphs were undertaken with a homeopath providing treatment or a general practitioner with experience in homeopathy doing so. The question arises as to whether the same can be said for OTC homeopathic treatment and whether parents can make correct decisions regarding OTC homeopathic remedies, similar to those of a homeopath. One way of making it easier to choose correct remedies is to provide OTC remedies with simplified descriptions for their indications. Steinsbekk, Bentzen, Fønnebø, & Lewith (2004, p.113) question to what extent parents will choose the same remedy that an experienced homeopath would have chosen for an ailment or illness of a child, based on simplified information. In their study, it was found that parents were able to choose the same homeopathic remedy as a trained homeopath for 55% of children with URTI. South African homeopath and producer of OTC homeopathic products under the brand There's A Remedy For That, Genie Rowson, notes that there is no 'wrong' remedy and that even a so-called 'wrong' remedy can be of some good (Rowson, nd.). Reid (2002, p. 225) concluded in a Manchester-based study that OTC homeopathic remedies were most often used for respiratory ailments and mental/psychological ailments, as well as for bruises/injuries. One of the most common reasons for using OTC homeopathic remedies is that it is a natural treatment, perceived as harmless.

4.6 HOMEOPATHY IN SOUTH AFRICA

Homeopathy is said to have arrived in South Africa around the 1820s through German and Dutch missionaries, as well as settlers. By 1931, there was only one doctor in the then Transvaal, but 15 chemists which sold homeopathic remedies ("Homeopathy in South Africa," nd.). The first homeopathic pharmacy was opened in 1941 by Willem Last. The Homeopathic Society of South Africa was started in 1949 by Barbara McFarland (a homeopath who studied in England). Dr Bill Lilley emigrated from England in order to establish formal homeopathic training in South Africa. He started a small learning group of lay people and produced the first batch of classical homeopaths in 1953. Dr Lilley also assisted in the formation of the South African Naturopathic and Homeopathic Association.

In 1951 the Lindlahr College was established with the first batch of graduates in 1956, under the auspices of Dr Bill Lilley. The founder of Natura, Dr Michael Levien, was amongst the very first graduates. By 1974 there were several homeopathic colleges presenting homeopathy courses, with varying standards of training. The South African government stepped in to standardise and formalise homeopathic training, which led to the closure of all existing schools in 1982. A new

Act 63 of 1982 (the Chiropractors, Homeopaths and Allied Health Services Professions Act), was passed, which led to the establishment of the Chiropractors, Homeopaths and Allied Health Services Professions Council of South Africa. It was one of the five statutory Health Professions Councils in South Africa. The council provided statutory guidelines for education to be established. This allowed new education institutions to be established. The Technikon Natal was the first to open its doors under the new legislation, for a five-year, full-time homeopathic qualification programme.

In 1992 Technikon Witwatersrand started a course in homeopathy. This ended the era of lay-homeopathy and the resurgence of medico-clinical homeopathy. In 1996 Dr David Lilley (son of Dr Bill Lilley) started the South African Homeopathic Medical Association, along with medical doctors who had completed qualifications at the British Faculty of Homeopathy. By the end of the 1990s the South African Faculty of Homeopathy was established, which is fully endorsed and recognised by the Allied Health Professions Council of South Africa. At the faculty, only registered medical practitioners are allowed to enter into the part-time study of homeopathy.

In 2000 the Chiropractors, Homeopaths and Allied Health Services Professions Act was amended to become the Allied Health Professions Act. Amendments made it compulsory for any person prescribing homeopathic medicine, whether it be medical practitioners and/or homeopathic practitioners to register under the Allied Health Professions Council (Drs JP Prinsloo Inc. nd. and “Homeopathy in South Africa,” nd.).

According to Steinberg & Luyt (2008), homeopathy is the second largest field registered with the South African Complementary Medical Association (now known as the South African Society of Integrative Medicine), the largest being Chiropractic, according to the 2007 South African Health Review (Gqaleni, Moodley, Kruger, Ntuli, & McLeod, 2007).

Mann (2008) conducted a study to determine the perceptions of homeopathy amongst pharmacists and pharmacists’ assistants in the greater Johannesburg area. 94% of respondents said that homeopathic medicines were available for sale in their place of work. It indicates that homeopathy has entered the mainstream line of business within pharmacies, and 63% of pharmacists agreed that homeopathic products provided an important source of income for their pharmacy. Most pharmacists were asked advice on homeopathy, even if they did not work specifically with homeopathic medicines in their pharmacy. The majority of respondents did not

feel confident in their knowledge of homeopathy and homeopathic products. This indicates possible opportunities for homeopathic training in order for pharmacists to assist customers in their search for homeopathic products which suit their needs. 77% of respondents in this study felt that the ease with which customers could obtain homeopathic products - owing to its unscheduled nature - was a major influence in customers' decision-making to purchase homeopathic products. 100% of pharmacists witnessed customers' scepticism regarding the effectiveness of homeopathic products, and 63% agreed that the lack of research was one of the major reasons for customers to avoid homeopathic products. A negative aspect surrounding the sale of OTC homeopathic products was the fact that very few medical aids reimburse members for OTC homeopathic purchases. 86% of pharmacists agree with this statement (Mann, 2008).

Broughton (2008) conducted a study to determine the perception of registered homeopaths in South Africa towards the availability of OTC homeopathic medicines. 65% of the responses were in favour of OTC homeopathic remedies. It was found that homeopaths feel that OTC homeopathic remedies contribute to the promotion of the homeopathic profession, as well as increasing its accessibility to the public. Homeopaths felt that the positive aspects surrounding the availability of OTC homeopathic remedies included advertising and the promotion of homeopathy as a cost-effective medicine, convenient for home usage. A major concern of homeopaths regarding the use of OTC homeopathic remedies was the possibility of misdiagnosis of more serious illnesses, which might be missed due to people self-medicating themselves with OTC homeopathic remedies. However, the same can be said for conventional OTC medicines.

Another concerning issue which homeopaths have highlighted in this study was the issue regarding the storage and quality control of these OTC remedies. Homeopathic remedies cannot be stacked close to electromagnetic equipment such as computers, in direct sunlight or near essential oils, all of which could negatively influence the activity of homeopathic remedies. Homeopaths felt that more training should be provided to health shop and pharmacy staff, in order to store OTC remedies correctly. 64% of respondents refer or have referred patients to use OTC homeopathic remedies at a retail outlet. 68% of respondents dispensed, prescribed and used OTC homeopathic remedies on a daily basis. The most preferred OTC homeopathic brands which homeopaths recommended were Natura and Heel, but other brands including Reckeweg, Pharma Natura and Weleda were also identified to a lesser degree.

Current figures available to the public on the growth of homeopathy, the possible market share and the value of the pharmaceutical industry in South Africa are extremely limited and therefore older secondary sources need to be referred to in this section. The South African pharmaceutical market was worth over $2bn in 2008, with overall sales figures expected to pass the $3bn mark in 2012 (Articlesbase, 2010). According to a presentation delivered by Dr Alan Tomlinson of the HPA in September 2011, the world market for Herbals and Vitamins is valued at approximately $50bn. R7.8bn belongs to the South African market, which represents 0.7% of the world market (Tomlinson 2011). The South African CAM market share is broken down into the following categories and percentages, as seen below in Table 4.3:

Table 4.3: The South African CAM market share

Item	**Market share %**
Vitamins	36%
Herbs	14%
Food supplements	16%
Health drinks	7%
Natural cosmetics	7%
Homeopathy	5%
Sport nutrition	4%
Other	11%
Total	**100%**

Source: Tomlinson (2011)

Broughton (2008) mentions that homeopathy has experienced a growth of 16.4%, between 2001 and 2003, in South Africa. The South African Health Review of 2007 notes that expenditure on homeopaths has grown from R7.2 million in 1994 to R20.5 million in 2006 (Gqaleni, Moodley, Kruger, Ntuli & McLeod, 2007). There is thus a definite growth in the use of homeopathy in South Africa. This fact will, inter alia, be tested in this study regarding the profile of would-be parents using OTC homeopathic remedies for children attending an ECD centre in the Pretoria East area.

South African OTC homeopathic manufacturers and those selling OTC remedies must comply with South African legislation in this regard. The Medicines Control Council (MCC) is a statutory

body that was established in terms of the Medicines and Related Substances Act, 1965 (Act No. 101 of 1965) to oversee the regulation of medicines in South Africa. Its main purpose is to safeguard and protect the public by making sure that all medicines that are sold and used in South Africa are safe, therapeutically effective and consistently meet acceptable standards of quality (Department of Health, nd.). These standards of quality include Good Manufacturing practices with all the required quality controls and quality assurances set out in the South African Good Manufacturing Practices Guide, as well as in the Pharmaceutical Inspection Convention Guide, as explained in Broughton (2008). Producers are also subject to regular Good Manufacturing Practice (GMP) inspections, as decided upon by the MCC. On visiting the Natura website, the manufacturing conduct is explained in terms of quality control, quality assurance, GMP, as well as the relationship with suppliers, both locally and internationally (Natura nd.).

4.7 SUMMARY

This chapter has been dedicated to an overview of homeopathy, within the realm of possible CAM therapies and medicines. Homeopathy has been defined and differentiated from herbal remedies and medicines. A brief but tumultuous history of homeopathy followed, which even has modern-day onslaughts regarding its effectiveness and the proof thereof. Specific to this study is the use of OTC homeopathic remedies on children. Supporting articles and studies were discussed in order to support the use of homeopathy for the common illnesses and ailments most children attending ECD centres can contract. The South African homeopathic business environment was looked at from the arrival of homeopathy through to the legislation which governs it. In the next chapter, the research methodology for this study will be discussed.

CHAPTER 5:
RESEARCH METHODOLOGY

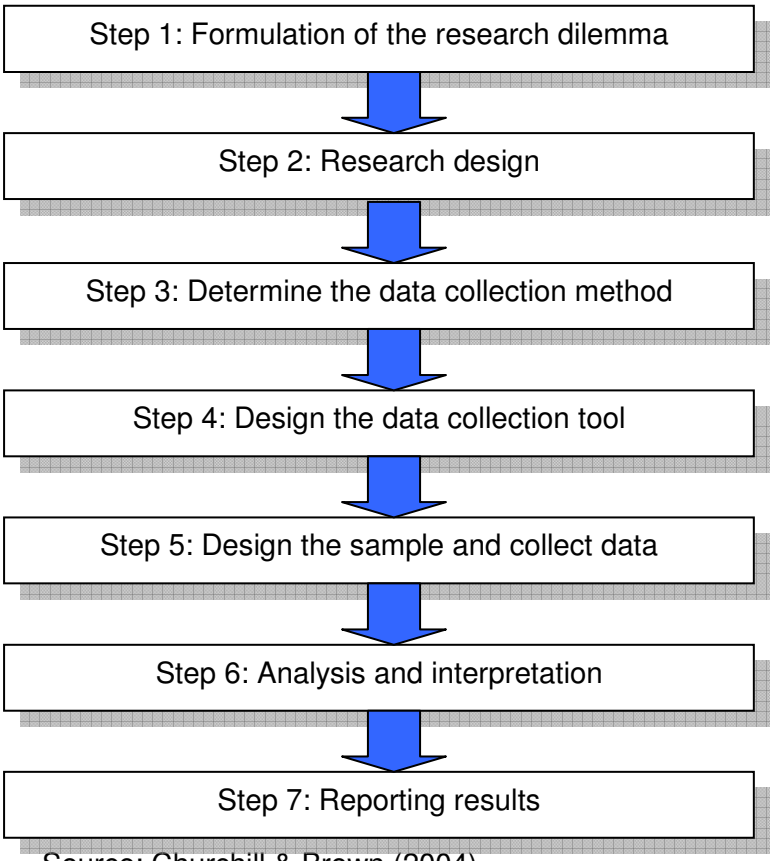
5.1 INTRODUCTION

The term 'marketing research' can be defined as the systematic and objective collection, analysis and interpretation of information so that marketing decisions can be made, based on recognised and scientific methods (Tustin, Ligthelm, Martins, & de J van Wyk, 2005). In this chapter, the marketing research process will be discussed and applied specifically to this study. A closer look will be taken at the research design and methodology based on the marketing research process. Measures to limit possible errors specific to this study will be discussed. Ethical marketing research is paramount and the methods put in place to ensure that this study is ethically sound will be examined.

5.2 MARKETING RESEARCH PROCESS

Marketing research is a process which requires consideration, as discussed in Churchill & Brown (2004, pp. 40-44), which briefly summarises the research process, as can be seen in Figure 5.1 below.

Figure 5.1: The Marketing Research Process



Source: Churchill & Brown (2004)

The research process starts with the formulation of the research dilemma. The research dilemma is also referred to as the research question or the research problem. Tustin *et al.*, (2005, p. 77) suggests that these opportunities, questions and problems usually result from the dynamic nature of the business environment. Although this step might seem frivolous, it is rather the foundation on which research rests and should be defined well enough, in order for the research to have value. Churchill & Brown (2004, p. 41) suggest that only when the research problem has been precisely defined can research provide pertinent information. From the research problem, primary and secondary research objectives can be derived. The research objectives of this study are discussed in Chapter 1 and are referred to as the following:

- Primary objective

  To build a profile of the homeopathic market, looking at a case of over-the-counter (OTC) homeopathic remedy use, amongst parents with children in Early Childhood Development Centres in the Pretoria East region.

- Secondary objectives
  - ✍ Measuring the perceptions and attitudes towards OTC homeopathic remedies of parents with children in Early Childhood Development Centres.
  - ✍ Determining the extent of use of OTC homeopathic remedies among parents with children in Early Childhood Development Centres in the Pretoria East region.
  - ✍ Evaluating whether parents with children in Early Childhood Development Centres in the Pretoria East region who use OTC homeopathic remedies view homeopathy as complementary or alternative to conventional medicine.
  - ✍ Determining the type and brands of homeopathic remedies used by parents.

The literature chapters following Chapter 1 have provided not only a background of the study, but also a motivation as to why the study should be conducted. In the next section, Steps 2-5 of the marketing research process will be discussed. The final two steps in the research process, namely data analysis and the reporting of results, will be covered in Chapter 6.

5.3 RESEARCH DESIGN AND METHODOLOGY

Following on the objectives set for a research project, the research design must be determined, as can be seen from Figure 5.1. If the research problem is the foundation for the research project, research design is the blueprint for the rest of the research process. Tustin *et al.*, (2005, p. 82), notes that it is the plan to be followed to realise the research objectives.

5.3.1 Research design

There are three basic research designs as discussed in Tustin *et al.*, (2005, pp. 83-87), Malhotra (2004, pp. 75-87), as well as in Churchill & Brown (2004, pp. 90-91) – namely, exploratory research, causal research and descriptive research. Table 5.1 and the discussion that follows indicate the key differences in the various designs:

Table 5.1: The basic research designs

	Exploratory	**Causal**	**Descriptive**
Objective	Discover ideas and insights	Determine cause and effect relationships	Describe market characteristics or functions
Characteristics	Flexible Versatile Often the front end of total research design	Manipulation of one or more independent variables Control of other mediating variables	Marked by prior formulation of specific hypotheses Pre-planned and structured design
Methods	Expert surveys Pilot surveys Secondary data Qualitative research	Experiments	Secondary data Surveys Panels Observational and other data

Source: Adapted from Malhotra (2004, p. 76)

- Exploratory research

  Exploratory research is used when researchers search for insights into the general nature of a problem. It is especially useful when establishing priorities among the various research questions and research problems. The research methods used under exploratory research are usually extremely flexible, unstructured and qualitative (Tustin *et al.*, 2005) . Churchill & Brown (2004, p. 90) note that exploratory research is typically used when the problem to be solved is broad or vague. Malhotra (2004, p. 76) agrees and states that exploratory research could be used to identify alternative courses of action, develop hypotheses and isolate key variables and relationships for further examination. Exploratory research could involve the reviewing of published data, conducting focus group discussions or investigating trade literature.

- Causal research

  Tustin *et al.* (2005 p. 87) explains that causal research is used to investigate whether one variable causes or determines the value of another variable. Experiments are usually used to determine a measure of causality.

- Descriptive research

  Typical descriptive research tries to answer questions which include who, what, where, when and how. Malhotra (2004, p.78) mentions that descriptive research is conducted for the following reasons:

  - To describe the characteristics of relevant groups such as consumers, salespeople, organisations and market areas.
  - To estimate the percentage of units in a specified population exhibiting a certain behaviour.
  - To determine the perceptions of product characteristics.
  - To determine the degree to which marketing variables are associated.
  - To make certain predictions.

  The research methods used in descriptive research are mostly structured and quantitative and include personal interviews, mail and intercept surveys, telephone interviewing, as well as online surveys (Tustin *et al.,* 2005). Churchill & Brown (2004, p. 90) note that descriptive research design determines the frequency with which something occurs or the extent to which two variables co-vary.

These three research design methods do not need to be applied individually, but could be combined in order to serve the purpose of the research project (Malhotra, 2004). The best combination of research design methods will depend entirely on the nature of the problem identified in the research project. Referring back to the research problem and objectives for this study, the research design which best suits this study is a descriptive research design. Some exploratory research design methods have been followed in the literature review of this study, in order to get a better idea of the research problem. The descriptive research design method will be actively used in the empirical part of the study.

The different research designs also call for different information types and information sources to be used, as is indicated in Step 3 of the research process, indicated in Figure 5.1. The different information sources can be grouped into secondary or primary data.

- Secondary data

  Secondary data is also known as data that have already been collected from some purpose other than the question at hand. Secondary data could exist internally or externally to an organisation and could include sales figures, trade association reports or government statistics. Should the information not be readily available or not suit the problem at hand, it will be necessary to conduct primary research.

  For the purposes of this study, secondary data were gathered from various sources for the exploratory phase of the study, which is summarised in the literature review. As can be surmised, the literature review covered the following aspects: the profiling of a market segment (Chapter 2), common ailments, illnesses and treatment of children in Early Childhood Development (ECD) centres (Chapter 3) and an overview of homeopathy (Chapter 4).

- Primary data

  Unlike secondary data, primary data are collected specifically for the relevant study or research project. Researchers have to decide the most appropriate research approach between quantitative and qualitative research. Referring to Table 5.2 below, the difference between the two research approaches is explained.

  Tustin *et al*. (2005, p. 89) describes quantitative research as the collection of primary data from large numbers of individuals with the intention of projecting the results to a wider population, with the aim of generalising about a specific population. This is done by being based on the results of a representative sample of that population. Quantitative research aims to quantify data and require the application of some sort of statistical analysis (Malhotra 2004). Tustin *et al.* (2004, p. 89) concurs and states that mathematical or statistical manipulation is carried out in order to produce broadly representative data of the total population.

Qualitative research is defined by Maholtra (2004, p. 137) as an unstructured exploratory research methodology based on small samples that provide insights and understanding of the problem setting. Tustin *et al.* (2004, p. 90) further note that the data generated by qualitative research are often difficult to quantify and are expressed as personal value judgements from which general conclusions are difficult to draw.

Table 5.2: Quantitative and Qualitative research

	Qualitative research	**Quantitative research**
Objective	To gain qualitative understanding of underlying reasons and motivation	To quantify data and generalise the results from the sample to the population of interest
Types of questions	Probing	Limited probing
Sample size	Small	Large
Information per respondent	Much	Varies
Data collection	Unstructured	Structured
Data analysis	Non-statistical	Statistical
Administration	Requires interviewer with special skills	Fewer special skills required
Type of analysis	Subjective, interpretive	Statistical, summarisation
Hardware	Recorders, projection devices, video, pictures, discussion guides	Questionnaires, computers, printouts
Ability to replicate	Low	High
Researcher training	Psychology, sociology, social psychology, consumer behaviour, marketing, marketing research	Statistics, decision models, decision support systems, computer programming, marketing, marketing research
Fit to research design	Exploratory	Descriptive or causal

Source: Adapted from Malhotra (2004) and Tustin *et al*., (2005)

Quantitative research techniques have been applied for this study. As can be seen from the discussion above, the quantitative research approach best applies to the primary data collection of information for this study.

There are several tools which researchers can use in order to obtain primary information for each research approach. The quantitative research approach usually makes use of either observations or surveys to collect primary data. Observation is defined as the recording of behavioural patterns of people, objects and events in a systematic manner to obtain information about the phenomenon of interest (Malhotra, 2004). Survey methods are described as a means of collecting primary data, based on communication (questions and answers) with a representative sample of respondents (Zikbund & Babin, 2010). This study will be making use of a survey, owing to the quantitative nature of the research. There are several advantages and disadvantages in making use of a survey, as discussed in Zikbund & Babin (2010, pp. 146-147). Some of the advantages include the following:

- Surveys provide a quick, often inexpensive, efficient and accurate means of assessing information about a population.
- Straightforward statistical techniques can be applied to analyse sample survey results.
- Surveys are flexible and could be of extreme value to decision-makers.

Possible disadvantages of surveys include:

- When basic research principles are not followed (specifically that of the research instrument and sampling method), the research could be ineffective and misleading.
- Results could be ill-timed or not measure the correct aspects.
- Low response rates could pose a problem regarding representative results

Two concerns or errors which are specific to this study include the non-response error and self-selection bias. Non-response error refers to the statistical differences between a survey that includes only those who have responded and a perfect survey, which would include those who failed to respond. Self-selection bias is a problem specific to self-administered questionnaires. It refers to a bias that occurs because people who feel strongly about a subject are more likely to respond to survey questions than people who feel indifferent. This could lead to distorted figures, because either a positive or negative position could be over-represented. An attempt was made to limit these two concerns by several means, as discussed later in this chapter.

Tustin, *et al*. (2005, p. 98) notes that the research instrument used for surveys is usually questionnaires. A questionnaire is defined as a structured technique for data collection that consists of a series of questions, written or verbal, which a respondent answers (Malhotra, 2004). Whether a researcher chooses to use a paper questionnaire or an electronic questionnaire it must, first and foremost, set out to achieve the research objectives. Further details on the purpose of a questionnaire are:

- to collect relevant data
- to make data comparable
- to minimise biases
- to motivate the respondent to participate in the survey.

The type of questionnaire used in this study was a self-administered paper questionnaire. Zikbund & Babin (2010, p. 166) define a self-administered questionnaire as a survey in which the respondent takes the responsibility to read and answer questions.

There are several advantages and disadvantages to using self-administered questionnaires, which include the following:

- A larger geographically-dispersed sample can be reached, because there is no interviewer required.
- Although relatively inexpensive when compared to personal interviews, printing of questionnaires could be expensive if high quality paper is utilised.
- Respondents complete these questionnaires at their convenience, which might make it more likely that they take time to think about their answers.
- Should respondents be put at ease about the anonymity of their personal or sensitive information, there is a higher likelihood that sensitive information will be provided and done so honestly.
- Problems or misunderstandings cannot be clarified, owing to the lack of an interviewer.
- If questionnaires are too long, respondents might lose interest in completing and returning the questionnaire, which might result in a low response rate.

As can be seen above, there is no interviewer able to explain uncertainties to respondents, should any occur, which could present a challenge. Researchers must therefore rely on the clarity of the written word. The content and phrasing of questions becomes extremely important and the following aspects should be considered (Tustin, *et al*., 2005):

- Questions must be kept as concise as possible
- Should an answer be definitive, the question must be definitive
- Should a study be conducted among all levels of the population, with various levels of education, the questionnaire should be worded so that everyone is able to understand
- Questions must be simple
- Questions should not lead a respondent into a desired answer
- Respondents should have the relevant information in order to answer a question
- Sensitive information should be asked in such a way that the respondent will not be embarrassed

The sequence in which questions are asked in a questionnaire should be carried out logically and with some thought. The funnel-approach is suggested by Malhotra (2004, p. 298) and implies that a questionnaire starts with general questions, followed by progressively more specific questions in order to prevent the specific questions from biasing the general questions. Tustin, *et al*. (2005, pp. 391-392) suggests the following considerations:

- The first question should be simple and interesting in order to put the respondent at ease and motivate him/her to answer the questions that follow.
- Questions must be grouped clearly, so that respondents know which to answer by a particular group.
- Questions should follow from general to specific as far as possible.
- Sensitive questions should be placed close to the end of the questionnaire.

Besides looking at the language and question sequence, it is also important to look at the layout of the questionnaire. This is of particular importance to self-administered questionnaires, as were used in this study. Questions should be divided into several parts, with questions for each part being numbered (Malhotra 2004). It is also suggested that the questionnaire should be pre-coded in order for the data capturing to be carried out more quickly.

The self-administered questionnaire for this study had a logical layout,in that it was divided into several sections, as seen in Table 5.3 below. The questionnaire was 13 pages long, printed in a large font with clear breaks on the pages and sections to make it easy to read, as is referred to in Appendix A. The questions were sequenced from general to more specific questions regarding the use and opinion of OTC homeopathic remedies. Biographical information was placed at the end of the questionnaire, as it contained sensitive questions regarding income,

medical aid, ethnic group and general lifestyle assets etc. This was also done to avoid respondent fatigue with the important questions of the study. The questionnaire had a cover letter explaining the study to respondents, as well as the requirements for answering the questions. Details on response incentives, return of the questionnaire, anonymity of information and non-participation or withdrawal from the study were also included in the cover letter. Uncertain terms such as OTC homeopathic remedies and conventional medicine were explained. Non-users of OTC homeopathic remedies were encouraged to participate in the study in order to resolve the possible self-selection bias. The questionnaire was printed on high quality paper and saddle-stitched for easy paging, answering and capturing of data. The questionnaire was not pre-coded, for fear of it being cluttered and confusing to respondents.

Table 5.3: Sections of the self-administered questionnaire used in this study

Section	Description	Completed by
Section A	General health issues of children	All respondents
Section B	Homeopathic use	Respondents who answered 'yes' to using OTC homeopathic remedies in the household
Section D	Respondent opinion	All respondents
Section E	Self-care	All respondents
Section F	Biographical information	All respondents

.

For a perspective of what the questions in each section entailed, refer to Table 5.4 below. As can be seen from the table, the questions asked will obtain information to reach the primary and secondary research objectives of this study.

Table 5.4: Section and Question details

Section	Question	Information obtained per question
A	1	The number of children in the respondent's household
	2	The ages of children in the household
	3	The common illnesses, ailments and period of contraction of the youngest child in the household

	4	Does the respondent use OTC homeopathic remedies?
B	1-3	Homeopathy versus conventional medicine
	4	Homeopathy and respondent medical aid
	5-9	Exposure to homeopathy
	10	Other reasons for using OTC homeopathic remedies
	11	OTC brands used in the household
	12	Retail sources of OTC homeopathic remedies
	13	Family member use of OTC homeopathic remedies
	14	Ailments, illnesses and wounds of all household members for which OTC homeopathic remedies are used
D	1-6	Opinion of OTC homeopathic remedies compared to conventional medicine
	7-11	Opinion on conventional medicine
	12-16	Opinion on natural remedies
	17-20	Confidence to self-medicate
	21-23	Medical aid
	24-30	When to call a doctor
	31	The use of antibiotics in the household
	32-33	Antibacterial products in the household
	34-36	Vaccinations
E	1-5	Self-care
F	1	Respondent age
	2	Respondent education
	3	ECD centre respondent uses
	4	Household income
	5-6	LSM determinants
	7	Ethnic group
	8-10	Medical scheme membership
	11	Respondent's profession
	12	Respondent's relationship to children

A closer look will now be taken at the question format of a questionnaire. Malhotra (2004, pp. 289-290) discusses the question format as being either structured or unstructured. Unstructured

questions are open-ended questions which respondents answer in their own words. This allows the respondent to freely express any views which might provide the researcher with rich insights. However, it does pose a disadvantage regarding the coding of these questions, as it is time-consuming and costly. To summarise responses in a useful format for data analysis can be extensive. See Table 5.5 below for a list of unstructured open-ended questions used in this study:

Table 5.5: Unstructured open-ended questions used in this study

Section	Question number	Type of question asked
Section A	1	Number of children in the household
Section A	2	The various ages of children in the household
Section B	10	Other reasons for using OTC homeopathic remedies
Section F	3	The pre-school the respondent's child(ren) attend(s)
Section F	9	Reasons for not belonging to a medical aid scheme
Section F	10	The name of the medical aid scheme respondent belonged to
Section F	11	Respondent's profession
Section F	12	Relationship of the respondent to the child(ren) in his/her care

Structured questions pre-specify the set of response alternatives and the response format (Malhotra, 2004). These are also referred to as closed-ended questions. Options regarding structured questions include multiple-choice, dichotomous and scale questions. Multiple-choice questions are also often referred to as fixed alternative questions. These are questions in which respondents are given specific, limited-alternative responses and asked to choose one or more options (depending on the question), closest to their viewpoint. Some advantages are that it requires less interviewer skill, takes less time and is easier for respondents to answer (Zikbund & Babin 2010). In this study multiple-choice questions were used to determine frequency, brand preference, retail preference, usage, illnesses, antibiotic use and biographical information. A total of 11 multiple-choice questions were used in the questionnaire for this study. In order to get a clearer perspective of respondents' preferences, an 'other' option with the instruction to specify, was included.

Dichotomous questions are the simplest form of closed-ended questions which allow respondents only two possible responses (Churchill & Brown, 2004). A neutral alternative, such as 'not sure', 'don't know' or 'no opinion' could also be included here (Malhotra, 2004). A total of

6 dichotomous questions were in the questionnaire used for this study. These questions are easy to code, but the disadvantage is that questions and options need to be clear and simple for respondents to understand and choose from, as can be referred to in Table 5.7 that follows.

There are several scale question options available to researchers. For this study, Likert-scales were used. Likert-scales are also known as summated-ratings scales. It is the most widely-used, attitude-scaling technique in marketing research. It can be defined as a self-report technique for attitude measurement in which respondents are asked to indicate their degree of agreement or disagreement with a number of statements. A respondent's attitude score is obtained by adding (or summing) over the items in the scale (Churchill & Brown, 2004). Statements must be closely connected with the subject, with a suggestion that at least half are positive and the other half negative. Negative statements need to be reversed in order to obtain a total score. For the purpose of this study, it was decided to use a 6-point Likert-scale instead of the traditional 5-point Likert-scale. The reason behind this was to have respondents commit to either a positive or negative end to the scale without the use of a neutral option. There were several Likert-scale questions in the questionnaire used for this study. Likert-scale questions were used to determine possible reasons for the use of OTC homeopathic remedies and respondent opinions regarding conventional medicine, natural remedies, OTC homeopathic remedies and medical aid. Table 5.6 provides a summary of the various structured questions used in this study

Table 5.6: Structured closed-ended questions used in this study

Question type	Section	Question numbers
Multiple-choice questions	A	3
	B	11, 12, 13, 14
	D	31
	F	1, 2, 4, 5, 6, 7
Dichotomous questions	A	4
	D	32,33, 34-36
	E	1-5
	F	6, 8
Likert-scale questions	B	1-9
	C	1-6
	D	1-30

Questionnaire validity and reliability is the final activity of a questionnaire design. Reliability is an indicator of a measure's internal consistency (Zikbund & Babin, 2010). Owing to the fact that the questionnaire used for this study did not measure a specific construct or set of sub-constructs, reliability was not determined by means of the traditional coefficient alpha. Validity refers to the accuracy of a measure or the extent to which a score truthfully represents a concept. Content validity was used to determine whether a scale logically reflects the concept being measured. It was done through the analysis of the questionnaire by several research professionals and statisticians.

Pre-testing the questionnaire is essential in order to determine whether the questionnaire will perform what it has set out to achieve (Tustin *et al.,* 2005). Pre-testing does not require sampling, but it needs to be done on respondents similar to those of the intended research study. This allows a researcher to determine whether questions cause any biases, or whether some are difficult to understand or need revising. The questionnaire used in this study was pre-tested among ten academic staff members, who are mothers of children in ECD centres, during September 2011. They were encouraged to make notes on the questions asked and whether any questions were unclear or problematic to answer. Several changes were made to the questionnaire to incorporate suggestions and avoid biases.

Step 5 in the research process, as discussed in Figure 5.1, deals with sampling design and the collection of data. The population of a study refers to the collective of all elements sharing some common set of characteristics that comprises the universe for the purposes of the marketing research problem (Malhotra, 2004). The population for this study was all parents with children in ECD centres in the Pretoria East region. In order to have respondents complete questionnaires, it was decided to use a multi-stage approach for this study.

The first stage of the sampling design was to obtain a population of ECD centres in the Pretoria East region. There were several challenges in obtaining such a list. All ECD centres need to register with the Department of Social Development. For this reason the Department was contacted and conversations followed at national, provincial and local government level from June-August 2011. Although helpful, none of the conversations could lead to a complete, updated and recent list or database of ECD centres for the Pretoria East region. Several other associations and organisations were contacted as well, in order to obtain such a list. None complete enough or representative of the entire region could be found. It was decided to use the 2010/2011 Pretoria telephone directory and identify all ECD centres within the municipal boundaries. During September 2011, the 2010/2011 telephone directory was manually scanned to obtain all the possible ECD centres in the Pretoria East region. The various ECD centres which could be identified for the entire municipal area were cross checked with the municipal map of Region 6, which as per the local government, constitutes the Pretoria East region. The municipal boundaries were identified by means of a regional map available on the Tshwane website, being www.tshwane.gov.za. The number of ECD centres in the Pretoria East region, which had contact details listed in the telephone, directly resulted in 51 ECD centres. This defined the population for the first stage of the sampling design process.

Owing to the small number of centres identified, it was decided to contact all the centres to obtain permission to conduct research. This is what is referred to as a census. A census is an investigation of all the individual elements that make up the population (Zikbund & Babin, 2010). All 51 ECD centres were contacted telephonically and were sent an email to provide more details on the study. ECD centres were requested to reply to the email, granting or denying permission for research to go ahead. Follow-up emails were sent to those who did not respond. 25 ECD centres gave permission for research to be conducted among parents, 7 ECD centres could not be reached in any way possible and 8 declined to be part of the study. The remaining

11 ECD centres were followed up again, but no additional responses regarding taking part in the study were received.

The second stage of the sampling design focused on the parents who were the respondents of this study. Another census was used, as questionnaires were sent to all respondents of all the ECD centres which gave permission for research to be conducted. A total of 3330 questionnaires were distributed during early November to all 25 ECD centres which had given permission for research to be conducted. A sample is defined as a subgroup of elements of the population selected for participation in the study (Malhotra, 2004). The reason for a census to be used instead of a sample is due to ECD centres not being willing to share their parents' contact details, but rather willing to assist with the handing out of questionnaires to all parents. There are several conditions which favour a census over a sample, and vice versa. Sampling is ideal for research when the budget is small, time allowed for research is limited and the population is large. Census is favourable in a situation where the population size is small (as was the case with the number of ECD centres in the Pretoria East region which have numbers listed in the Pretoria telephone directly of 2010/2011). A concern regarding a census in comparison to a sample refers to the cost of sampling and non-sampling errors. Should the cost of sampling errors be high, a census which eliminates such errors is desirable. If there is a high cost of non-sampling error, sampling is favourable instead. A census can greatly increase non-sampling error to the point where these errors exceed the sampling errors of a sample (Malhotra 2004). A possible reason is that many forms of non-sampling error cannot be estimated, where sampling errors can be calculated. Taking this risk into consideration, as well as the problems involved in obtaining both a complete list of ECD centres as well as possible contact lists of parents from the various centres, it was decided to go ahead with a census in both stages of the sampling design.

Once it was decided to go ahead with a census for both the ECD centres and parents, questionnaires were printed. During early November 2011, questionnaires were individually packed into unmarked envelopes, which respondents used to return their completed questionnaires. This also allowed their information to remain anonymous. Each ECD centre received the appropriate number of questionnaires for the number of children attending their centre, based on the figures they provided. This method of distribution for self-administered questionnaires is referred to as a drop-off method, as discussed by Zikbund & Babin (2010, p.

172). This implies that self-administered questionnaires require the researcher to travel to the respondent's location and drop off questionnaires that will be collected later.

The ECD centres handed out questionnaires to all the parents by putting the questionnaires in the bags of all the children attending their centre. Parents could complete the questionnaire at their leisure and return it in the unmarked envelope to the ECD centre their children attend. A marked box was given to each participating ECD centre to place completed questionnaires in. A follow up email was sent to all ECD centres taking part in the study, requesting them to send reminders to their parents to return questionnaires before the closing date of the 30th of November 2011. During early December 2011, completed questionnaires were collected again from each ECD centre which was part of the study. A total number of 821 questionnaires were received. The number of usable questionnaires was 716, which provided a response rate of 21.5%.

An unexpected error occurred during the research design and data capturing. The Tshwane website, with the various region maps, was unavailable at the time when the different areas which constitute the Pretoria East region, were identified. Two ECD centres were erroneously included in the study. These two ECD centres are on the border of Region 6, but belong to Region 3 of the Tshwane municipal boundaries. In order to keep the data specific for Region 6, it was decided to discard these questionnaires from the data of this study. From these two ECD centres 49 questionnaires were usable, but were not taken into account for this study.

5.4 MEASURES TO LIMIT NON-RESPONSE ERROR, SELF-SELECTION BIAS AND LOW RESPONSE RATE

As mentioned before, a concern of this study was non-response error and self-selection bias. A further problem which plagues most research projects is the matter of a low response rate. Zikbund & Babin (2010, p. 168) define response rate as the number of questionnaires returned and completed, divided by the number of eligible people who were asked to participate in the survey. All three of these concerns had an attempt to limit them by using the following:

- Cover letter

  As mentioned before, the questionnaire was accompanied by means of a cover letter providing respondents with all possible information and requirements for the completion

of the questionnaire. The cover letter had the Unisa branding on, adding credibility to the study.

- Prizes

  Both the ECD centres participating in the study, as well as parents completing the questionnaires, were offered prizes for their participation in the study. For the ECD centre with the highest number of usable returned questionnaires, there was a voucher for either Makro retailer or Lapa-books, depending on the need of the school. This encouraged ECD centres not only to take part in the study, but also to encourage parents to participate and return completed questionnaires. The winning ECD centre had a response rate of 44.3%. Parents, in turn, could take part in a lucky draw. Parents who wished to take part in the lucky draw were asked to provide their cellphone numbers. All completed and usable questionnaires with provided cellphone numbers were placed in a lucky draw. Three respondents could each win a voucher from Dis-Chem pharmacies. It was made clear that none of the cellphone numbers provided would be given to any third party for any reason. Should respondents not wish to be part of the lucky draw, they were asked not to include their cellphone numbers. Questionnaires from the 2 ECD centres which were erroneously included in this study were included in the lucky draw, although the data provided was not. The same applied to the erroneous ECD centres themselves as well. The rules for the use and redeeming of vouchers were explained in the cover letter of the questionnaire. All participants, whether ECD centre or parents, had an equal and fair chance of winning a prize. All prize winners were informed of their prizes in January 2012.

- Follow-ups

  A follow-up email was sent to participating ECD centres, to encourage respondent parents to complete and return questionnaires.

5.5 ETHICS IN RESEARCH

Marketing research is subject to ethical considerations. Tustin *et al.* (2005, p.46), discusses the various ethical obligations researchers have towards respondents, such as that no respondent should be harmed or deceived, respondents should be willing and informed and data should be held in confidence.

Whether physically or emotionally, no respondent should be harmed in any way. Respondents should not be embarrassed, ridiculed or belittled. Researchers should minimise potential respondent discomfort and maximise respondent convenience (Tustin *et al.,* 2005). During this study, sensitive biographical information was placed at the end of the questionnaire.

Respondents were given an indication that the questionnaire would take approximately 20 minutes to complete, based on the time it took respondents to complete the questionnaire during the pre-testing phase of the research design process. This was done to prevent deceiving respondents as to how long it might take to complete the questionnaire.

Respondents were informed of the purpose of the study, who was conducting the study and the process to follow to participate in the study, by means of the cover letter which accompanied the questionnaire. Respondents were also informed that they were under no obligation to take part in the study and that they were free to be excluded from the study, by not completing or returning the questionnaire.

The information respondents provided is confidential. The cellphone numbers of respondents who have taken part in the lucky draw for the Dis-Chem vouchers have been stored in a separate file. These numbers will not be given to a third party for any reason whatsoever.

A further measure to ensure that this study was ethically sound is that permission was granted at national, provincial and local governmental level by the Department of Social Development. This study is also registered with the Department of Social Development.

This study has also served at an academic colloquium as well as on Ethical Clearance and Higher Degree committees within the structures of the university, from all of whom ethical clearance was granted.

5.6 SUMMARY

In this chapter the marketing research process was defined and applied to this study. Research design and methodology was discussed, as well as measures to limit possible errors and biases. Ethical clearance and considerations were also examined. In Chapter 6 that follows, the last two steps in the marketing research process - namely, data analysis and interpretation, as well as reporting of the results - will be discussed.

CHAPTER 6:
DATA ANALYSIS AND FINDINGS

6.1 INTRODUCTION

In order to understand the data analysis and findings of this study, it is important to recap the objectives of this study, as discussed in Chapter 1.

The main objective of this study is to build a profile of the homeopathic market, looking at a case of OTC homeopathic remedy use amongst parents with children in Early Childhood Development (ECD) centres in the Pretoria East region.

The secondary objectives of this study include the following:

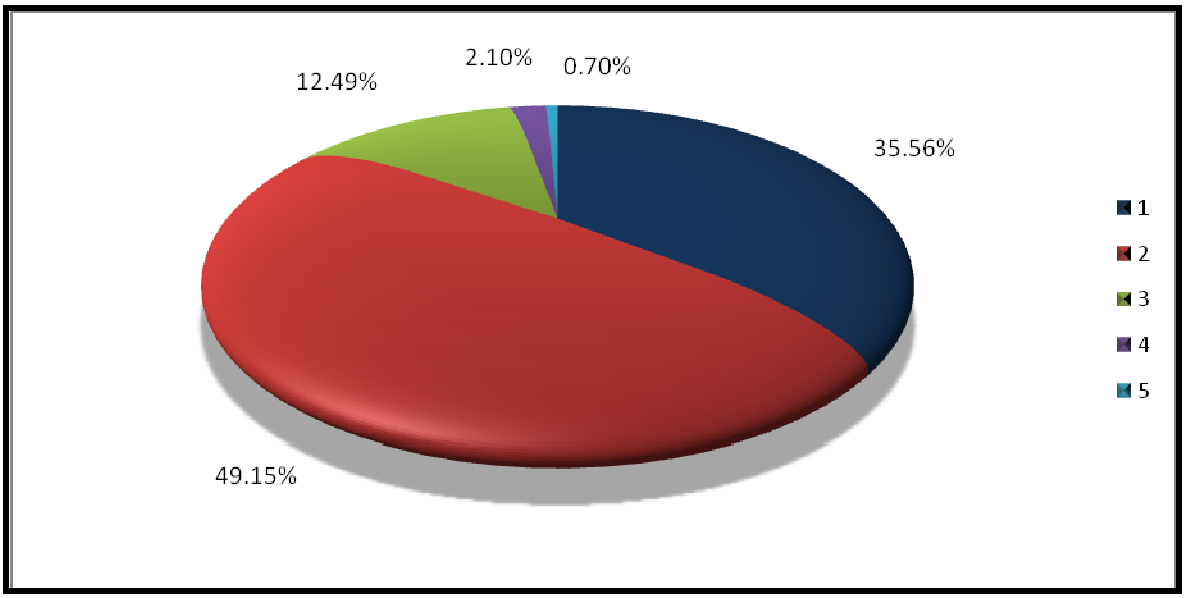
- Measuring the perceptions and attitudes towards OTC homeopathic remedies of parents with children in Early Childhood Development Centres.
- Determining the extent of use of OTC homeopathic remedies among parents with children in Early Childhood Development Centres in the Pretoria East region.
- Evaluating whether parents with children in Early Childhood Development Centres in the Pretoria East region who use OTC homeopathic remedies view homeopathy as complementary or alternative to conventional medicine.
- Determining the brands of homeopathic remedies used by parents.

In the next section, the biographical information of respondents will be looked at.

6.2. BIOGRAPHICAL INFORMATION OF RESPONDENTS

The first question in the questionnaire was on the number of children in the household. From Figure 6.1 below, the majority of respondents have 1 or 2 children (84.71%) and only 15.29% of the respondents have 3 or more children. The legend on the far right of the graph indicates the number of children in the household, as indicated by respondents.

Figure 6.1: The distribution of the number of children of respondents



Respondents to the second question of the questionnaire had to indicate the ages of the children in their household. Table 6.1 provides the details of the age range for each of the children in the household. The first column in the table below ranges from child number 1-5, where the eldest child is child number one, followed by the consecutive children according to their various ages.

Table 6.1: The age distribution of children in the household

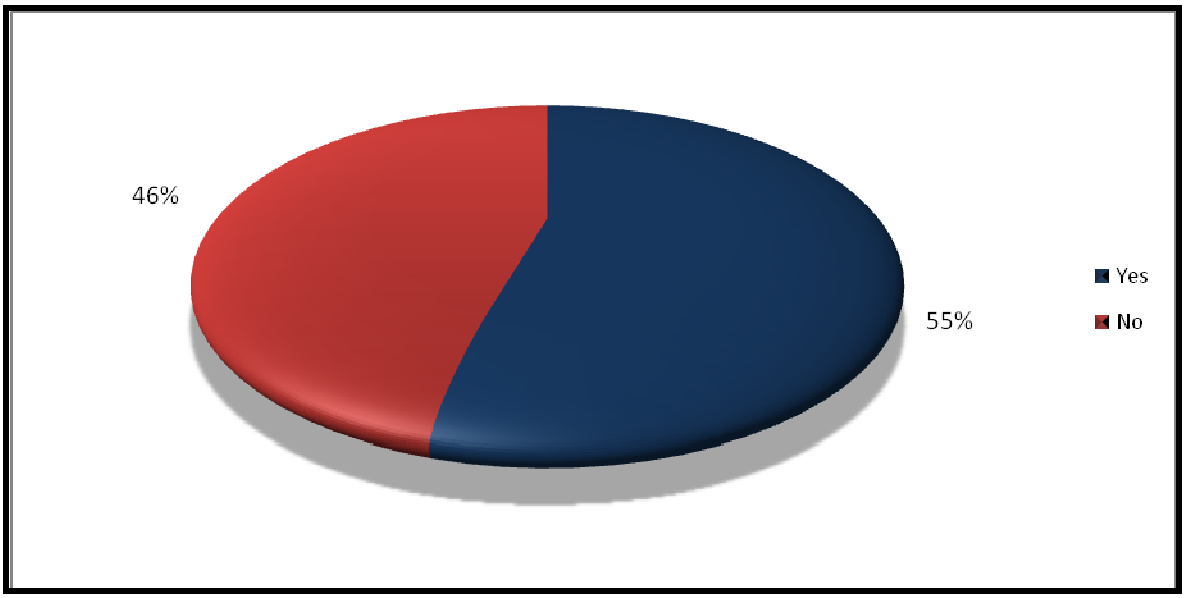
Child number	Percentage of respondents with children attending ECD centres	Total number of respondents who answered this question	Age range
1	71%	613	0.4-24 years
2	94.1%	613	0.08-21 years
3	98.3%	606	0.16-19 years
4	99.8%	606	1-10 years
5	100%	563	0.25-3 years

As can be seen from Table 6.1 above, the age range for children in the household varies from 1 month old to 24 years of age. This table further explains that the majority of respondents, varying from 71-100%, have children of pre-school going age, meaning a child aged between 0-6. Although it might be seen as self-explanatory, this indicates that the study was aimed at the correct target audience.

Question A4: Respondent use of OTC homeopathic remedies

Question 4 in Section A of the questionnaire was a sifting question to determine whether respondents use OTC homeopathic remedies in the household. From this question, respondents were directed to the various relevant sections in the questionnaire, depending on their answer. The pie chart in Figure 6.2 shows that 55% of respondents (334 out of 613 valid responses) use OTC homeopathic remedies and 46% (279 out of 613 valid responses) do not. It is encouraging to note that this questionnaire was not only answered by respondents who make use of OTC homeopathic remedies, but also those who do not.

Figure 6.2: OTC homeopathic remedies used in the household



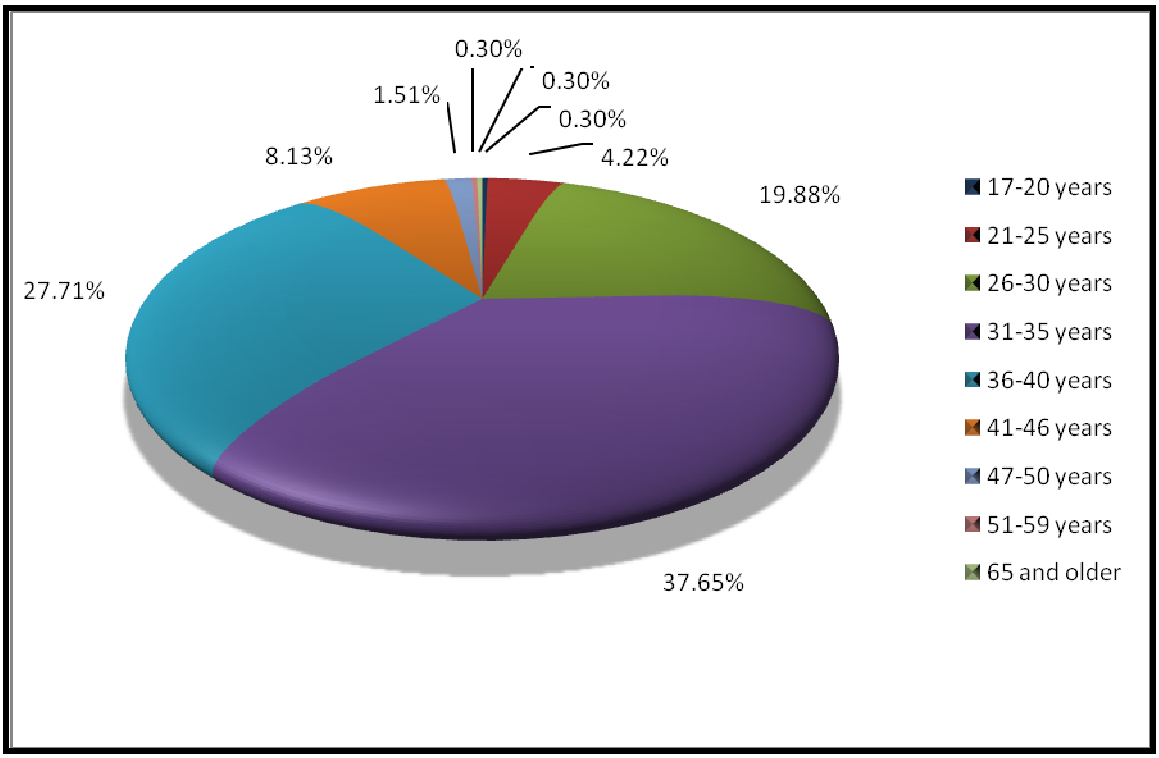
The sections to follow will discuss the biographical information specific to the users of OTC homeopathic remedies in the Pretoria East area, with children in ECD centres.

Question F1: Respondent age

The age groups of parents using OTC homeopathic remedies can be seen in Figure 6.3 below. Looking at Figure 6.3, it is clear that the largest age group is represented by parents aged 31-35 years of age (37.05%), followed by those aged 36-40 years (28.03%). Parents aged 26-30 years have a frequency of 17.05%. Parents aged 41-46 years of age have a frequency of 11.15%.

The majority of respondents (97.3%) are thus aged between 17-46 years of age. The respondents in the age group 17-30 were 24.25% and 73.05% for the age group 31-46. This corresponds with the age descriptions for Generation X and Generation Y. As discussed in Chapter 2, Generation X and Y are the generations with children currently attending ECD centres. When looking to use generations as a possible segmenting tool, the various generations must be identified. Generation X is an age group (aged between 33-46 years) and Generation Y (aged between 17-32 years).

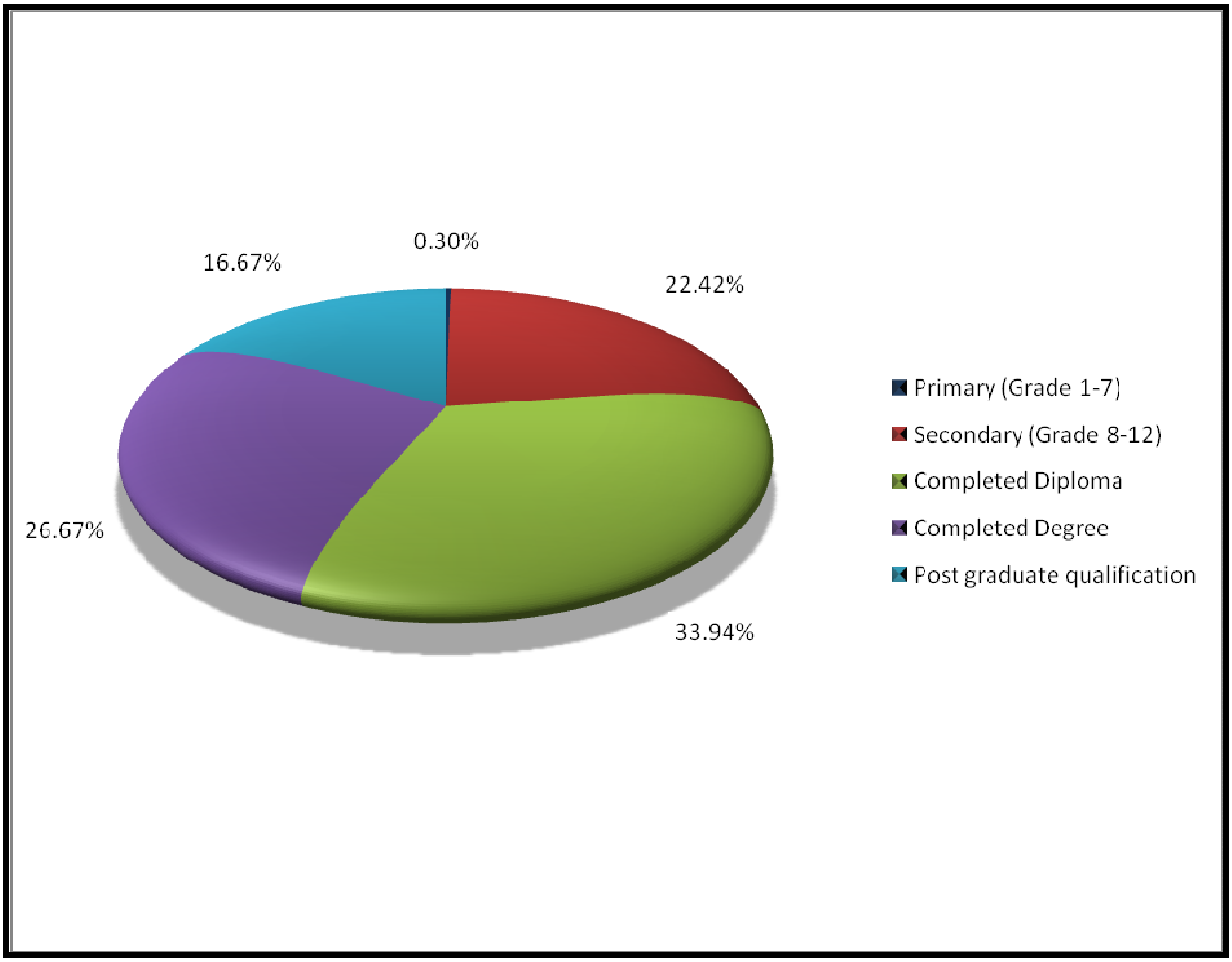
Figure 6.3: Respondent age distribution



Question F3: Respondent education level

As can be seen from Figure 6.4 below, 77.28% of respondents using OTC remedies have an educational qualification beyond secondary schooling. These qualifications included completed degrees, completed diplomas and postgraduate qualifications.

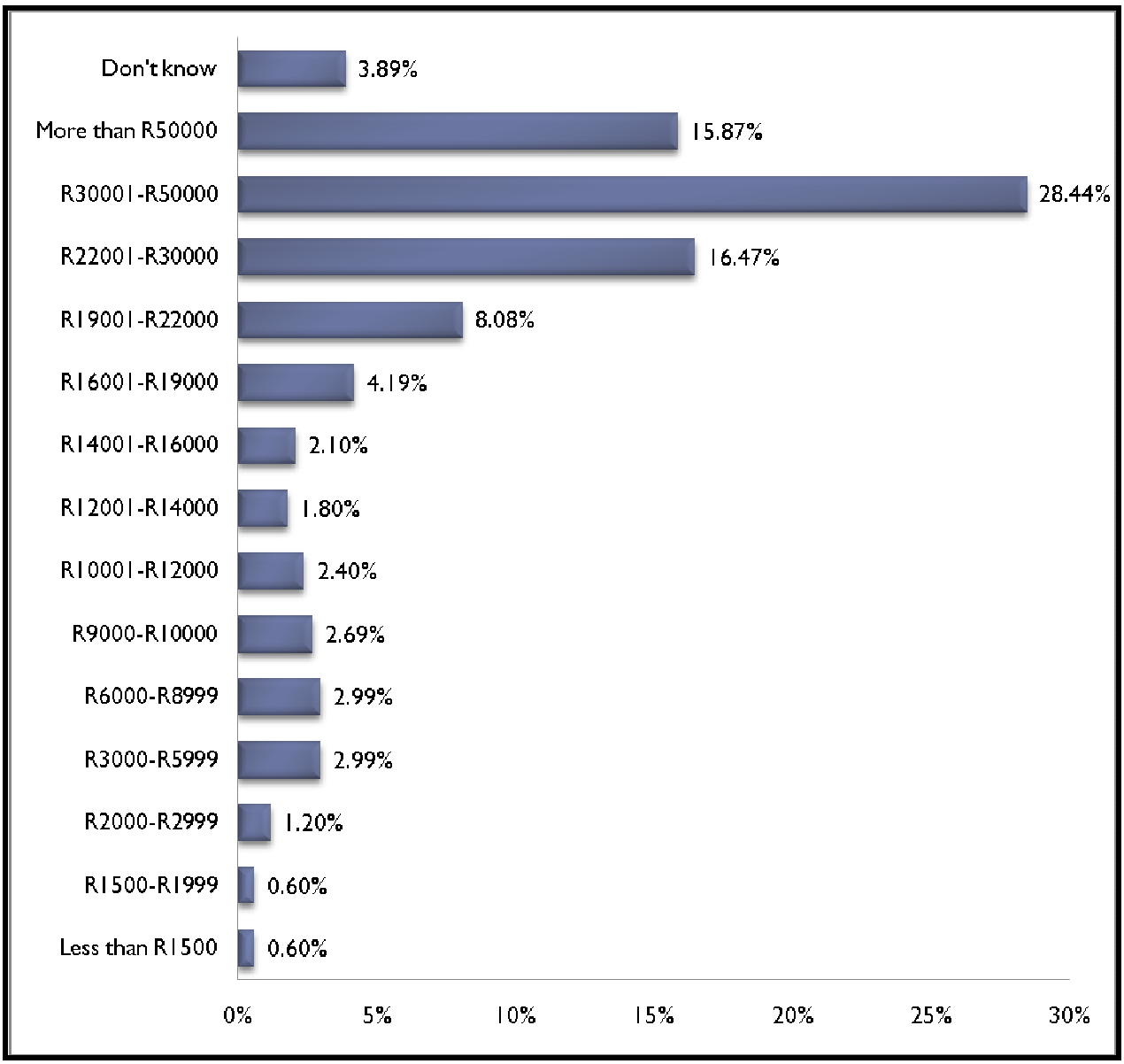
Figure 6.4 Distribution of respondent education level



Question F4: Average household income

From Figure 6.5 below, the majority of parents (60.78%) with children in ECD centres who use OTC homeopathic remedies have an average household income of more than R22001.00 per month. As mentioned before in Chapter 2, segmenting a market based on income alone will not be of much use. Segmenting and thus profiling a market needs to be undertaken together with other demographic details including age, education and occupation, in order to have relevance.

Figure 6.5: Average household income distribution

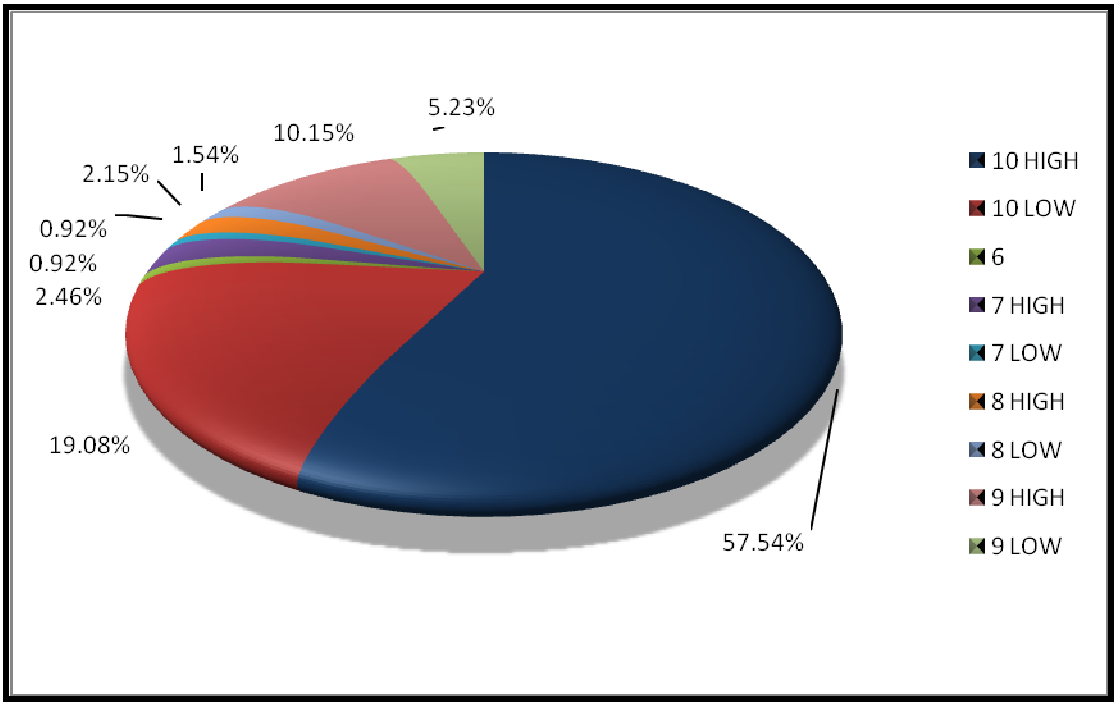


Questions F 5 & 6: LSM grouping of respondents

As discussed before, segmenting markets based on a Living Standards Measure or LSM grouping is what a large number of South African organisations use as a segmenting tool. Looking at the LSM groupings relevant to this study in Figure 6.6 below, the majority (57.54%) of parents who make use of OTC homeopathic remedies were in LSM 10 High. This coincides

with the LSM group summary per province, as discussed in Chapter 2 (refer to Table 2.2). As previously discussed in Chapter 2, previous research found that users of homeopathic remedies were mainly from the LSM groups 9 and 10. The results of this study agree with this.

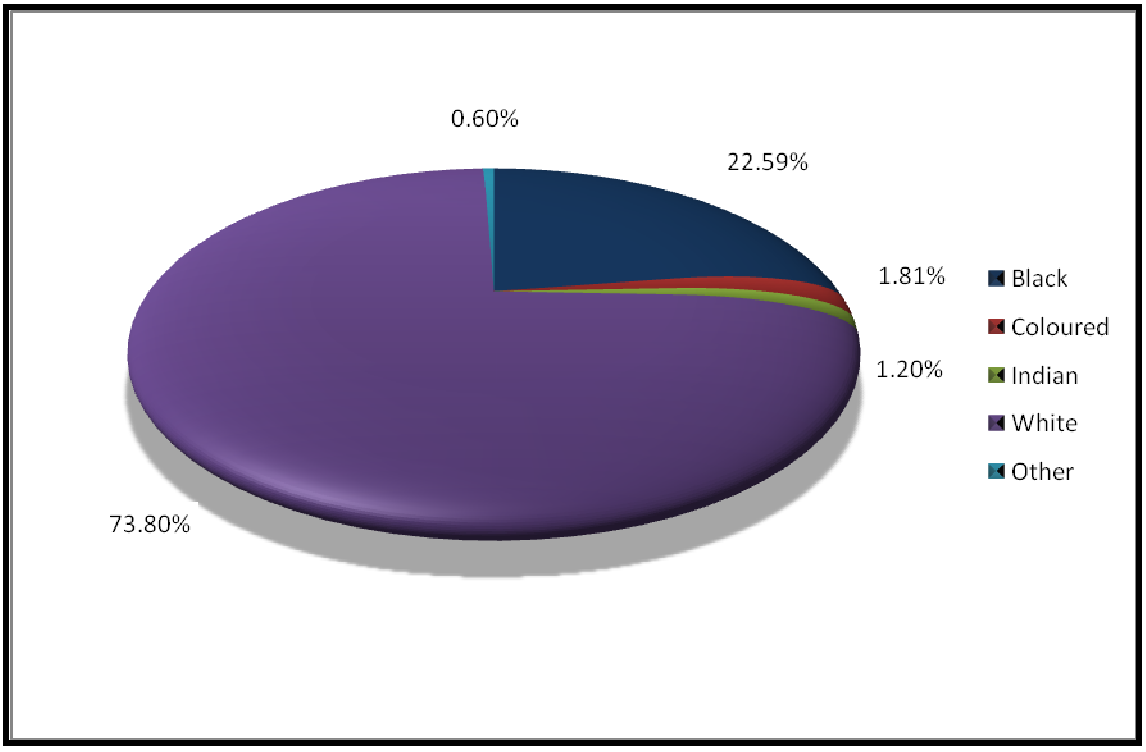
Figure 6.6: LSM grouping of respondents



Question F7: Ethnic group

The various ethnic groups of parents in the Pretoria East area using OTC homeopathic remedies can be seen in Figure 6.7 below. The majority (73.8%) of parents using OTC homeopathic remedies in the Pretoria East area were white. It is encouraging, however, that 22.59% of users are black, presenting an opportunity for OTC homeopathic marketers and producers.

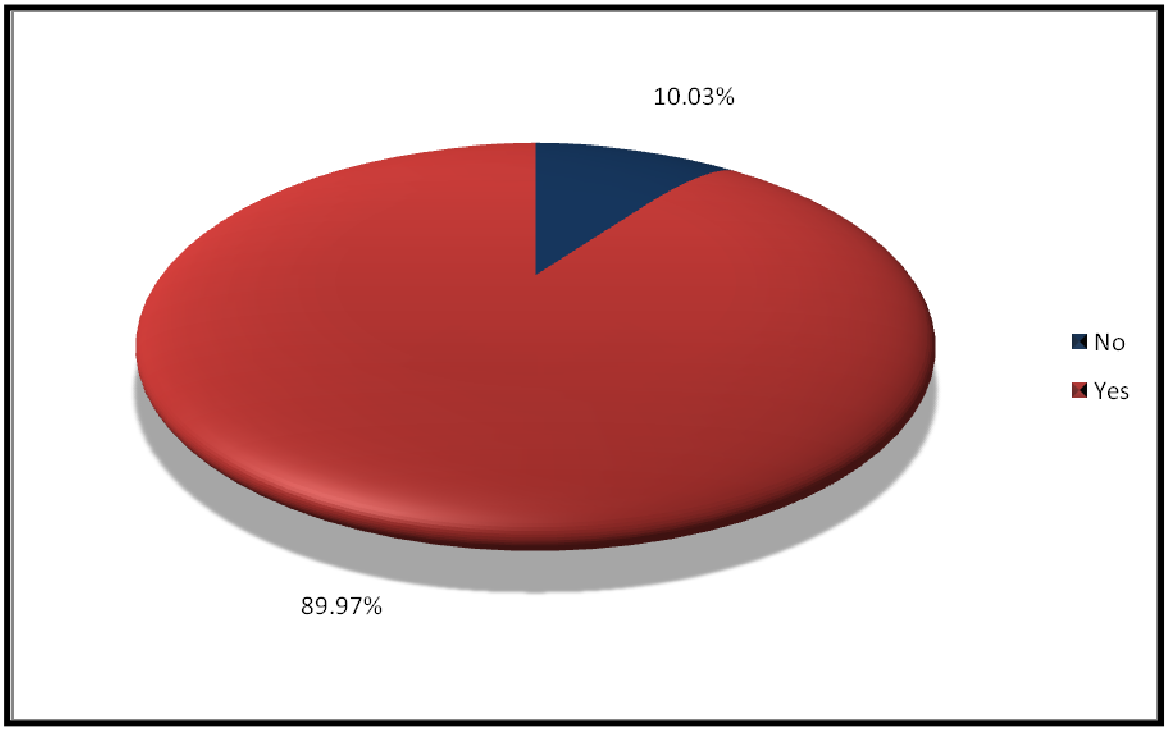
Figure 6.7: Ethnic group distribution



Question F8: Medical aid membership

The majority (89.97%) of parents with children in ECD centres using OTC homeopathic remedies belong to a medical aid, as seen in Figure 6.8. Conventional medicine, whether prescription or over-the-counter (depending on whether chronic or not), can be claimed for through the medical aid the parents belong to. However, most medical aids do not cover OTC homeopathic remedies, which means that parents need to pay for these remedies out of their own pockets. By no means is there a suggestion that medical aid membership will be an indicator for the use of homeopathic remedies, only that other deciding factors regarding the use of these remedies should be considered.

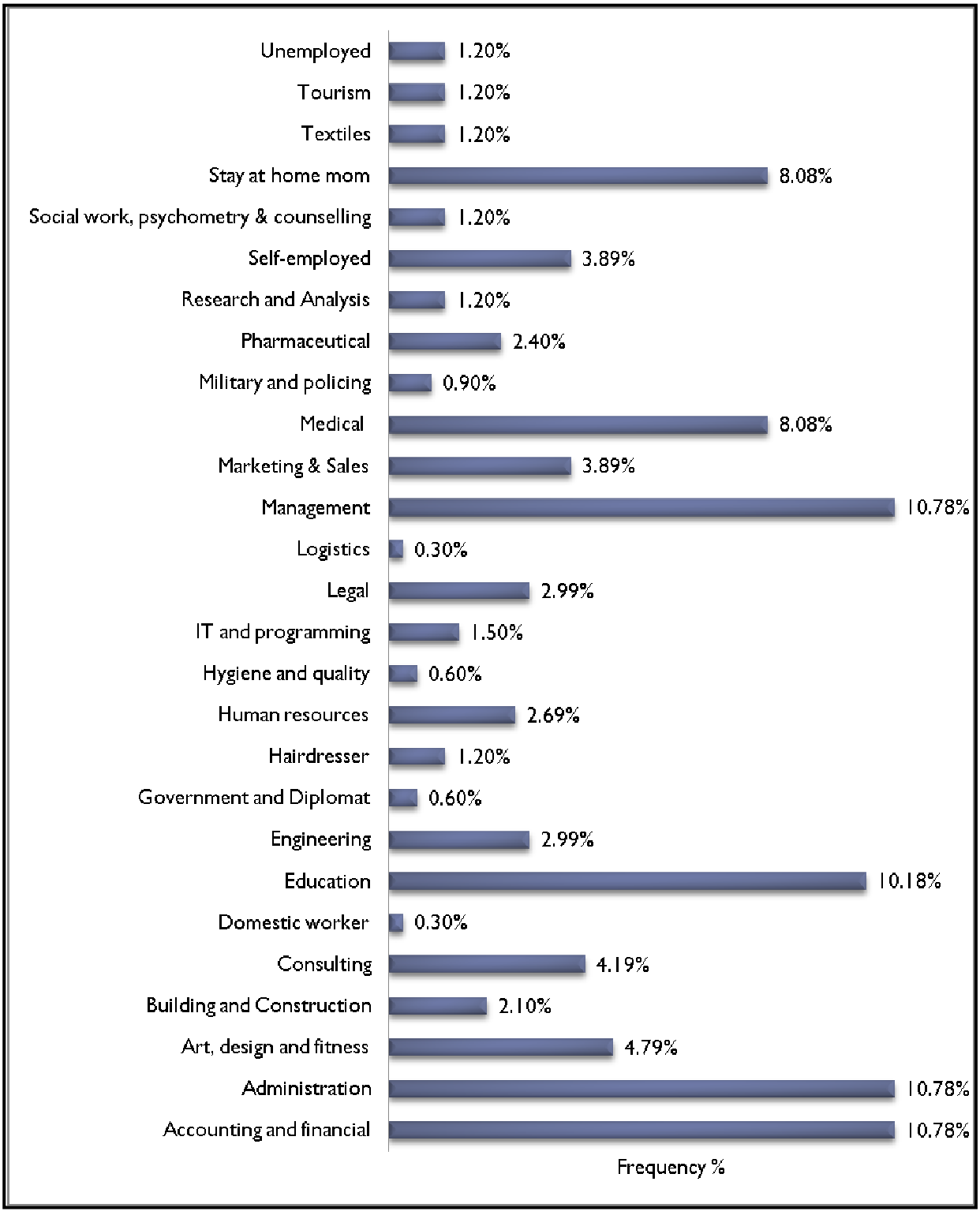
Figure 6.8: Medical aid membership



Question F11: Respondent profession

There were various answers given by respondents, as this was an open-ended question. Similar professions were grouped together, based on industry or other similarity factors, as can be seen from Figure 6.9 below. The results as provided here reflect only the professions of parents in the Pretoria East area who use OTC homeopathic remedies.

Figure 6.9: Respondent profession distribution



As can be seen from Figure 6.9, the largest frequency of professions of parents in the Pretoria East region who use OTC homeopathic remedies in the household occurred in the following sectors:

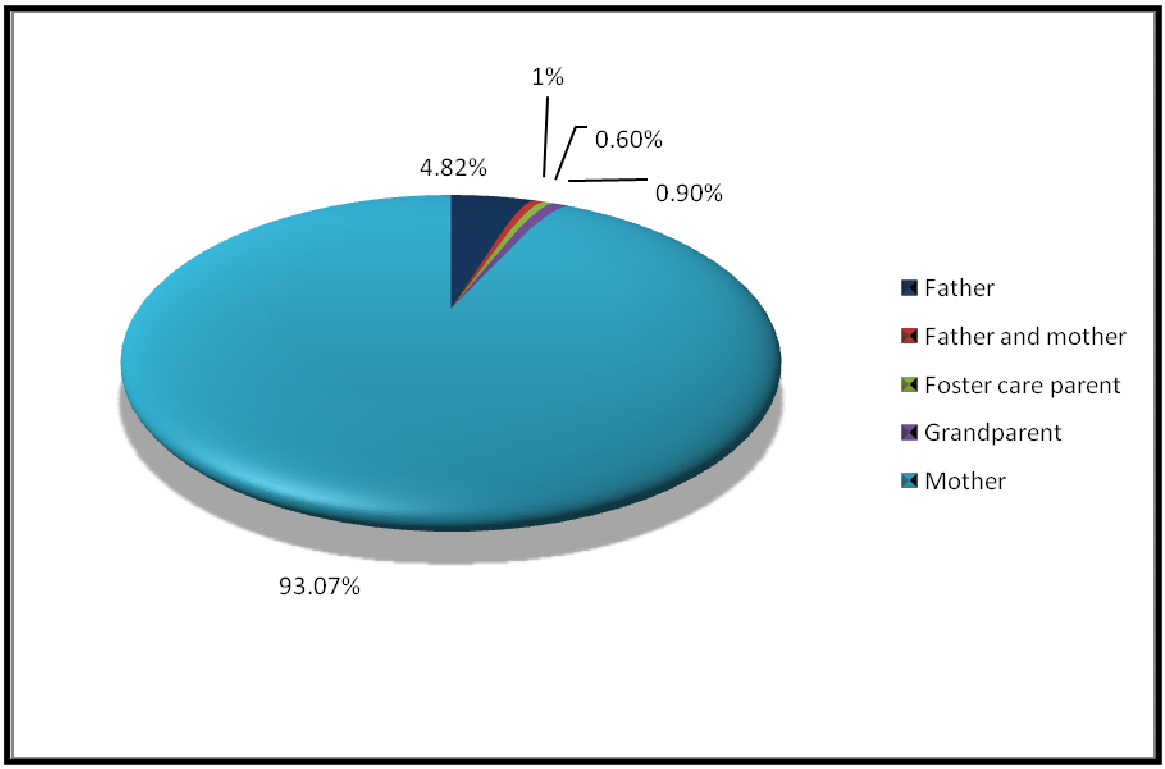
- Accounting and financial
- Administration
- Education
- Management

These are followed closely by parents in the medical field and those that were “stay at home moms”.

Question F12: Respondent relationship to children

The majority (93.07%) of respondents fulfilling the parenting role within the household and using OTC homeopathic remedies were mothers, as indicated in Figure 6.10 below. 4.82% of respondents were fathers.

Figure 6.10: Respondent relationship to children

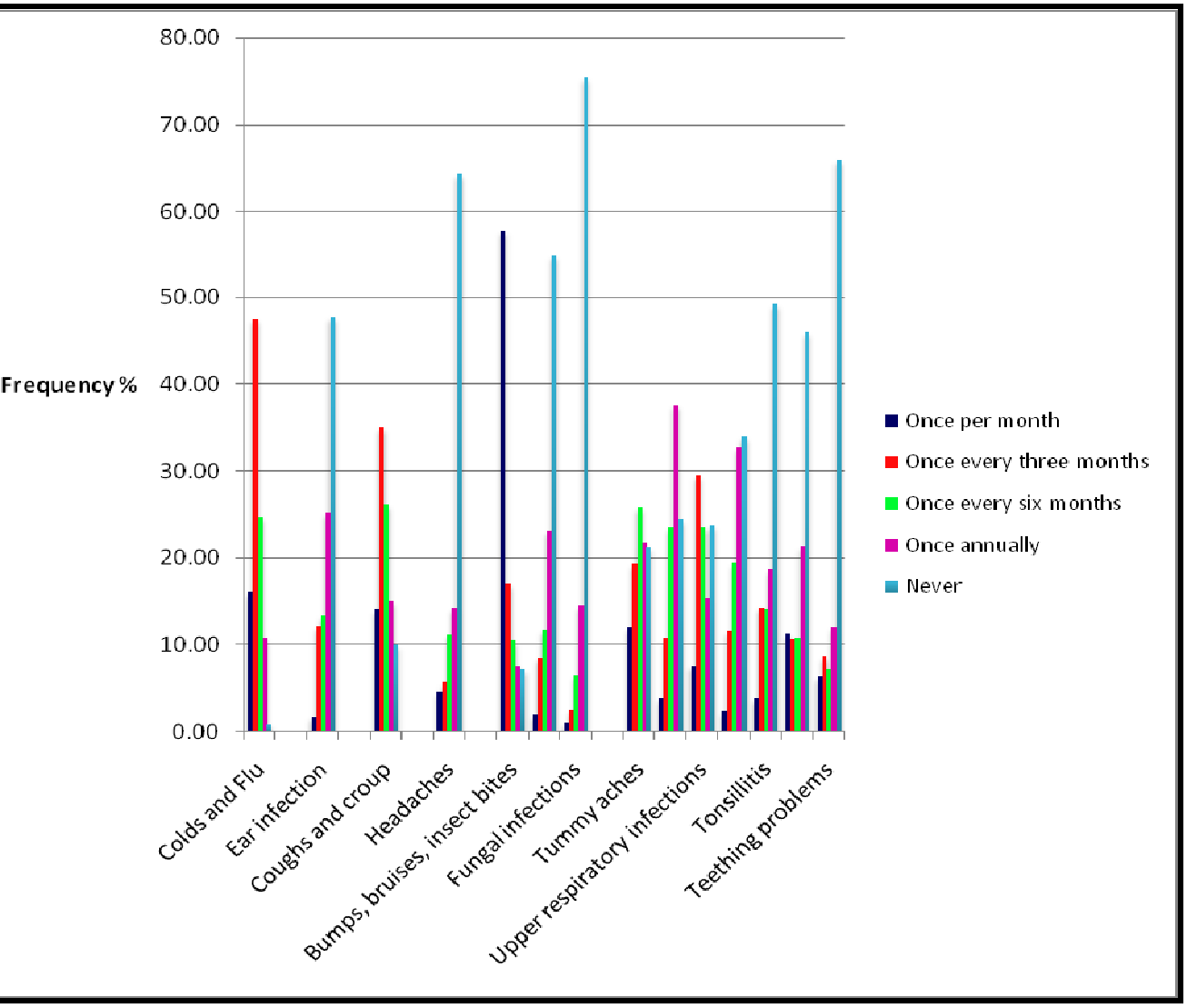


The third question in the general section of the questionnaire dealt with the common ailments, illnesses, injuries and wounds that children obtain. This question was specific to the youngest child in the household attending an ECD centre. The reasoning behind focusing on the youngest child only, was to ensure that respondents answered on a child(ren) specific to ECD centres and not older children. As the literature chapter suggests, young children in ECD centres are more prone to illness than those who are older and those who have developed a stronger immune system. Table 6.3 and Figure 6.11 below provide a breakdown of how often children in ECD centres contract the common ailments, illnesses, injuries and wounds. The responses of all respondents within the study are taken into consideration here.

Table 6.2: Frequency distribution of the occurrence of Common Ailments, Illnesses, Injuries and Wounds of Children in ECD centres

	Once per month	Once every three months	Once every six months	Once annually	Never
Colds and Flu	16.10	47.50	24.70	10.80	0.80
Ear infections	1.70	12.10	13.30	25.20	47.70
Coughs and croup	14.10	35.00	26.10	15.00	9.90
Headaches	4.60	5.60	11.20	14.20	64.30
Bumps, bruises, insect bites	57.80	17.00	10.50	7.60	7.20
Eye inflammation and infection	1.90	8.50	11.70	23.10	54.80
Fungal infections	1.00	2.50	6.50	14.50	75.50
Tummy aches	12.00	19.30	25.80	21.70	21.20
Vomiting	3.80	10.70	23.50	37.60	24.40
Upper respiratory infections	7.60	29.50	23.50	15.30	23.80
Diarrhoea	2.30	11.60	19.40	32.70	34.00
Tonsillitis	3.80	14.30	14.10	18.60	49.20
Rashes and eczema	11.30	10.60	10.80	21.30	46.00
Teething problems	6.30	8.60	7.10	12.00	66.00

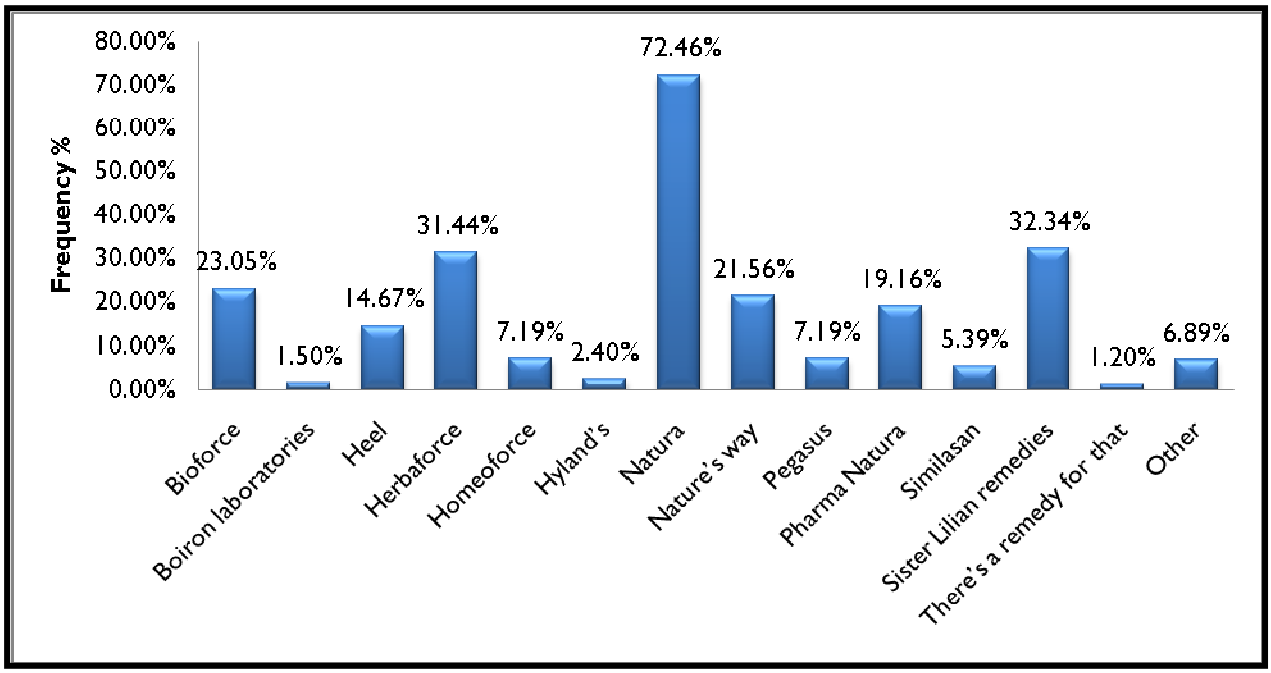
ure 6.11: Frequency distribution of the occurrence of Common Ailments, Illnesses, Injuries and Wounds of Childre
D centres



From Table 6.3 and Figure 6.11, it can be seen that the most common health issue (57.8% of respondents) among children in ECD centres is bumps, bruises and insect bites occurring at least once a month. Colds and flu (47%), Coughs and Croup (35%) and URTIs (29.5%) occur mostly every three months which corresponds with the literature of the study, as seen in Section 3.4. The reason for the results being highest among the three- and six-month period could be attributed to possible environmental factors, such as the changing of seasons. Gastrointestinal complaints occur most frequently: once every six months to once annually. The respective percentages for once every six months and once annually are tummy aches (25.80%,21.70%), vomiting (23.50%, 37.60%) and diarrhoea (19.40%, 32.70%). This is a positive sign as children receive regular vaccinations, including vaccines against the Rotavirus, which could cause fatal gastrointestinal disease, as suggested in the literature.

The various OTC homeopathic brands used by the 334 respondents who have indicated that they use OTC homeopathic remedies, were covered in Question 11 of Section B in the questionnaire. From Figure 6.12 below, it is clear that the brands respondents have mostly indicated include Natura (72.46%), Sister Lilian Remedies (32.34%) and Herbaforce (31.44%). As a recent newcomer to the market, it is encouraging to note that Sister Lilian remedies is seen as a commonly used OTC homeopathic remedy. This could be due to the successful marketing strategy of Sister Lilian Remedies, advertising in several baby and childcare magazines as well as in various online tutorials linked to online parenting websites. This is especially of importance to the connected generation which, as explained in Chapter 2, refers to the combined Generation X and Generation Y who make use of technology on a regular basis in their decision-making. Natura has been in the business of homeopathic remedies for several decades and has become a trusted brand among OTC homeopathic remedy users and homeopaths alike. This is clearly mirrored in the literature, as discussed in Chapter 4. Seeing that brand preference was not required, it cannot be assumed that any of these brands are preferred brands, but only brands most commonly found in households in Pretoria East which use OTC homeopathic remedies.

Figure 6.12: Brands used in homes which use OTC homeopathic remedies



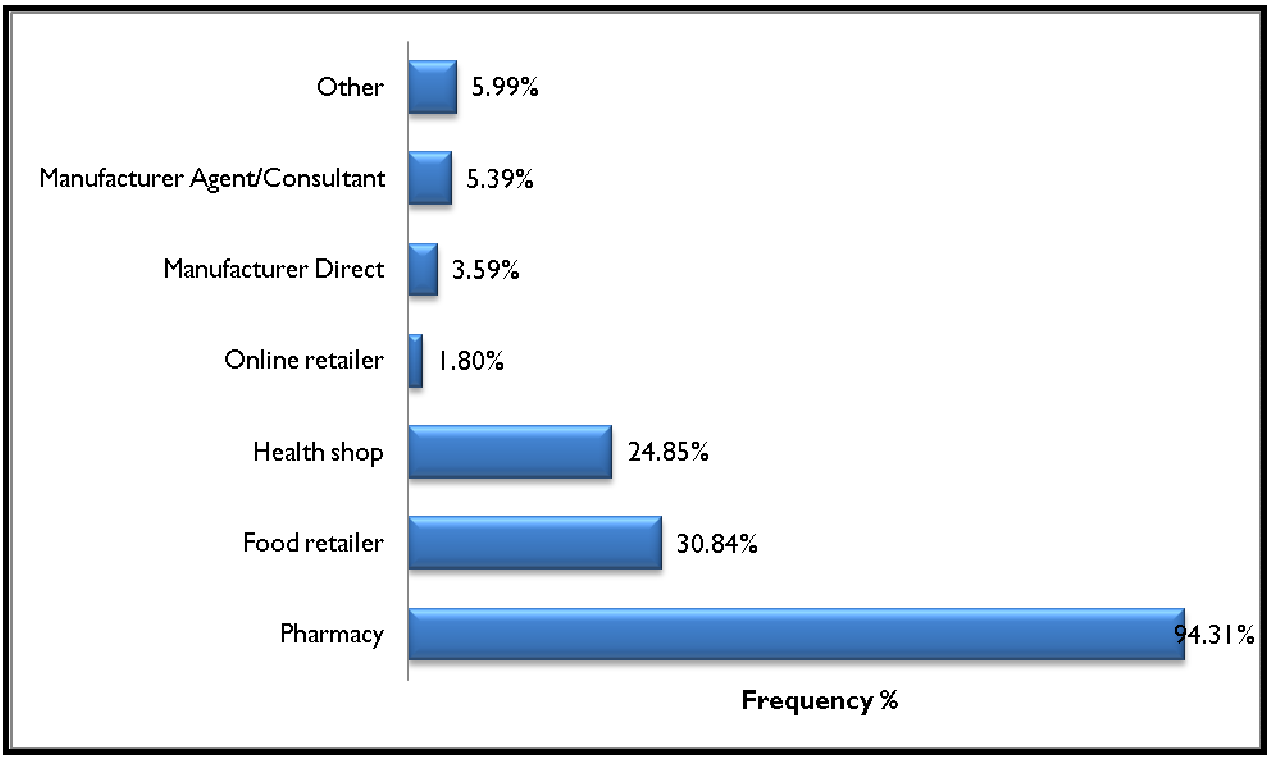
Question B12: Distribution channels from which OTC Homeopathic remedies are obtained

As seen in Figure 6.13 below, the majority of respondents who use OTC homeopathic remedies indicated that they obtain their OTC homeopathic remedies from pharmacies (94.31%). Food retailers (30.84%) and health shops (24.85%) were also among the retail sources of OTC homeopathic remedy users, but to a much lesser degree. Again, this question does not indicate preference, but rather which sources parents use to obtain OTC homeopathic remedies. The high frequency of pharmacies could indicate that parents like to obtain face-to-face information from a trained professional regarding homeopathic remedy options. This is also mirrored in the small frequency of parents indicating an online retailer (1.8%) as a retail source for OTC homeopathic remedies. As suggested in Chapter 4, this poses a possible conundrum for pharmacists who are not trained in the use of homeopathic remedies, and who need to provide advice to consumers about the use of homeopathic remedies.

Ironically, the second largest indicated retail source is food retailers. This signifies that parents are comfortable enough with purchasing their OTC homeopathic remedies from a food retailer

without the assistance of knowledgeable retail staff. It could imply that parents have done research in order to purchase the right remedy, without having the requirement of additional assistance. The packaging of the OTC homeopathic remedies might contain the right amount of information consumers need in order to make the right decision regarding the remedies they require, especially combination remedies. It could further signify that parents are comfortable purchasing OTC homeopathic remedies, together with other groceries, at a food retailer and that the convenience thereof is of significant value to parents. A second issue to be considered for both food retailers and pharmacies is that parents could consider the price of the remedies as a deciding factor. Pharmacies such as Dis-Chem provide parents with relatively cheaper prices for medicines and other related products, in comparison to other retail options such as health shops. Although the percentage of respondents who indicated health shops as a retail source were rather small in comparison to pharmacies, it should still be taken into consideration. Health shops' distribution footprint is not as pervasive as pharmacies, but the personal advice received from sales staff could be a deciding factor for parents who wish to purchase OTC homeopathic remedies, especially first-time buyers of products.

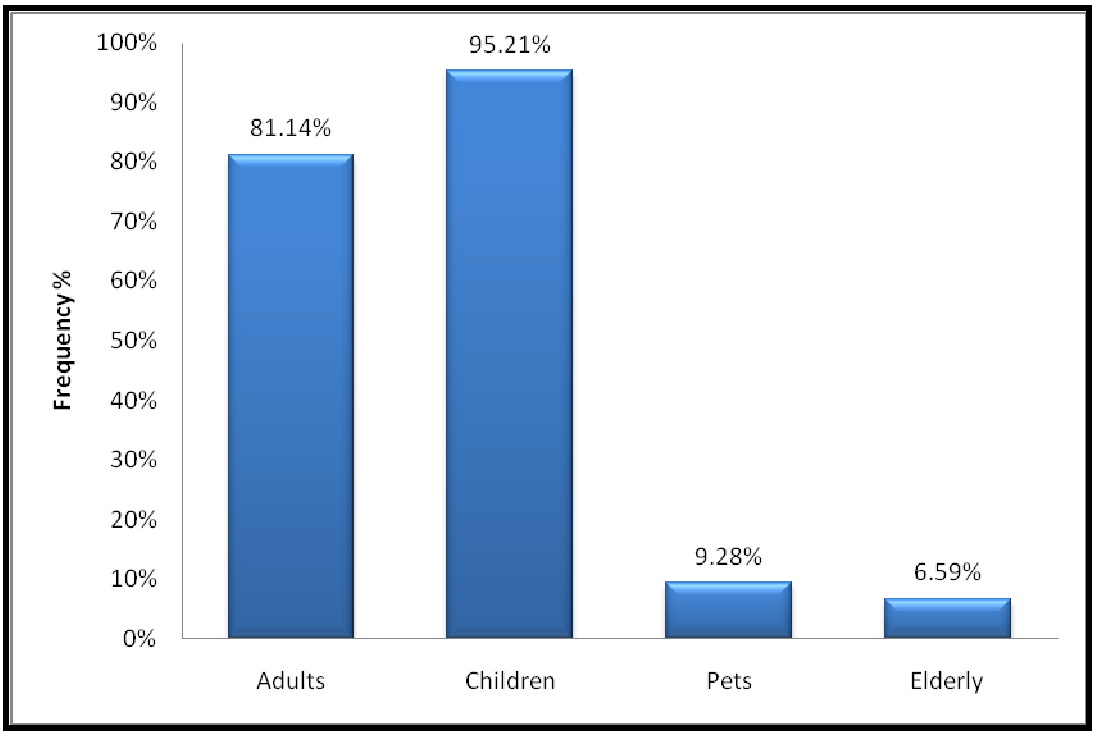
Figure 6.13: Distribution channels from which OTC Homeopathic remedies are obtained



Question B13: Family members using OTC homeopathic remedies

Question 13 of Section B requested respondents who use OTC homeopathic remedies to indicate for which members of the family the OTC homeopathic remedies are being used. As seen below in Figure 6.14, the majority of respondents indicated that both adults (81.14%) and children (95.21%) in the household receive OTC homeopathic remedies. The least number of family members who receive OTC homeopathic remedies are pets (9.28%) and the elderly (6.59%). A reason for parents not to provide pets with homeopathic remedies is possibly due to a lack of knowledge. This could also be an opportunity for OTC homeopathic remedy manufacturers and marketers to look into the possibility of expanding their product offering to a pet range as well. The lack of remedies used for the elderly could be due to elderly family members not being part of the core family unit living in the same household as parents with children in ECD centres in the Pretoria East region.

Figure 6.14: Family members using OTC homeopathic remedies

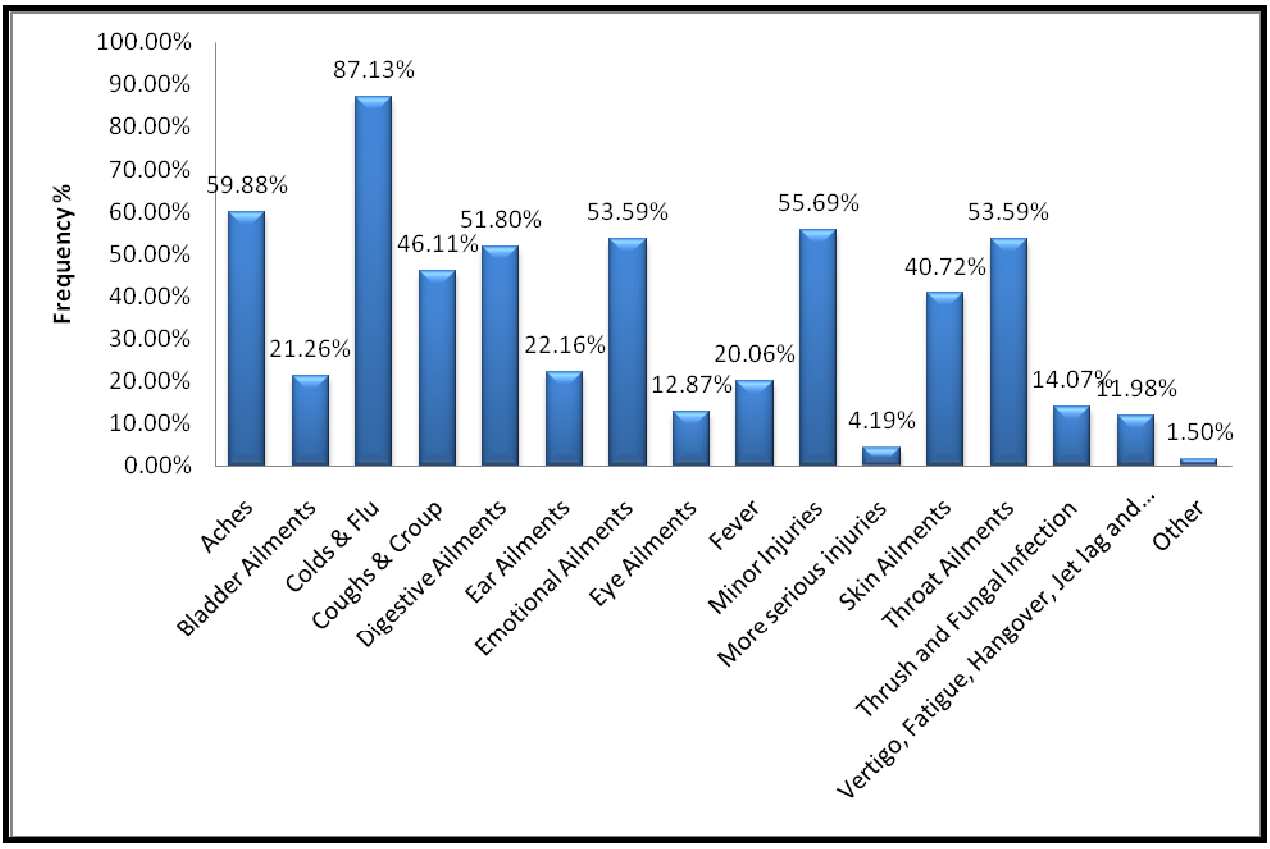


Question B14: Ailments, wounds and illnesses OTC homeopathic remedies are being used for

Referring to Figure 6.15 below, it is clear that the majority of parents who use OTC homeopathic remedies use them for the following ailments, wounds and illnesses:

- Aches (59.88%)
- Colds and flu (87.13%)
- Digestive ailments (51.80%)
- Emotional ailments (53.59%)
- Minor injuries (55.69%)
- Throat ailments (53.59%)

Figure 6.15: Ailments, wounds and illnesses OTC homeopathic remedies are being used for



The specific details for each of these commonly contracted ailments wounds and illnesses can be seen in Table 6.3 below.

Table 6.3: Specific details of the commonly contracted ailments, wounds and illnesses

Ailments, wounds and illnesses	Details
Aches	backache, sciatica, spinal disorders, growing pains, joint inflammation, arthritis, gout, fidgety/restless or aching legs, arthritis, menstrual pains, after surgical procedures, after dental procedures, lumbago, headache, migraine, toothache, tooth abscesses and gumboils, babies teething
Colds and flu	Runny nose, sinusitis, hayfever, blocked nose
Digestive ailments	bloatedness, distention, flatulence, heartburn, indigestion, tummy ache, constipation, nausea, vomiting, diarrhoea, food poisoning, gastric disorders, motion sickness, cramps, colic
Emotional ailments	Anxiety, fear, worry panic, depression, irritability, exam nerves, mental focus, mental fatigue, grief, hysteria, insomnia, restlessness, nightmares, night terrors, shock, trauma, disappointment, sleeplessness
Minor injuries	insect bites, stings, abrasions, sunburn, grazes, minor cuts, bruises, sores, nosebleeds, muscle sprains, ligament, tendon and joint strains, lactic acid build-up, eye injury
Throat ailments	sore throat, tonsillitis, pharyngitis, laryngitis, snoring, hoarseness, loss of voice

Source: Adapted from Rowson (2008)

The ailments, wounds and illnesses which were not in the majority covered the following:

- Bladder ailments (21.26%)
- Coughs and croup (46.11%)
- Ear ailments (22.16%)
- Eye ailments (12.87%)
- Fever (20.06%)
- More serious injuries (4.19%)
- Skin ailments (40.72%)
- Thrush and fungal infections (14.07%)
- Vertigo, fatigue, hangover, jet lag and exhaustion (11.98%)

There is some agreement between the various illnesses that the youngest children in ECD centres contract and the uses of OTC homeopathic remedies. All respondents to the study have indicated that 47.5% of the youngest child(ren) in the household contract colds and flu every three months. 87.13% of parents using OTC homeopathic remedies use it for colds and flu. Coughs and croup occur every three months for 35% of all respondents to the study, but only 46.11% of parents who use OTC homeopathic remedies have indicated their use for coughs and croup. A possible reason is that coughs and croup are seen in general as more serious ailments, which require medical attention, and not only OTC medication. 57.8% of all respondents participating in the study indicated that minor injuries (bumps, bruises and insect bites) occur once a month, and 55.67% of parents who use OTC homeopathic remedies use them for minor injuries. A possible opportunity arises here for homeopathic producers to market their products to parents dealing with minor injuries as well.

From the above biographical information regarding the users of OTC homeopathic remedies, it is possible to suggest a profile of users among parents with children in ECD centres in the Pretoria East region. *Parents with children in ECD centres using OTC homeopathic remedies are mostly mothers from the white ethnic group, with one or two children and with the majority of children being between 1-6 years of age. These mothers are aged between 17-46 years, also known as the connected generation (referred to as the combined Generation X and Generation Y). They are well educated, implying that they are educated beyond secondary schooling to tertiary level, with an average household income of more than R22001.00 per month. They belong mostly to LSM 10 High and 10 Low, are members of a medical aid scheme and are working in the accounting or financial industry, administration, education, management, medical industry or are stay-at-home moms. The OTC homeopathic brands most commonly found in these households include Natura, Sister Lilian Remedies and Homeoforce. OTC homeopathic remedies are purchased mostly from pharmacies, followed by food retailers and health shops. These remedies are used to treat mostly children and adults, with the following ailments; colds and flu, digestive ailments, emotional ailments, minor injuries and throat ailments.*

Up to this point, the data analysis looked at the biographical information of respondents and details surrounding the use of homeopathic remedies among parents with children in ECD centres using OTC homeopathic remedies. In the following section, a more detailed look will be

taken on the reasons for using OTC homeopathic remedies, as well as the various aspects surrounding the perception of respondents.

6.3 REASONS FOR USING OTC HOMEOPATHIC REMEDIES AND PERCEPTIONS REGARDING OTC HOMEOPATHIC REMEDIES

Reasons for using OTC homeopathic remedies were covered in the early part of Section B of the questionnaire. In order to determine the direction of agreement with the various reasons for using OTC homeopathic remedies, it was decided to use the binomial test. The binomial test is a non-parametric test commonly used to test a hypothesis concerning a variable that takes only two values. It is a mechanism to determine whether the level of agreement with the various given statements regarding reasons for using OTC homeopathic remedies tend to be positive or negative.

The comparison of the proportion of "positive" responses with the proportion of "negative" responses will enable us to determine areas where parents with children in ECD centres have felt positively or negatively regarding the supplied reasons for using OTC homeopathic remedies.

For the purposes of the binomial test, responses which are considered positive, meaning 'somewhat agree', 'agree' and 'strongly agree', coded as 4, 5 and 6 respectively, were grouped together and coded as a 2 (labelled 'Category 2).'. Responses that could be considered negative included 'strongly disagree', 'disagree' and 'somewhat disagree"' coded as 1, 2 and 3 were grouped together and coded as a 1 (labelled 'Category 1'). The results of the binomial test are given in Table 6.4 below.

The hypotheses tested are:
H_0: p=0.5.
H_1: $p \neq 0.5$

Table 6.4: Binomial Test results for Section B

Hypothesis		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
Conventional medicine no longer worked	Group 1	1.00 (-)	210	.64	.50	.000
	Group 2	2.00(+)	116	.36		
	Total		326	1.00		
Homeopathy is a cheaper option than conventional medicine	Group 1	1.00(-)	130	.40	.50	.000
	Group 2	2.00(+)	199	.60		
	Total		329	1.00		
Choice of a natural solution to everyday ailments	Group 1	2.00(+)	300	.91	.50	.000
	Group 2	1.00(-)	31	.09		
	Total		331	1.00		
Medical aid covers less, homeopathy is the next best thing	Group 1	1.00(-)	178	.55	.50	.108
	Group 2	2.00(+)	148	.45		
	Total		326	1.00		
Friends or colleagues suggested homeopathic remedies (Reference groups)	Group 1	2.00(+)	217	.67	.50	.000
	Group 2	1.00(-)	108	.33		
	Total		325	1.00		
Celebrities	Group 1	1.00(-)	276	.87	.50	.000
	Group 2	2.00(+)	42	.13		
	Total		318	1.00		
Advertisements	Group 1	1.00(-)	171	.54	.50	.160
	Group 2	2.00(+)	145	.46		
	Total		316	1.00		
In-store promotion	Group 1	1.00(-)	241	.76	.50	.000
	Group 2	2.00(+)	77	.24		
	Total		318	1.00		
Historic use	Group 1	1.00(-)	194	.59	.50	.001
	Group 2	2.00(+)	135	.41		
	Total		329	1.00		

The results of the binomial test indicated that all the questions except two were statistically significant, with a $p<0.05$ resulting in that H_0 is thus rejected for all the questions except two:

namely, that homeopathy is the next best thing due to a decrease in medical aid coverage and that an advertisement has led a customer to use OTC homeopathic remedies.

From the table above, it becomes evident that parents with children in ECD centres in the Pretoria East region tend to agree more (the proportion "positive responses" is given in brackets) with the following reasons for using homeopathic remedies:

- Homeopathy is a cheaper option than conventional medicine (0.60)
- Respondents preferred a more natural health solution for everyday ailments (0.91)
- A friend or colleague suggested homeopathic remedies (0.67)

From the reasons provided above, it becomes apparent that parents using OTC homeopathic remedies are taking note of the financial impact of paying for more and more medication out of their own pockets. Of course, this is not the only issue regarding the financial strain families are experiencing, but the fact remains that parents need to use their money wisely. Not only are homeopathic remedies cheaper compared to conventional medicine, but frequent health problems occur less when treated with homeopathic remedies, as discussed in Chapter 4, resulting in less expenditure on medical treatment.

Respondents seem to have made a conscious decision regarding the way they live. It is no wonder that this has spilt over in the way they view treating common everyday ailments. There has been a lot of focus in the media regarding the use of chemicals in almost every facet of our everyday lives, from bottled water to food production and packaging, to name but a few. Consumers are likely to be driven to look for alternatives that are free of possible harmful chemicals or products which could have serious side-effects. It is no wonder that the users of OTC homeopathic remedies will consider this a very important reason for using these remedies.

The effect of opinion leaders and reference groups on consumer decision-making has been well documented in marketing literature. This cannot be more true than it is for the market of parents of young children, especially for both Generation X and Generation Y parents. The importance of reference groups and opinion leaders is discussed in Section 2.2. As discussed in Chapter 2, the connected generation likes to share information using several technology methods. Following the advice of a trusted person, such as a friend or colleague who has gone through

the same problems regarding ailments and illnesses in children, could be of immense value for the parents of the connected generation.

Parents tend to disagree more with the following statements, as possible reasons for using homeopathic remedies (the proportion "negative responses" is given in brackets):

- Conventional medicine no longer worked for respondents (0.64)
- Celebrities' use of homeopathic medicine has led respondents to try it (0.87)
- In-store promotion has led respondents to try homeopathic remedies (0.76)
- Parents grew up with homeopathic remedies and continue using it for their families (0.59)

Parents still trust conventional medicine and believe it has its place in the medical treatment of their children, which supports the fact that parents view OTC homeopathic remedies as complementary rather than alternative to conventional medicine. The effect of celebrities using homeopathic remedies is not of great concern to the users of OTC homeopathic remedies, which could possibly be linked to the way the connected generation views celebrities and the use of the media. In-store promotions was not a possible reason for trying OTC homeopathic remedies, perhaps due to a lack of such promotions or limitations placed on manufacturers to have such promotions. Parents using OTC homeopathic remedies have not grown up with homeopathic remedies and as a result this could not be a reason for them to use OTC homeopathic remedies.

An almost equal proportion of parents agreed and disagreed with the following possible reasons for using homeopathic remedies (proportions are provided in brackets):

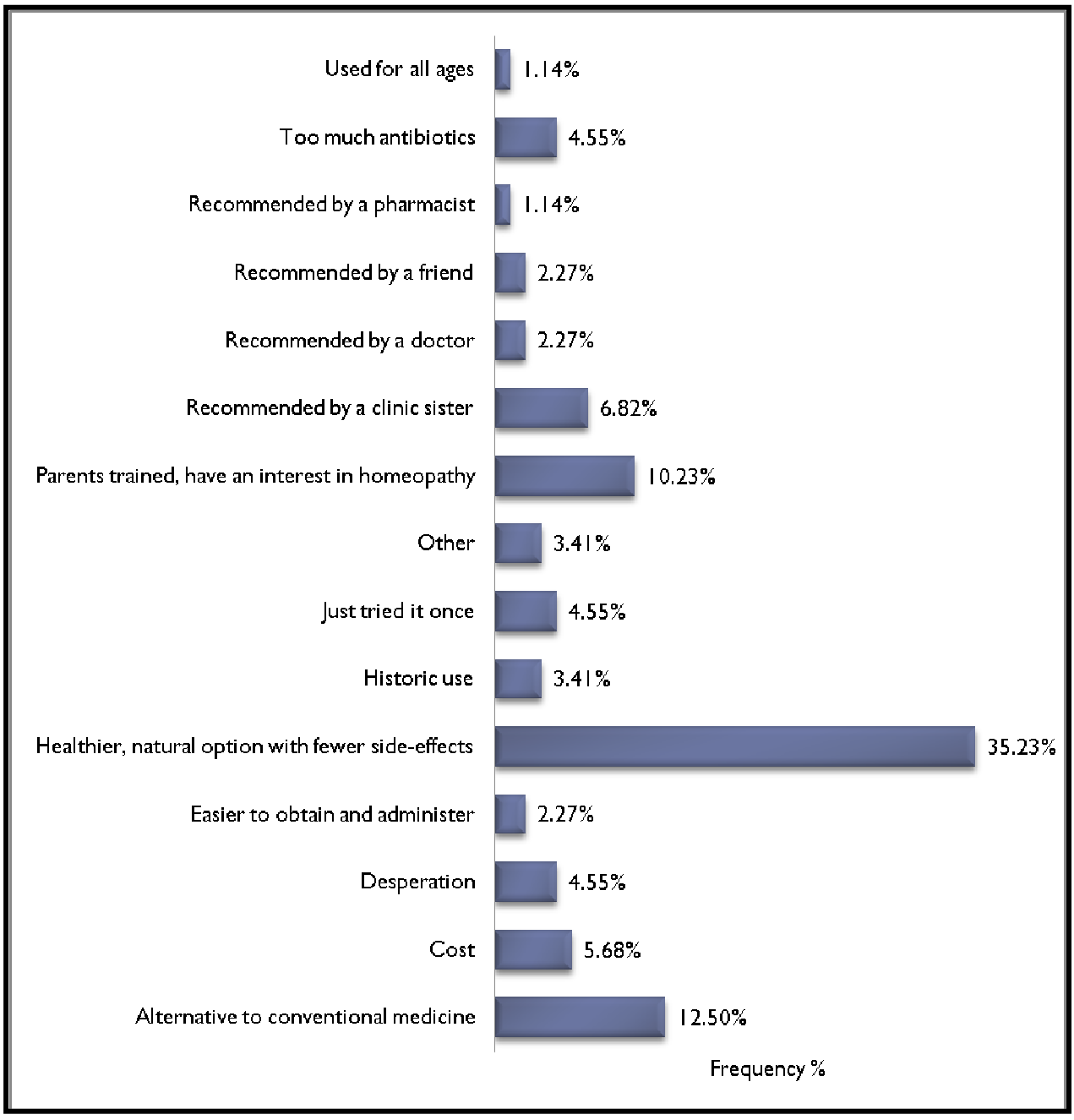
- An advertising campaign (disagree=0.54 and agree=0.46)
- Homeopathy being the next best thing, due to medical aid fees not covering medicine expenses (disagree=0.55 and agree=0.45)

The lack of advertising campaigns from the manufacturers of homeopathic remedies or the cynical view Generation Xers (Gen X) have towards advertising in general, as discussed in Chapter 2, could be the reason for the responses given by respondents.

Question B10: Other reasons for using OTC homeopathic remedies

88 respondents have added their own reasons for using OTC homeopathic remedies in Section B, Question 10. This was an open-ended question, which led to various answers. These answers were grouped together as far as possible as shown below in Figure 6.16. As can be seen, 35.23% of parents using OTC homeopathic remedies do so because they feel it is a healthier natural option with fewer side-effects. This is clearly mirrored in the binomial test discussion above as a conscious decision by parents to live a healthier and natural lifestyle. This is followed by parents using OTC homeopathic remedies as an alternative to conventional medicine (12.50%).

Figure 6.16: Other reasons for using OTC homeopathic remedies



Section D of the questionnaire dealt with respondent opinion on various aspects, such as conventional medicine, homeopathic remedies compared to conventional medicine, natural

remedies, confidence to self-medicate and medical aid. This section also looked at the opinion respondents have on when a visit to a doctor is necessary. Instead of looking only at those respondents who use homeopathic remedies, this section will look at the results based on the responses of all respondents in this study.

For the purposes of this section, a binomial test was used. As before, the responses of respondents had to be transfigured. Responses which are considered positive, meaning "somewhat agree", 'agree' and 'strongly agree', coded as 4, 5 and 6 respectively, were grouped together and coded as a 2 (labelled 'Category 2).'. Responses that could be considered negative included 'strongly disagree', 'disagree' and 'somewhat disagree,' coded as 1, 2 and 3, were grouped together and coded as a 1 (labelled 'Category 1'). The results of the binomial test are given in Table 6.5 below.

The hypotheses tested are:

H_0: p=0.5.

H_1: $p \neq 0.5$

Table 6.5: Binomial Test results for Section D

Hypothesis		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
Homeopathic remedies before conventional medicine	Group 1	1.00	377	.63	.50	.000
	Group 2	2.00	222	.37		
	Total		599	1.00		
Homeopathy equal to conventional medicine	Group 1	1.00	375	.63	.50	.000
	Group 2	2.00	220	.37		
	Total		595	1.00		
OTC homeopathic remedies as alternative medicine	Group 1	1.00	449	.74	.50	.000
	Group 2	2.00	156	.26		
	Total		605	1.00		
OTC homeopathic remedies as complementary medicine	Group 1	1.00	279	.46	.50	.061
	Group 2	2.00	326	.54		
	Total		605	1.00		
Homeopathy has no place in medicine	Group 1	1.00	547	.91	.50	.000
	Group 2	2.00	52	.09		

	Total		599	1.00		
Homeopathy is dangerous	Group 1	1.00	557	.93	.50	.000
	Group 2	2.00	44	.07		
	Total		601	1.00		
Conventional medicine is better than homeopathy	Group 1	1.00	275	.46	.50	.050
	Group 2	2.00	324	.54		
	Total		599	1.00		
Conventional medicine is not as effective anymore	Group 1	2.00	255	.42	.50	.000
	Group 2	1.00	351	.58		
	Total		606	1.00		
Only prescribed medicine used	Group 1	1.00	339	.56	.50	.007
	Group 2	2.00	271	.44		
	Total		610	1.00		
Prescribed medication works every time	Group 1	1.00	269	.44	.50	.006
	Group 2	2.00	337	.56		
	Total		606	1.00		
Returned to doctor after first course of prescribed medication did not work	Group 1	1.00	250	.42	.50	.000
	Group 2	2.00	350	.58		
	Total		600	1.00		
Doctors need more training in homeopathy and other natural remedies	Group 1	2.00	532	.88	.50	.000
	Group 2	1.00	74	.12		
	Total		606	1.00		
Natural remedies are the way of the future	Group 1	2.00	451	.75	.50	.000
	Group 2	1.00	153	.25		
	Total		604	1.00		
More should be done to integrate natural remedies with conventional medicine	Group 1	2.00	544	.90	.50	.000
	Group 2	1.00	62	.10		
	Total		606	1.00		
I need to have scientific proof that medicine works before I will try it	Group 1	1.00	184	.30	.50	.000
	Group 2	2.00	421	.70		
	Total		605	1.00		
Do not believe in natural remedies for my family	Group 1	1.00	524	.87	.50	.000
	Group 2	2.00	80	.13		
	Total		604	1.00		
Friend/Colleague would suggest remedies (Reference groups)	Group 1	2.00	492	.81	.50	.000
	Group 2	1.00	112	.19		
	Total		604	1.00		

Own judgement	Group 1	2.00	518	.86	.50	.000
	Group 2	1.00	86	.14		
	Total		604	1.00		
Consult books/Internet	Group 1	1.00	262	.43	.50	.001
	Group 2	2.00	341	.57		
	Total		603	1.00		
Ill-equipped	Group 1	1.00	299	.50	.50	.871
	Group 2	2.00	304	.50		
	Total		603	1.00		
Medical aid rates are becoming less affordable	Group 1	1.00	85	.14	.50	.000
	Group 2	2.00	513	.86		
	Total		598	1.00		
Pay more for medical services out of pocket	Group 1	1.00	86	.14	.50	.000
	Group 2	2.00	512	.86		
	Total		598	1.00		
Medical aid coverage is sufficient	Group 1	2.00	237	.40	.50	.000
	Group 2	1.00	359	.60		
	Total		596	1.00		
If my child has a fever, we go to the doctor	Group 1	1.00	504	.83	.50	.000
	Group 2	2.00	101	.17		
	Total		605	1.00		
Fever higher than 38.5 degrees, we go to the doctor	Group 1	2.00	390	.65	.50	.000
	Group 2	1.00	212	.35		
	Total		602	1.00		
At the first sign of illness, we go to the doctor	Group 1	1.00	501	.83	.50	.000
	Group 2	2.00	102	.17		
	Total		603	1.00		
Only after I have done everything I know or have read up on	Group 1	1.00	124	.21	.50	.000
	Group 2	2.00	479	.79		
	Total		603	1.00		
When I deal with something strange, we go to the doctor	Group 1	2.00	532	.88	.50	.000
	Group 2	1.00	75	.12		
	Total		607	1.00		
I don't know enough, will consult a doctor for all ailments and illnesses	Group 1	2.00	268	.44	.50	.006
	Group 2	1.00	336	.56		
	Total		604	1.00		
I don't have the time to	Group 1	2.00	175	.29	.50	.000

search for information about my children's illnesses and ailments	Group 2	1.00	429	.71		
	Total		604	1.00		

The results of the binomial test indicated that all the questions except three were statistically significant, with a $p<0.05$ resulting in that H_0 is thus rejected for all the questions except three: namely, that OTC homeopathic remedies are used as complementary medicine, conventional medicine is better than homeopathy and parents feeling ill-equipped to deal with children's ailments and illnesses.

When looking at the subsection which concentrates on respondent opinion regarding homeopathic remedies in comparison to conventional medicine, the following can be gathered. Parents with children in ECD centres in the Pretoria East region tend to disagree more with the following statements (the proportion of "negative responses" is given in brackets):

- Using homeopathic remedies before conventional medicine (0.63).
- Believing that homeopathy is equal to conventional medicine (0.63).
- Using OTC homeopathic remedies instead of conventional medicine (0.74).
- Homeopathy has no place in medicine (0.91).
- Homeopathy is dangerous and should be avoided at all costs (0.93).

From the respondents' reaction to the statements as discussed, it can be gathered that parents view homeopathic remedies not quite on a par with conventional medicine. This is another opportunity for the homeopathic industry to step up and convey more information to the public on homeopathic products. Parents also do not use OTC homeopathic remedies as an alternative treatment to conventional medicine. It is encouraging to note that respondents do not perceive homeopathy as something to be avoided in its entirety.

An almost equal proportion of parents agreed and disagreed with the statement regarding the use of homeopathic remedies as complementary medicine to conventional medicine (0.46 and 0.54). Referring to the respondents that use OTC homeopathic remedies, it could be gathered that they use these remedies in a complementary fashion, in comparison to those who do not use these remedies at all.

From the subsection looking at the opinions of respondents to conventional medicine, it could be gathered that respondents tend to agree more with the following statements (the proportion of "positive responses" is given in brackets):

- The medicine my doctor (GP or paediatrician) prescribes works every time (0.56).
- I have gone back to a doctor after one course of prescribed medicine could not cure an illness, ailment or infection (0.58).

These two statements clearly show a division in how respondents view conventional medical treatment from doctors. Parents trust their physicians to have their best interests at heart for the whole family and provide the correct prescribed medication, even though it might not be done so the first time. On the one hand, respondents are satisfied with the prescribed medication they receive from doctors in that it works every time, but on the other, respondents have returned to doctors after a course of medication could not cure an ailment, illness or infection. As has been seen in the literature, this is specifically true for the treatment of children, especially regarding the use of antibiotics, the effect of which on the individual, household and the community at large is of immense concern. Parents are possibly not aware of these dangers. It also indicates that parents have possibly accepted that a return visit to a doctor after one course of medication to treat an illness or ailment, whether it be antibiotics or other conventional medicine, is normal.

Respondents tend to disagree more with the following statements (the proportion of "negative responses" is given in brackets):

- Conventional medicine (such as antibiotics) is not as effective anymore (0.58).
- I only use prescribed conventional medicine (0.56).

Parents still view conventional medicine as effective, including antibiotics. The literature suggests a different picture, especially the use of antibiotics, referring to the details discussed in Chapter 3. This possibly indicates that parents are not aware of the effects of routinely-prescribed antibiotics on their children, as well as on the community at large.

It is encouraging to note that parents do not just use prescribed conventional medicine, which might indicate that other options such as conventional OTC medicines and possibly OTC homeopathic remedies could be considered as well. It also ties in with the fact that respondents are spending more time on researching their children's common illnesses and ailments and

having more confidence to make decisions regarding their children's health, as seen in the discussions that follow below.

An almost equal proportion of parents agreed and disagreed with the following statement:

- Conventional medicine is better than homeopathy (disagree=0.46 and agree= 0.54)

The fact that parents agreed and disagreed that conventional medicine is better than homeopathy is encouraging for the homeopathic industry. Parents do not completely view conventional medicine as being better than homeopathy. There is scope to develop the image and presence of homeopathy in the medical industry, provided that there is enough information from the industry to do so.

From the subsection looking at the opinions of respondents towards natural remedies, it could be gathered that respondents tend to agree more with the following statements (the proportion of "positive responses" is given in brackets):

- Doctors need more training in homeopathy and other natural remedies (0.88).
- Natural remedies are the way of the future (0.75).
- More should be done to integrate natural remedies with conventional medicine (0.90)
- I need to have scientific proof that medicine works before I will try it (0.70)

The answers respondents have given to this entire section are encouraging. Not only do parents feel that an integrative approach between conventional and natural medicine is necessary, but also it is viewed as a definite need/future prerequisite of parents to have doctors trained in natural options. This ties in with the decision parents have made to live a more natural life and this decision could spill over to a possible requirement for physicians that parents might make use of in the future. As previously mentioned, parents trust their doctors to have their best medical intentions at heart and to prescribe the appropriate medication for illnesses and the like, which includes the sphere of natural remedies. It is encouraging to see that parents feel this is important in the training of physicians and could possibly be something the medical training fraternity, including the national Department of Health, could consider.

Parents have indicated that they require scientific proof that medication is effective before they will try it. This is true for homeopathic and conventional medicine. There exists a large amount

of information on the effectiveness of conventional medication, but industry journals have done little to make the way for scientific research on the effectiveness of homeopathic remedies any easier, as is mentioned in Chapter 4. Journals published by the pharmaceutical industry could make it seem that there is no equal scientific proof for the effectiveness of homeopathic remedies, when in actual fact there are numerous peer-reviewed, industry-related and relevant articles proving just the opposite. As Chapter 4 elaborates, this has been a problem for the homeopathic industry throughout the ages, which continues to this day and can be seen in the responses of parents. Parents could simply not be aware of proof of efficacy based on scientific research.

Respondents tend to disagree more with the following statements (the proportion of "negative responses" is given in brackets):

- I do not believe in natural remedies for my family (0.87)

The response from parents to this statement is of extreme encouragement to the homeopathic industry. Parents seem to be open-minded to natural remedies, provided that there is enough information and proof of its efficacy, as well as positive experiences from reference groups and opinion leaders.

Referring to the subsection on respondent confidence to self-medicate, respondents tend to agree more with the following statements (the proportion of "positive responses" is given in brackets):

- If a friend/colleague would suggest a remedy (homeopathic or otherwise), I will try it (0.81).
- I trust my own judgement when it comes to my family's health (0.86).
- I will consult books/Internet before a visit to the doctor for everyday ailments (0.57).

Parents in Generation X and Y have taken active decisions regarding their parenting, as is discussed in Chapter 2. The combined generation, also referred to as the connected generation, will use various means of technology to assist their decision-making. This could range from books and websites to social forums and social networks. This clearly corresponds with the results above.

An equal proportion of parents agreed and disagreed with the statement on feeling ill-equipped to deal with their child(ren's) illnesses and ailments (0.50 and 0.50).

In the subsection pertaining to respondent opinion on their medical aid, respondents tend to agree more with the following statements (the proportion of "positive responses" is given in brackets):

- Medical aid rates are becoming less affordable (0.86)
- Respondents have to pay for more and more medical services out of their own pockets; the medical aid covers less of our expenses (0.86)

Parents with children in ECD centres in Pretoria East feel that the expenditure for medical aid rates keeps increasing and that more and more expenditure comes out of their pockets, as discussed in Chapter 1. This is not a phenomenon unique to this study, but is mirrored here as something of national concern.

Respondents tend to disagree with the statement on sufficient medical aid coverage for everyday medical needs per year, which include doctors' visit and prescribed non-chronical medication, with a proportion of "negative responses" being 0.60. This response further supports the fact that the coverage that medical aid members who are parents with children in ECD centres in the Pretoria East region receive is not sufficient to meet the needs of these households. The answers to this subsection are of great importance, as 89.97% of respondents that indicated that they use homeopathic remedies, belong to a medical aid scheme.

The last subsection dealt with the occasions when parents find it prudent to take their children to a doctor or emergency room. Respondents tend to agree more with the following statements (the proportion of "positive responses" is given in brackets):

- When my child has a fever higher than 38.5 degrees, we go to the doctor (0.65).
- Only after I have done everything I know or have read up on, will I go to a doctor (0.79)
- When I deal with something I have not dealt with before (strange rash or strange cough), we go to the doctor (0.88)

Respondents tend to disagree more with the following statements (the proportion of "negative responses" is given in brackets):

- If my child has a fever, we go to the doctor, regardless of the temperature reading (0.83).
- At the first sign of illness, we go to the doctor (0.83).
- I don't know enough about medicine and would rather consult a doctor for all my children's ailments and illnesses (0.56).
- I don't have the time to search for information about my children's illnesses and ailments (0.71).

Looking at the responses of respondents to this section, it ties in quite well with the responses parents gave to a previous question, which indicated that they will use and trust their own judgement when it comes to their family's health. From the range of responses it can be gathered that parents will not necessarily make their way to the emergency room or doctor's practice at the first sign of illness. It also supports the notion that parents will do some information search, and follow the advice given from their research, knowing that they have done everything they possibly can before they deem a visit to a doctor as necessary. Parents are also responsible in addressing problems they are not familiar with or have not dealt with before, by seeking medical attention. That said, parents will make the time to search for information regarding their children's illnesses and ailments. This corresponds to what is said regarding the connected generation in Chapter 2. This generation will use all available technology to obtain information needed, in order to make decisions.

6.4 THE POSITIONING OF OTC HOMEOPATHIC REMEDIES IN THE MIND OF THE CUSTOMER

One of the secondary objectives of the study was to determine the positioning of OTC homeopathic remedies in the mind of the customer. As was referred to in Chapter 2, Section 2.3, identifying markets usually involves a three-step process, namely segmentation, targeting and positioning. As can be seen from the literature discussion in Section 2.3, positioning can be visually represented by means of perceptual mapping or spidergram analysis. For the purposes of this study spider graphs, exploratory factor analysis, cluster analysis and multidimensional scaling are used.

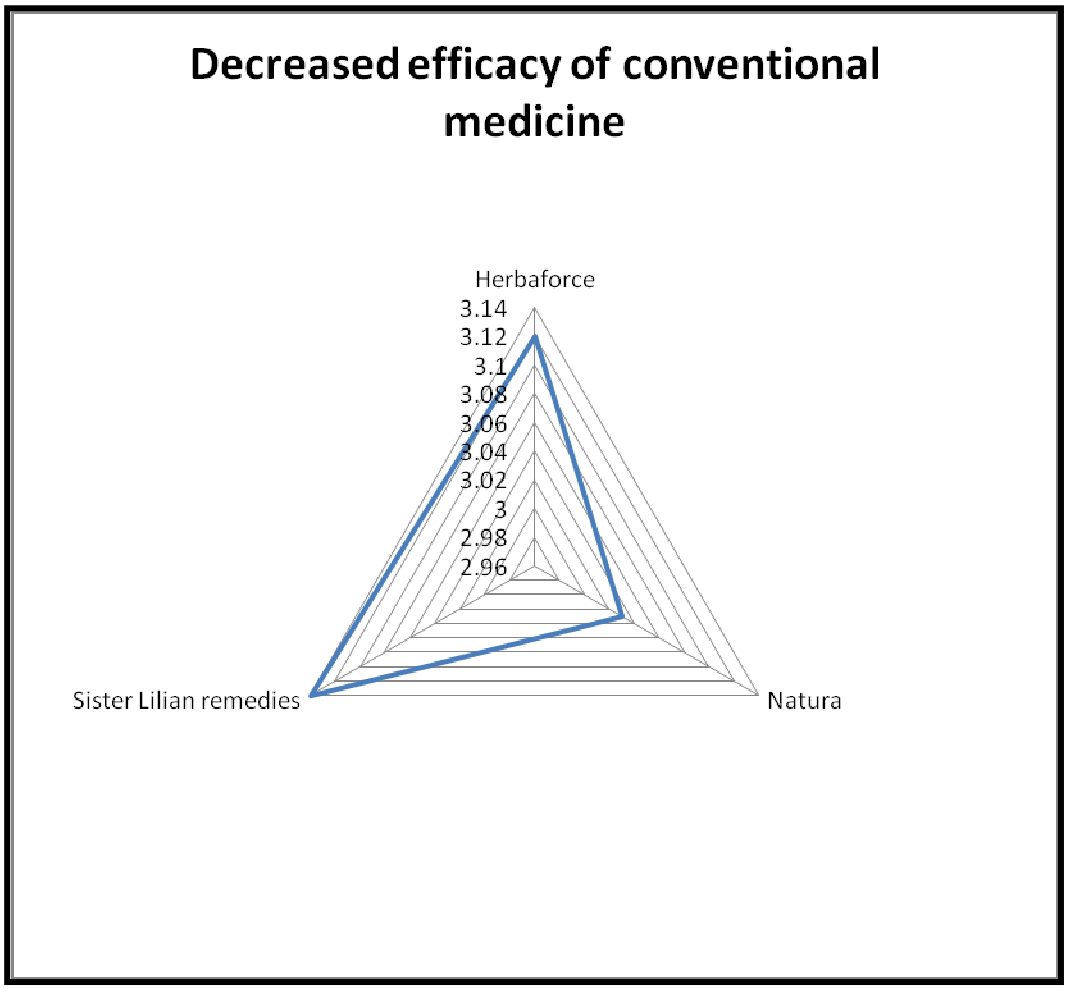
6.4.1 Spider graphs

The top three brands most often used in the homes of respondents to the study were Natura, Sister Lilian Remedies and Herbaforce. In order to determine how customers of these three brands perceived the use of these homeopathic products, it was decided to plot each brand's customers' average value for the "reasons for using homeopathy" variables provided in Section B of the questionnaire. The results worth mentioning are shown below:

Table 6.6: Decreased efficacy of conventional medicine and brands

Brand	Average level of agreement: Decreased efficacy of conventional medicine
Herbaforce	3.12
Natura	3.03
Sister Lilian's Remedies	3.14

Figure 6.17: Decreased efficacy of conventional medicine and brands

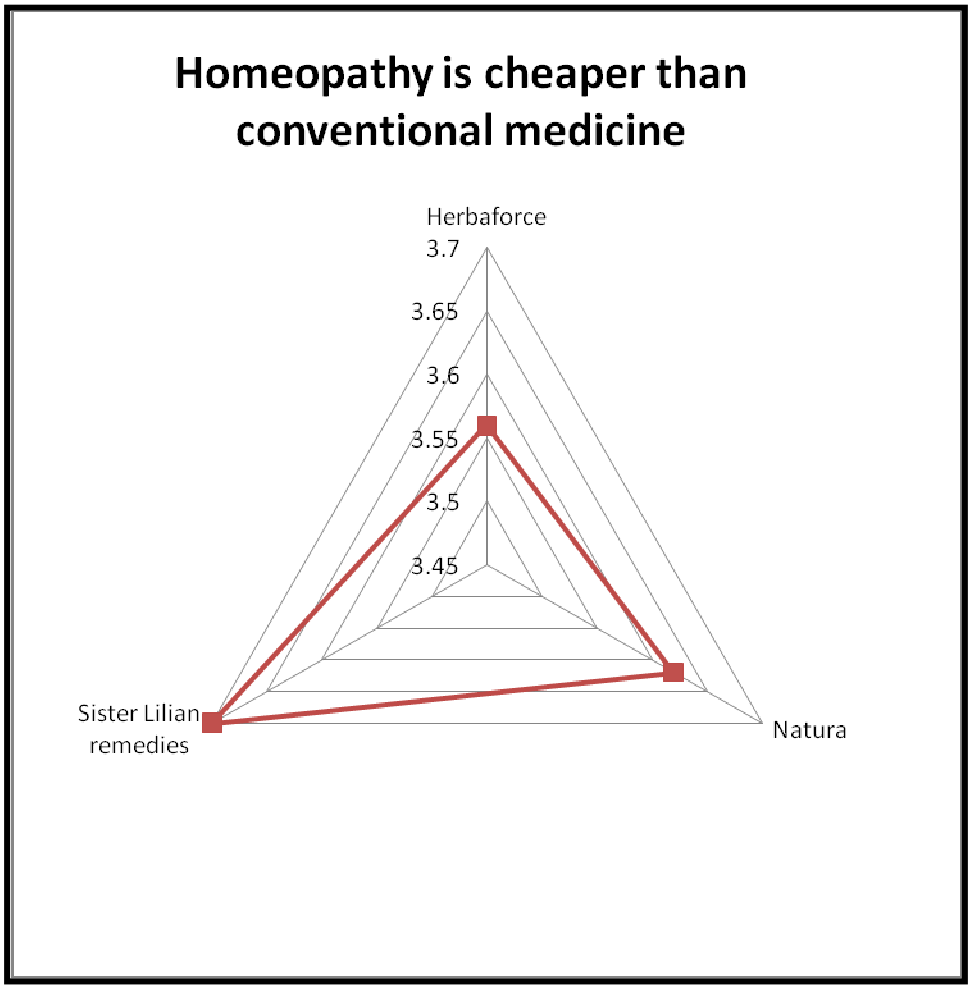


Looking at Table 6.6 and Figure 6.17 above, users of all three brands tended to disagree more with the statement that conventional medicine did not work for them any longer. Users of Sister Lilian Remedies (mean value of 3.14) and Herbaforce (mean value of 3.12) tended to disagree less than Natura users (mean value of 3.03) with this statement. As mentioned previously in the findings of the study, respondents still trust the conventional medicine system, but will explore other natural solutions in a complementary fashion.

Table 6.7: Homeopathy is cheaper than conventional medicine and brands

Brand	Average level of agreement: Homeopathy is cheaper than conventional medicine
Herbaforce	3.56
Natura	3.62
Sister Lilian Remedies	3.7

Figure 6.18: Homeopathy is cheaper than conventional medicine and brands

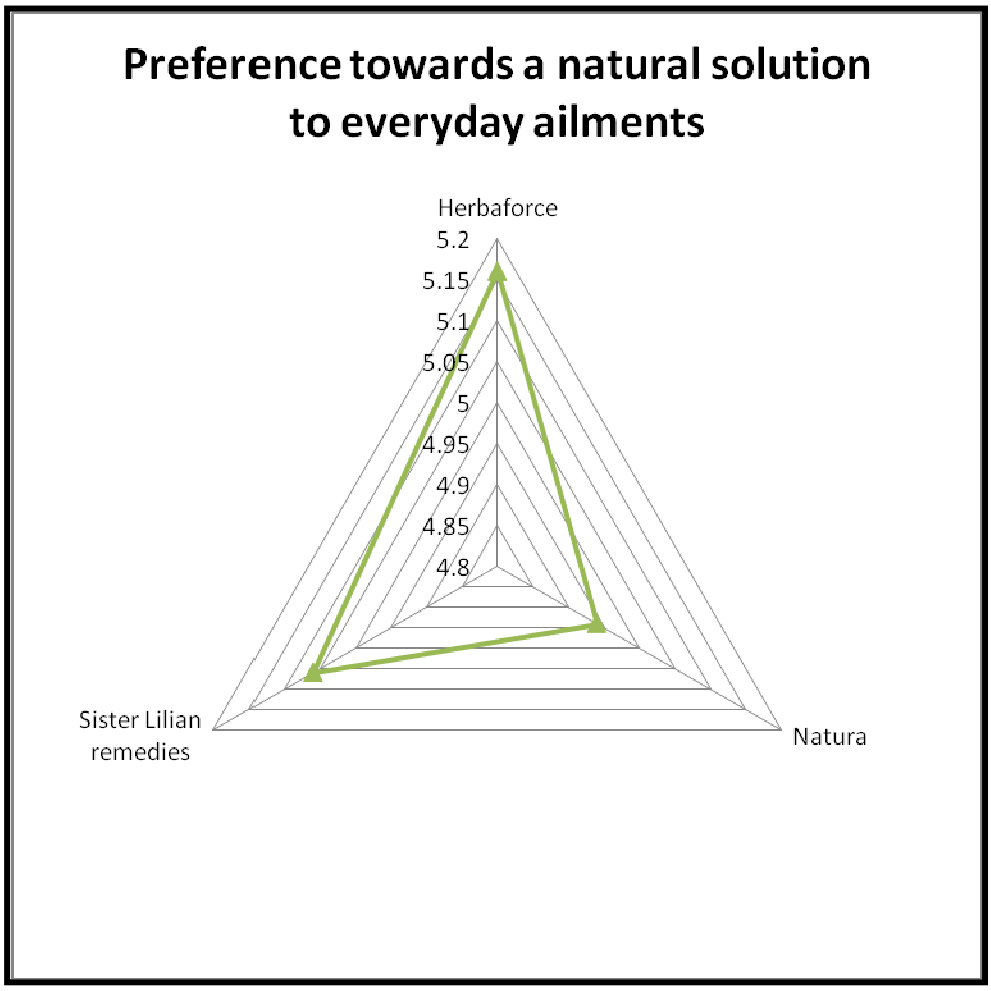


Users of Natura, Sister Lilian Remedies and Herbaforce tended to disagree somewhat with the statement that homeopathy is a cheaper option than conventional medicine, all mean values being above 3.5. Users of Sister Lilian Remedies (mean value of 3.7) and Herbaforce (mean value of 3.56) disagreed less than those of Natura (mean value of 3.62) to the statement.

Table 6.8: Preference towards a natural solution for everyday ailments

Brand	Average level of agreement: Preference towards a natural solution for everyday ailments
Herbaforce	5.16
Natura	4.94
Sister Lilian Remedies	5.06

Figure 6.19: Preference towards a natural solution for everyday ailments

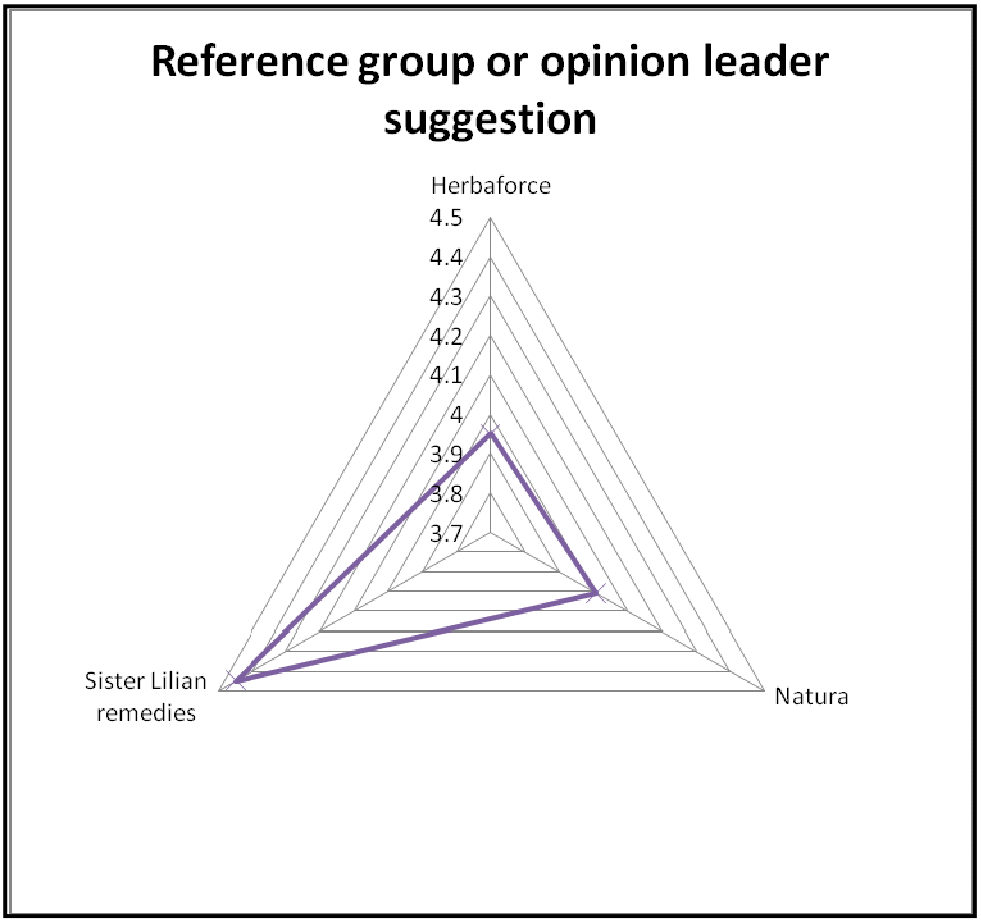


All users of Natura, Sister Lilian Remedies and Herbaforce tended to agree with the statement that they prefer a more natural solution to everyday ailments, all mean values being above 4. Users of Herbaforce (mean value of 5.16) tended to agree more with the statement than Sister Lilian Remedies (mean value of 5.06) and Natura (mean value of 4.94) users, as can be referred to in Table 6.8 and Figure 6.19.

Table 6.9: Reference group or opinion leader suggestion and brands

Brand	Average level of agreement: Reference group or opinion leader suggestion
Herbaforce	3.95
Natura	4.01
Sister Lilian Remedies	4.45

Figure 6.20: Reference group or opinion leader suggestion and Brands

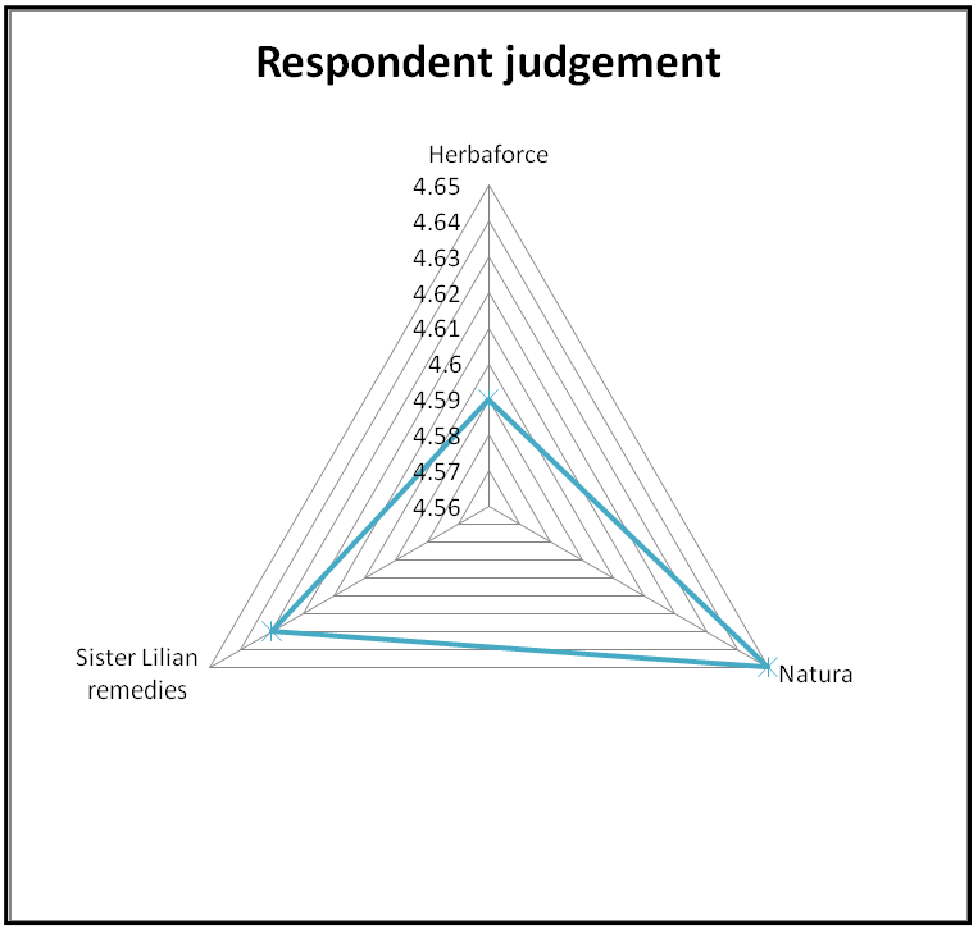


Users of Natura and Sister Lilian Remedies tended to agree somewhat with the statement that a friend or colleague suggested homeopathic remedies to them, with mean values of 4.01 and 4.45 respectively. (Refer to Table 6.9 and Figure 6.20). Users of Herbaforce did not agree as strongly with this statement, with a mean value of 3.95. This finding agrees with the theoretical discussion on the importance of reference groups and opinion leaders, as seen in Section 2.2. This is especially true for the parents of the connected generation. It is also important that users of OTC homeopathic remedies could in turn become opinion leaders regarding the use of homeopathic remedies among their peers who also have young children. Knowing the importance of reference groups and opinion leaders to the connected generation, together with the use of technology in sharing experiences, it could be a strong recommendation for producers of OTC homeopathic remedies to look into this facet when planning a marketing strategy. This is discussed in the last chapter of the study.

Table 6.10: Respondent judgement and brands

Brand	Average level of agreement: Respondent judgement
Herbaforce	4.59
Natura	4.65
Sister Lilian Remedies	4.63

Figure 6.21: Respondent judgement and Brands

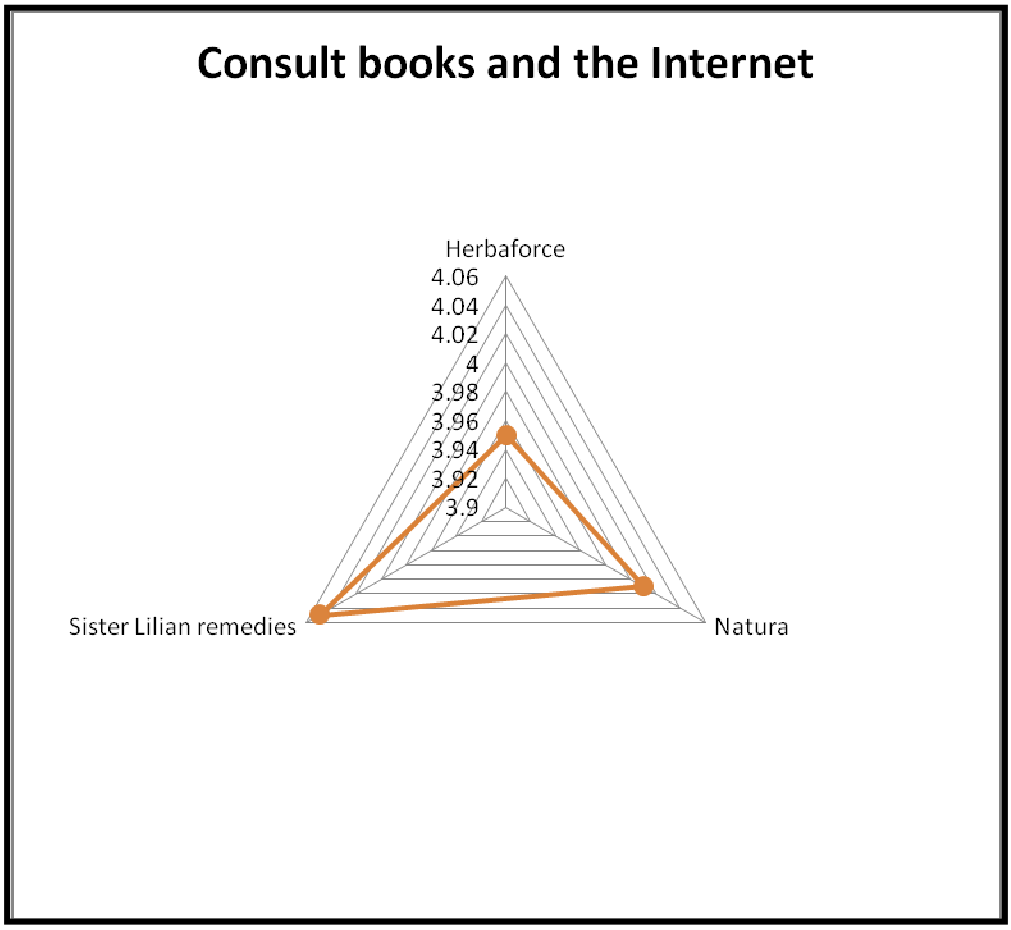


Referring to Table 6.10 and Figure 6.21, all users of Herbaforce, Natura and Sister Lilian Remedies tended to agree with the statement that they trust their own judgement when it comes to the health of their families; all mean values were above 4.5. Users of Natura felt strongest about the statement, with a mean value of 4.65, followed by Sister Lilian Remedies with a mean value of 4.63 and lastly Herbaforce with a mean value of 4.59.

Table 6.11: Consult books and the Internet and brands

Brand	Average level of agreement: Consult books and the Internet
Herbaforce	3.95
Natura	4.01
Sister Lilian Remedies	4.05

Figure 6.22: Consult books and the Internet and brands



Looking at Table 6.11 and Figure 6.22, it can be seen that users of Sister Lilian Remedies and Natura tended to agree somewhat more with the statement entailing the consultation of books and the Internet before a visit to a doctor for everyday ailments. The mean values were 4.05 and 4.01 respectively. Users of Herbaforce did not agree as strongly with the statement, with a mean value of 3.95. The findings support the theoretical discussion on the use of technology on the decision-making of the connected generation, as seen in Section 2.3.1. As discussed in the

last chapter of the study, a strong Internet presence is of extreme importance for OTC homeopathic remedy manufacturers.

6.4.2 Exploratory factor analysis

Exploratory factor analysis was conducted, using principal component extraction and varimax rotation, to determine if a meaningful factor structure emerged regarding respondents' opinions of homeopathy, conventional medicine, natural remedies and the confidence to self-medicate (Questions 1 to 30 of Section D of the questionnaire). Factor analysis is described by Malhotra (2004, p. 560) as a class of procedures used primarily to reduce and summarise data.

Principal component extraction considers the total variance of data and is recommended when the objective is to determine the minimum number of factors that will account for the maximum variance in the data for the use of multivariate analysis (Malhotra, 2004).

To determine whether the data were suitable for a factor analysis, a Bartlett's test of sphericity and the Keiser-Meyer-Olkin (KMO) measure of sampling adequacy were conducted. The Bartlett's test of sphericity is used to examine the hypothesis that the variables are uncorrelated in the population (Malhotra, 2004). The KMO measure of sampling adequacy examines the appropriateness of factor analysis. High values between 0.5 and 1.0 indicate that factor analysis is appropriate (Malhotra, 2004). Bartlett's test of sphericity was significant ($p= 0.000$) and the KMO value was 0.827 (and thus above the threshold value of 0.7), which indicated that it was feasible to conduct factor analysis on the captured data.

The data were subjected to principal component analysis which allowed factors with eigenvalues greater than one to be extracted; the other factors with a variance less than 1.0 are not included. Varimax rotation was applied in order to minimise the number of variables that had high loadings on any factor and to improve the degree to which the factors correlated and for ease of interpretation. A scree plot was used in association with the rotated factor loadings to determine a meaningful factor structure. Malhotra (2004, p. 567) notes that a scree plot is a plot with the eigenvalues against the number of factors in order of extraction. The shape of the plot is used to determine the number of factors. There is a distinct break between the steep slope of

factors with high eigenvalues and a gradual trailing off associated with the rest of the factors. The point at which the scree begins (the gradual trailing off) denotes the true number of factors.

Four factors, based on the rotated factor loadings and the scree plot were extracted, accounting for 42.7% of the variance. Using Cronbach alpha, the internal consistency (reliability) for the four factors was found to be 0.779, 0.837, 0.774 and 0.831 respectively, which are all above the recommended threshold value of 0.7 and are thus considered satisfactory.

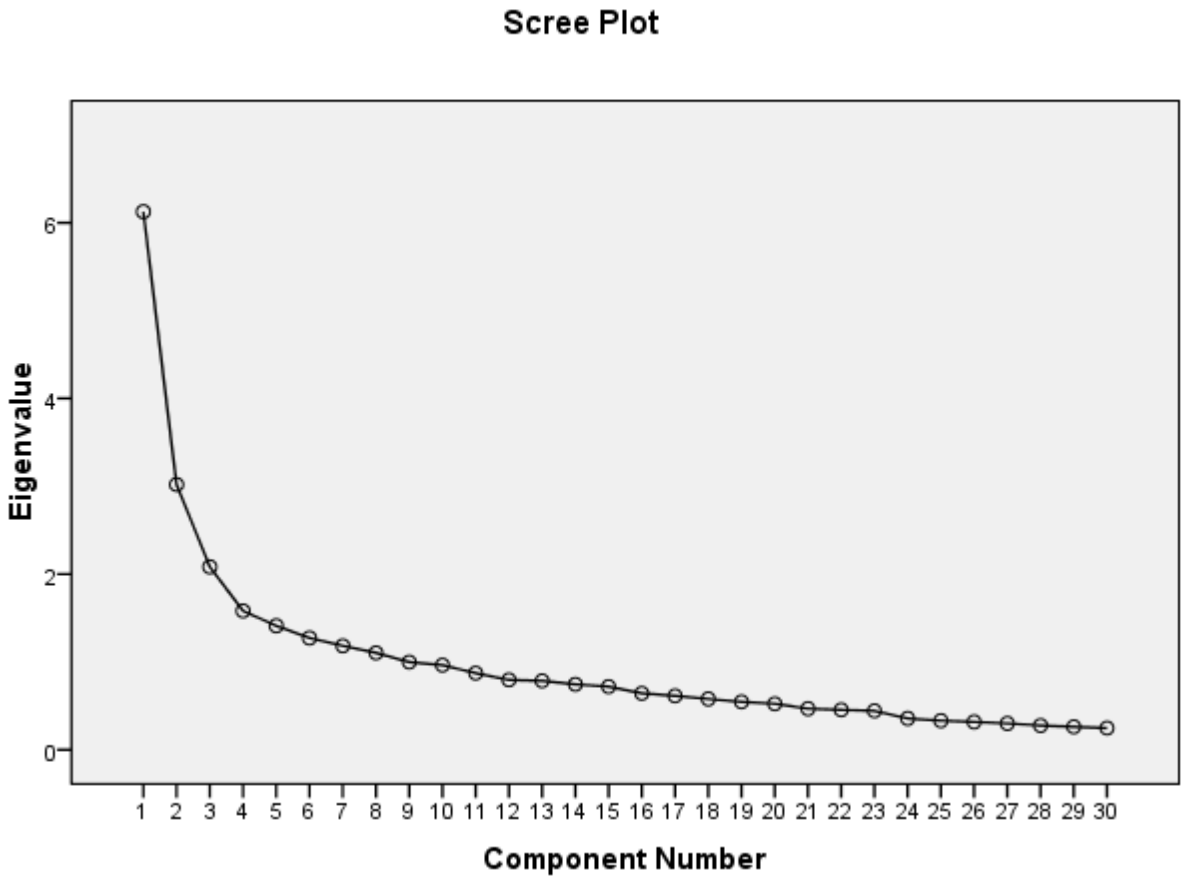
The rotated factor loadings, eigenvalues, % variance explained by the factor, the Cronbach alpha value (reliability) for the factor and the mean value for each factor are shown in Table 6.12 below and the scree plot in Figure 6.23.

Table 6.12: Factor Analysis Result

Factor Descriptors	Factor Loadings	Eigenvalue	Variance (%)	Cronbach Alpha (α)	Mean
Factor 1: Homeopathy preference		6.126	20.421	0.779	2.876
I use homeopathic remedies before using conventional medicine	0.833				
I believe homeopathy is equal to conventional medicine.	0.614				
I use OTC homeopathic remedies **instead** of conventional medicine	0.826				
Factor 2: Natural remedy preference		3.019	10.063	0.837	4.524
I think doctors today need more training in homeopathy and other natural remedies.	0.762				
I think natural remedies are the way of the future.	0.761				
I think more should be done to integrate natural remedies with conventional medicine	0.813				
Factor 3: Prefer professional help		2.083	6.943	0.774	3.046
If my child has a fever, no matter what the thermometer reading is, we go to the doctor or emergency room.	0.830				
I will call a doctor or emergency room when my child has a fever higher than 38.5℃.	0.719				
I will call a doctor or emergency room at the first sign of illness.	0.777				
I feel I do not know enough about medicine and would rather consult my doctor for all my children's ailments and illness	0.607				

Factor 4: Against homeopathy		1.581	5.268	0.831	1.915
Homeopathy has no place in medicine.	0.727				
Homeopathy is dangerous and should be avoided at all costs.	0.788				

Figure 6.23: Scree Plot



Factor 1, which is labelled as homeopathy preference, was concerned with the degree to which the respondents prefer homeopathy. This factor was comprised of 3 items that explained 20.42% of the total variance. The mean value of 2.876 indicates that respondents tended, on

average, to vary their opinion regarding a preference for homeopathy towards “somewhat disagree”. This result corresponds with the Binomial test results discussed in Section 6.3. As mentioned before, parents still trust conventional medicine and would perhaps rather view homeopathic remedies as a complementary means of treatment instead of alternative. It also supports the notion that parents do not view homeopathy as being on a par with conventional medicine. This factor could possibly indicate that there is a gap regarding the perception parents have of homeopathy and that there is a definite opportunity for the homeopathic industry to provide information to this market segment to change this perception.

Factor 2, which is labelled as ‘Natural remedies preference’, was concerned with the degree to which parents prefer natural remedies. This factor comprised of 3 items that explained 10.06% of the total variance. The mean value of 4.524 implies that the respondents, on average, tended to “somewhat agree and agree” that they prefer natural remedies. As discussed in the Binomial test results in Section 6.3, parents want a more natural approach to health problems and feel that an integrated approach between conventional medicine and natural remedies is the way of the future. This is also supportive of the notion that the training of physicians should incorporate the use of natural remedies.

Factor 3, labelled as ‘Prefer professional help’, was concerned with the degree to which the respondents prefer to obtain the services of a health professional, especially that of a doctor or emergency room. This factor was comprised of 4 items that explained 6.94% of the total variance. The mean value of 3.046 indicates that respondents tended, on average, to “somewhat disagree” with the notion that their first port of call regarding their children’s ailments and illnesses is to make use of the services of a health professional (e.g. a doctor or emergency room). It corresponds with the discussion in Section 6.3 which elaborated on the notion that parents will not go to a doctor’s rooms or emergency room for every ailment and illness their children contract. It supports the notion that parents will do an information search, and try everything possible first, before a visit to a doctor or emergency room is deemed necessary.

Factor 4, which is labelled ‘Against homeopathy’, was concerned with the degree to which the respondents’ opinion is against homeopathy. This factor was comprised of 2 items that explained 5.268% of the total variance. The mean value is 1.915 which indicates that parents on average tended to “disagree and strongly disagree” that homeopathy should be avoided. As

mentioned in Section 6.3, this is encouraging to the homeopathic industry, as this provides an opportunity to change the perception parents have of homeopathy.

6.4.3 Cluster analysis

In order to determine whether the four identified factor variables will result in a distinct grouping of the respondents, it was decided to perform a cluster analysis. Cluster analysis involves a mathematical method of grouping data based on their inherent similarity or dissimilarity between each other. Malhotra (2004, p. 586) notes that clusters must be relatively homogenous. K-means clustering was used, which requires the number of clusters to be specified in advance. Two clusters were chosen for this study. The K means-algorithm assigns each point to the cluster whose centre (also called centroid) is nearest. The centre is the average of all the points in the cluster - that is, its coordinates are the arithmetical mean for each dimension separately over all the points in the cluster. The main advantages of this algorithm are its simplicity and speed which allows it to run on large datasets. Its disadvantages are that it minimises intra-cluster variance, but does not ensure that the result has a global minimum of variance and the implementation of the procedure in SPSS is restricted to measuring distances between samples, using Euclidean distance.

The output is shown in Table 6.13 and Table 6.14. The four variables prefhom, prefnat, prefdoc and nohompref refer to Factors 1 to 4 previously identified in the factor analysis.

Table 6.13: Final Cluster Centres

	Cluster	
	1	2
prefhom	3.70	1.99
prefnat	5.06	3.93
prefdoc	2.83	3.23
nohompref	1.38	2.49

Table 6.14: Number of Cases in each Cluster

Cluster	1	311.000
	2	289.000
	Valid	600.000
	Missing	46.000

The individuals in Cluster 1, as a result of the cluster centre pattern, can be described as those who have a tendency towards " Prefer homeopathy and natural remedies" while those in group 2 are those that tend more towards conventional medicine. It is interesting to note that the proportion of individuals in each cluster was almost equal, with a slightly higher proportion in the "Prefer homeopathy and natural remedies" group.

In the next section, cross-tabulations were carried out to determine if age, LSM groups and the number of children in the household are associated with the cluster groups. The results of cross-tabulations between the two identified clusters and various respondent demographics, which included age groups (seen in Table 6.15), LSM groups (Table 6.16) and the number of children in the household (Table 6.17) are tabled and discussed.

Table 6.15: Cluster Number of Case * Age group Cross-tabulation

Count

		Age groups				
		17-20	21-25	26-30	31-35	36-40
Cluster Number of Case	1	1	5	52	104	83
	2	0	13	55	118	85
	Total	1	18	107	222	168

Table 6.15: Cluster Number of Case * Age group Cross-tabulation (continued)

Count

		Age groups				
		41-46	47-50	51-59	60-64	Total
Cluster Number of Case	1	33	4	4	1	287
	2	33	4	2	0	310
	Total	66	8	6	1	597

Table 6.16: Cluster Number of Case * LSM Cross-tabulation

Count

		LSM				
			10 LOW	10 HIGH	10 LOW	6
Cluster Number of Case	1	4	1	164	47	5
	2	14	0	173	51	1
	Total	18	1	337	98	6

Table 6.16: Cluster Number of Case * LSM Cross-tabulation (continued)

Count

		LSM				
		7 HIGH	7 LOW	8 HIGH	8 LOW	9 HIGH
Cluster Number of Case	1	4	2	8	9	30
	2	8	2	6	4	32
	Total	12	4	14	13	62

Table 6.16: Cluster Number of Case * LSM Cross-tabulation (continued)

Count

		LSM	
		9 LOW	Total
Cluster Number of Case	1	15	289
	2	20	311
	Total	35	600

Table 6.17: Cluster Number of Case * Number of children in the household Cross-tabulation

Count

		Number of children in the household					
		1	2	3	4	5	Total
Cluster Number of Case	1	106	134	41	6	1	288
	2	107	160	34	7	1	309
	Total	213	294	75	13	2	597

As can be seen from the various cross-tabulations above, and the Chi-square (χ^2) results below in Table 6.18 and Table 6.20 respectively, there is no significant statistical relationship between the clusters and the demographic variables (age groups, and number of children in the household). The Chi-square test was not valid for the LSM groups (27% of cells have an expected count of less than 5). Rather than grouping the LSM categories into a smaller number of categories, three measures of association between the two variables were calculated. None of these values were statistically significant ($p>0.05$), thus indicating that there is no statistically significant relationship. This implies that the demographic variables mentioned above of households within the Pretoria East region do not impact membership of cluster one (who prefer natural remedies and homeopathy) or cluster two (who prefer conventional medicine) and this indicates that these variables are not necessarily reliable as segmentation variables in this geographical area.

Table 6.18: Chi-square results for clusters and respondent age groups

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.299[a]	4	.509
N of Valid Cases	581		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.58.

Table 6.19: Measures of Association

Measures of Association

		Value	Approx. Sig.
Nominal by Nominal	Phi	.148	.215
	Cramer's V	.148	.215
	Contingency Coefficient	.146	.215
N of Valid Cases		600	

Table 6.20: Chi-square results for clusters and number of children in the household

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.298[a]	4	.681
N of Valid Cases	597		

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is .96.

6.4.4 Exploratory perceptual maps: Multidimensional scaling

Following the cluster analysis, multidimensional scaling (MDS) was used to construct perceptual maps for each age group to explore the preferences and influence variables' patterns across the age group. This can potentially inform positioning variables for marketers of OTC homeopathic remedies.

MDS attempts to find the structure in a set of distance measures between objects or cases. This task is accomplished by assigning observations to specific locations in a conceptual space (usually two- or three-dimensional) such that the distances between points in the space match the given dissimilarities as closely as possible. For the purposes of this study, spatial maps were used. Malhotra (2004, p. 612) identifies a spatial map as perceived relationships among brands or other stimuli as represented as geometric relationships among points in a multidimensional space. In many cases, the dimensions of this conceptual space can be interpreted and used to further understand the data. Within marketing management, MDS is generally seen in the form of positioning of current and ideal brands. However, the questions used in the questionnaire of the study did not address preferences between brands.

In order to create perceptual maps on the perception of respondents, it was decided to use a derived approach to obtain perception data. Malhotra (2004, p.613) identifies a derived approach as an attribute-based approach to collecting perception data, requiring respondents to rate the stimuli on the identified attributes using semantic differential or Likert scales. For each age group, the four dimension variables taken into consideration included:

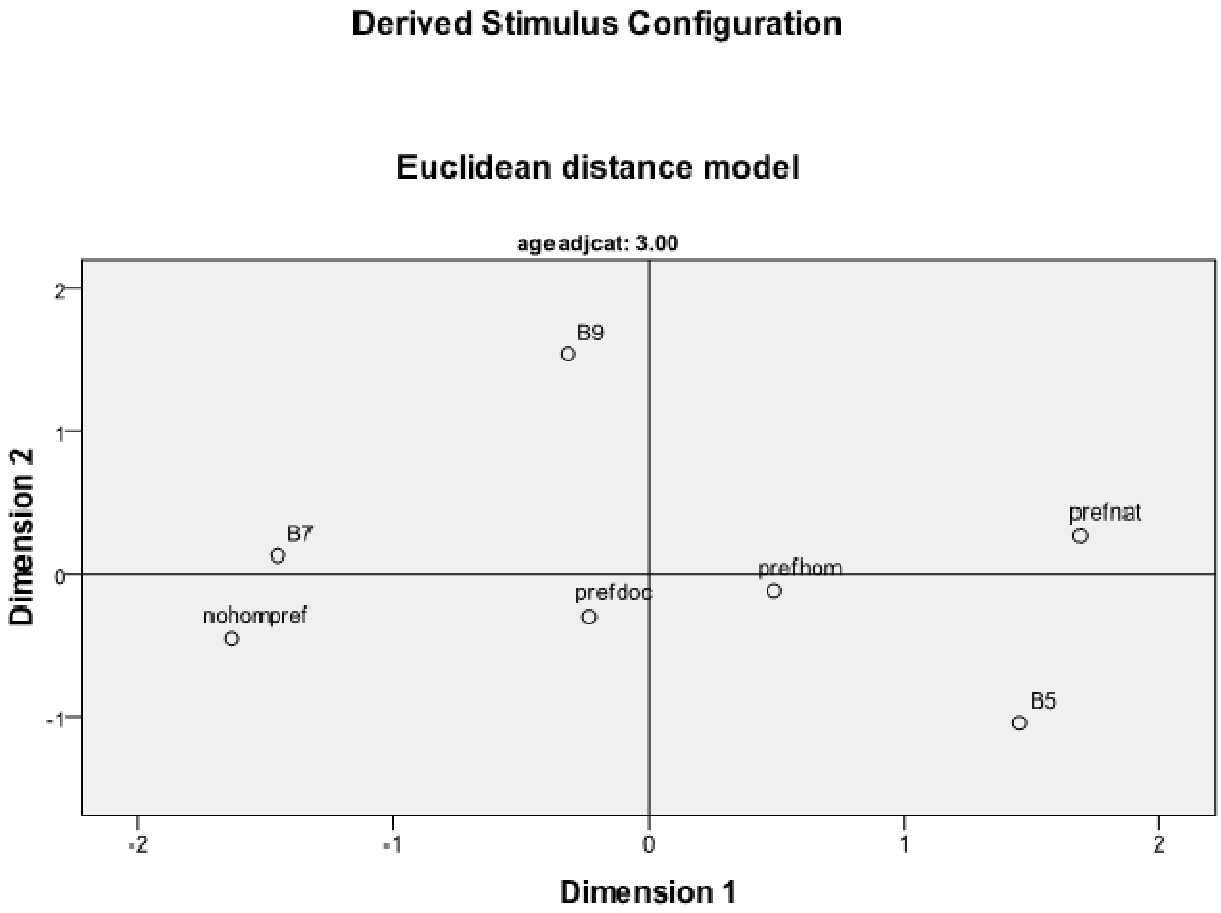
- Homeopathy preference (prefhom)
- Natural remedy preference (prefnat)
- Prefer professional help (Doctor) (prefdoc)
- Against homeopathy(nohompref)

The three influencer variables taken into consideration included the following:

- A friend or colleague suggested homeopathic remedies (B5)
- An advertisement led respondents to try homeopathic remedies (B7)
- Respondents grew up with homeopathic remedies and continue to use them (B9)

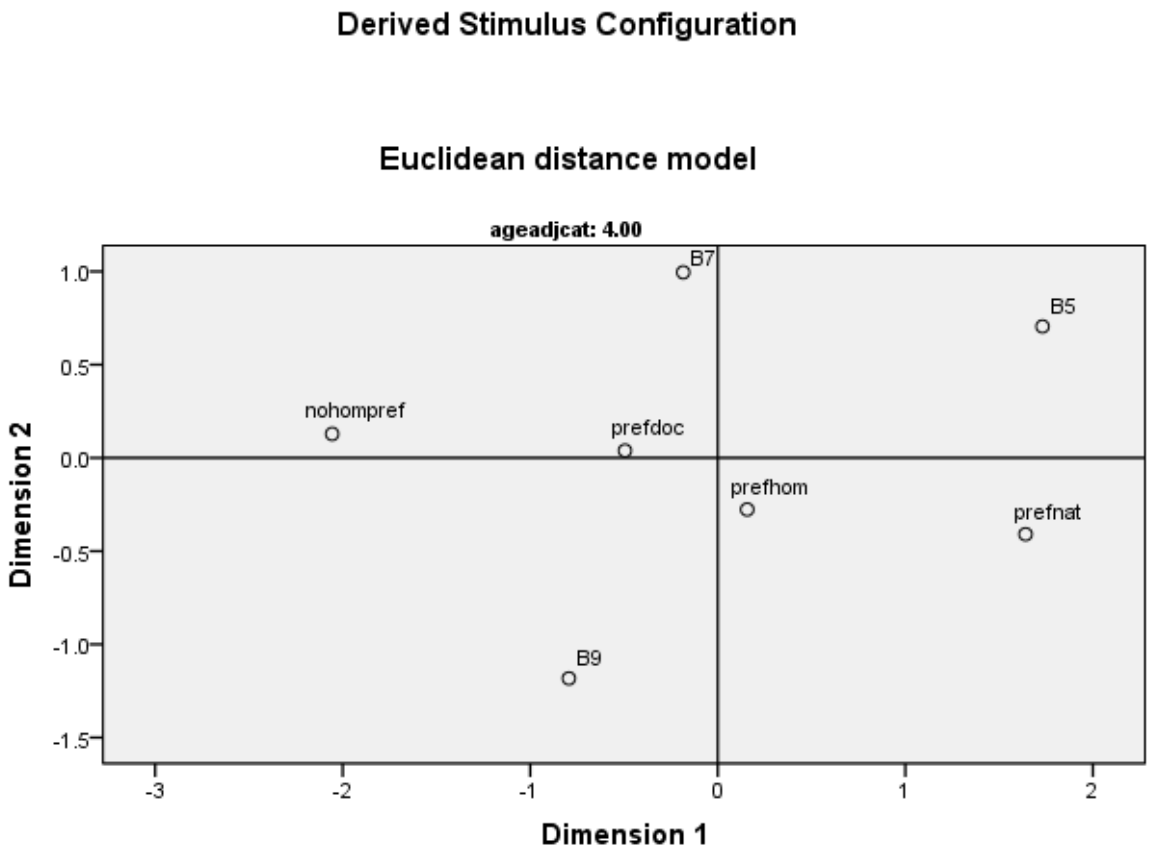
Across all age groups Dimension 2 (also known as the y-axis) looks at the level of influence, strong on the one side in comparison to weak on the other, related to the use of homeopathic remedies. Dimension 1 (also known as the x-axis) looks at preference towards conventional medicine on the one side compared to preference towards homeopathy and natural remedies on the other, across all age groups. The preference variable on the conceptual maps remains relatively similar among all age groups, with the influencing dimension which varies in intensity and position. In the figures to follow, the perceptual maps for each age group and the B5, B7 and B9 influencers will be discussed.

Figure 6.24: Perceptual map for age group 21-25 and influencers B5, B7 and B9



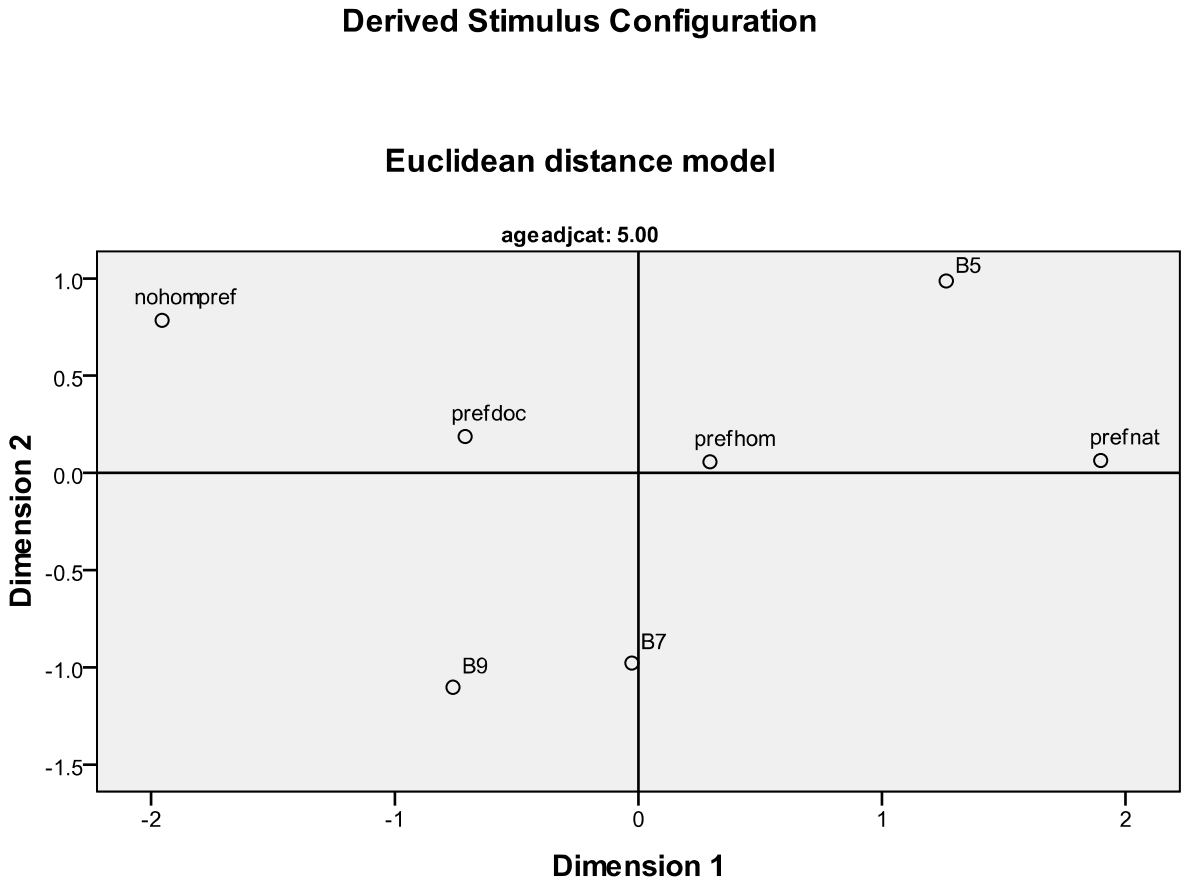
As seen above in Figure 6.24, for the age group 21-25 year old respondents, the use of reference groups or opinion leaders (B5) is a strong influencing variable for the use of homeopathic remedies. The perceptual map indicates that the fact that most respondents did not grow up with homeopathic remedies did not necessarily influence their decision to prefer homeopathy to conventional medicine. B7 which refers to the exposure to an advertisement that has led a respondent to use homeopathic remedies is also not a very strong influencer for respondents to use homeopathic remedies. The results for this MDS perceptual map need to be used with caution, as the number of respondents were relatively low and n=14 for this age group.

Figure 6.25: Perceptual map for age group 26-30 and influencers B5, B7 and B9



The number of respondents for the perceptual map in Figure 6.25 were n=66. As mentioned before, the preference dimension, namely Dimension 1, has remained relatively constant among all the various age groups. Looking at the influencing dimensions, reference groups are a strong influence on this age group, as seen in the position of B5, for those respondents who use homeopathic remedies. This age group, 26-30 year old respondents, forms part of Generation y which, together with Generation X, forms part of the connected generation. For the combined generation, reference groups are of extreme importance, as discussed in Section 2.3.1, and this is supported in further findings discussed in this chapter. B7 refers to the role of advertising that leads a respondent to use homeopathic remedies. As seen in Figure 6.25, B7 does not have a very strong position, but is something homeopathic producers should consider. As mentioned previously in Section 2.3.1, the combined generation require creative and interactive means of communication. Traditional means of advertising might not be very effective for this age group. The position of B9, referring to respondents growing up with homeopathic remedies as an influencer for their use of homeopathic remedies, shows that for the younger age group the perceptual map indicates that the fact that most respondents did not grow up with homeopathic remedies did not necessarily influence their decision to prefer homeopathy to conventional medicine.

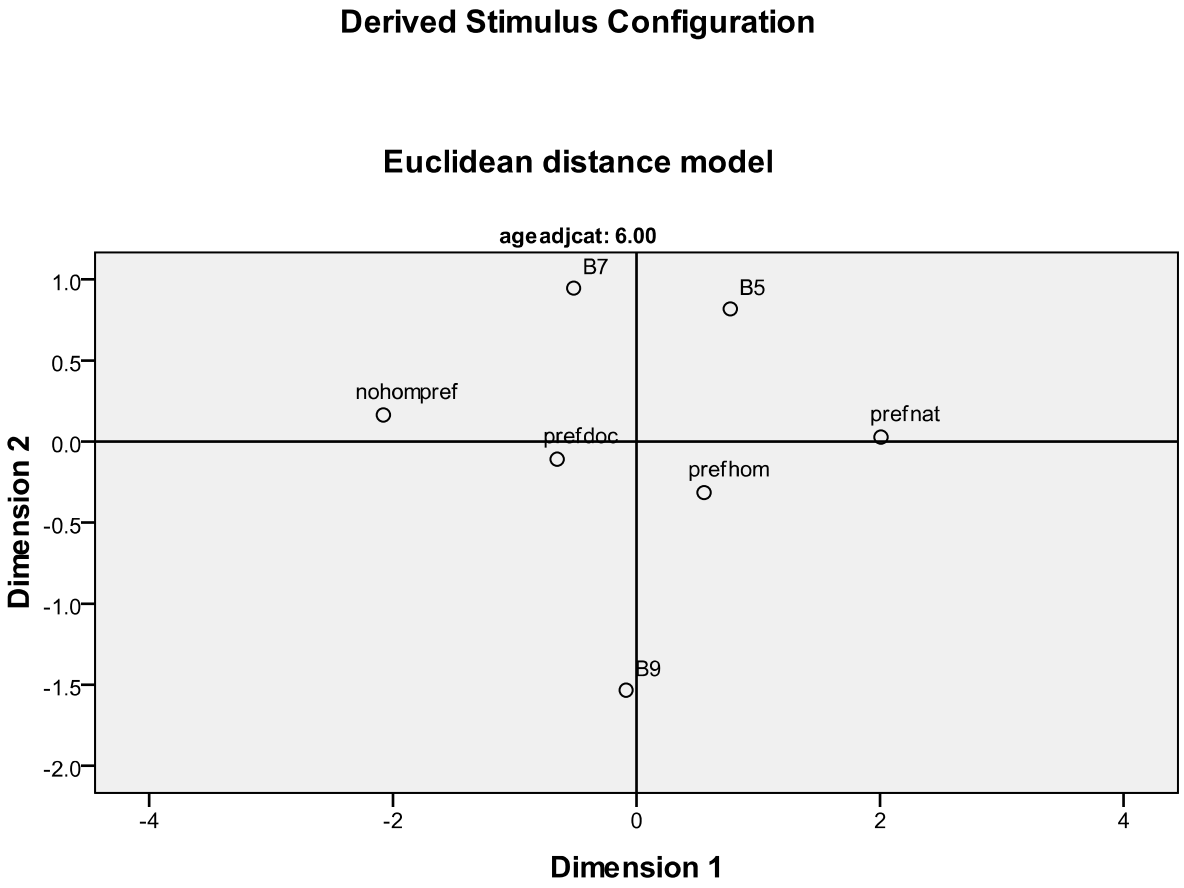
Figure 6.26: Perceptual map for age group 31-35 and influencers B5, B7 and B9



The number of respondents for the perceptual map in Figure 6.26 were n=122, the largest group. As mentioned before, the preference dimension, namely Dimension 1, has remained relatively constant among all the various age groups. The position of “nohompref” on the map indicates that the level of disagreement expressed in the value of “nohompref” could have been influenced by B5 (recommendation by friend). Looking at the influencing dimensions, reference groups are a strong influence on this age group, as seen in the position of B5, for those respondents who use homeopathic remedies. This age group, 31-35 year old respondents, forms part of the connected generation. For the connected generation, reference groups are of extreme importance, as discussed in Section 2.3.1, and this is supported in further findings discussed in this chapter. B7 refers to the role of advertising that leads a respondent to use

homeopathic remedies. As seen in Figure 6.26, B7 does not have a very strong position, as the proportion of respondents that agreed/disagreed was almost equal. This is something homeopathic producers should consider. As mentioned previously in Section 2.3.1, the connected generation requires creative and interactive means of communication. Traditional means of advertising might not be very effective for this age group. The position of B9 refers to respondents growing up with homeopathic remedies as an influencer for their use of homeopathic remedies. For this age group, the perceptual map indicates that the fact that most respondents did not grow up with homeopathy did not significantly impact their decision to make use of doctors' services, rather than homeopathy and natural remedies.

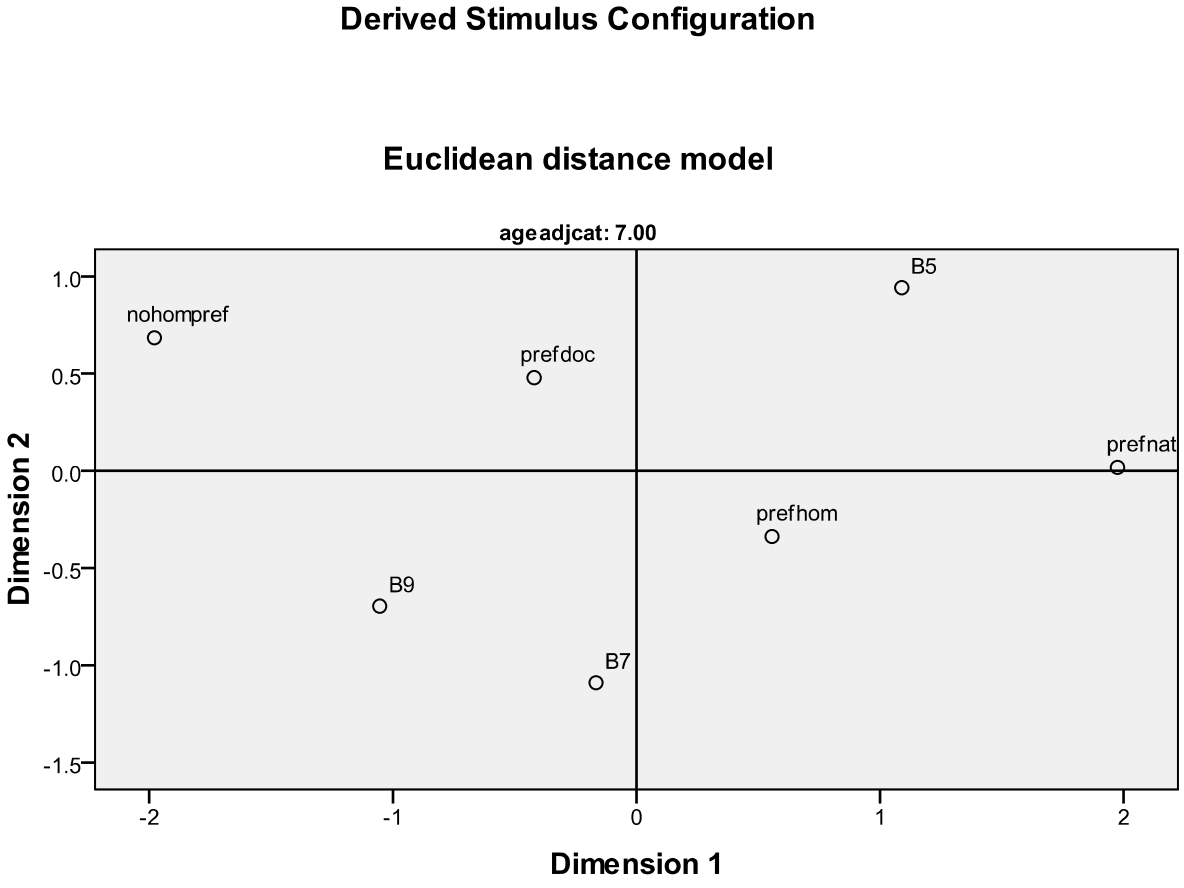
Figure 6.27: Perceptual map for age group 36-40 and influencers B5, B7 and B9



The number of respondents for the perceptual map in Figure 6.27 were n=91. As mentioned before, the preference dimension, namely Dimension 1, has remained relatively constant among all the various age groups. Looking at the influencing dimensions, reference groups are a strong influence on this age group, as seen in the position of B5, for those respondents who use homeopathic remedies. This age group, 36-40 year old respondents, forms part of Generation X, which, together with Generation Y, forms part of the connected generation. For the connected generation, reference groups are of extreme importance, as discussed in Section 2.3.1, and this is supported in further findings discussed in this chapter. B7 refers to the role of advertising that leads a respondent to use homeopathic remedies. As seen in Figure 6.27, B7 does not have a very strong position in the sense that the majority of respondents disagree, but is something homeopathic producers should consider. As mentioned previously in Section 2.3.1,

the combined generation require creative and interactive means of communication. Traditional means of advertising might not be very effective for this age group. The position of B9, referring to respondents growing up with homeopathic remedies as an influencer for their use of homeopathic remedies, indicates that the distribution of respondents is almost equal between those that grew up and did not grow up with homeopathic remedies and this did not necessarily influence their decision to prefer homeopathy to conventional medicine.

Figure 6.28: Perceptual map for age group 41-46 and influencers B5, B7 and B9



The number of respondents for the perceptual map in Figure 6.28 were n=27. As mentioned before, the preference dimension, namely Dimension 1, has remained relatively constant among all the various age groups. The position of “nohompref” and “prefdoc” on the map indicates that the strong level of disagreement expressed in the value of “nohompref” and the tendency

towards disagreement of the value of “prefdoc” could have been influenced by B5 (recommendation by friend). Looking at the influencing dimensions, reference groups are a strong influence on this age group, as seen in the position of B5, for those respondents who use homeopathic remedies. This age group, 41-46 year old respondents, forms part of the connected generation. For the connected generation, reference groups are of extreme importance as discussed in Section 2.3.1, and this is supported by further findings discussed in this chapter. B7 refers to the role of advertising that leads a respondent to use homeopathic remedies. As seen in Figure 6.28, B7 does not have a very strong position. As mentioned previously in Section 2.3.1, the combined generation requires creative and interactive means of communication. Traditional means of advertising might not be very effective for this age group. The position of B9, referring to respondents growing up with homeopathic remedies as an influencer for their use of homeopathic remedies. For this age group, the perceptual map indicates that the fact that most respondents did not grow up with homeopathy did not significantly impact their decision to make use of doctors’ services, rather than homeopathy and natural remedies.

6.5 SUMMARY

In this chapter the data analysis and findings of this study were discussed. These findings were discussed in order to achieve the objectives of the study, the primary objective being to determine a profile of parents with children in ECD centres using OTC homeopathic remedies specific to the Pretoria East region. As was concluded before, a possible profile of parents with children in ECD centres using OTC homeopathic remedies are mostly mothers from the white ethnic group, with one or two children and with the majority of children being between 1-6 years of age. These mothers are aged between 17-46 years, also known as the connected generation (referred to as the combined Generation X and Generation Y). They are well educated beyond secondary schooling to tertiary level, with an average household income of more than R22001.00 per month. They belong mostly to LSM 10 High and 10 Low, belong to a medical aid scheme and are working in the accounting or financial industry, administration, education, management, medical industry or are stay at home moms. The OTC homeopathic brands most commonly found in the medicine cabinets of these households include Natura, Sister Lilian Remedies and Homeoforce. OTC homeopathic remedies are purchased mostly from

pharmacies, followed by food retailers and health shops. These remedies are used to treat mostly children and adults with the following ailments; colds and flu, digestive ailments, emotional ailments, minor injuries and throat ailments.

The secondary objectives for this study were also reached. Respondents had certain perceptions and attitudes towards OTC homeopathic remedies, such as that it is viewed as a cheaper option than conventional medicine. Respondents are actively making decisions towards natural health solutions to everyday ailments, with fewer side effects. The influence of friends and colleagues is also paramount to the decision-making of respondents. It was gathered that respondents use OTC homeopathic remedies in a complementary rather than alternative means. Respondents have also indicated that conventional medicine and homeopathy together with other natural medicines should be integrated into South African medicine. Worrying matters linked to respondents' opinions regarding medical aids have been highlighted and respondents' trigger points as to when they deem it necessary to see a physician were discussed.

Positioning of homeopathy in the mind of parents with children in ECD centres in the Pretoria East region was another secondary objective obtained. Positioning was discussed by means of spider graphs, exploratory factor analysis, cluster analysis and multidimensional scaling. The positioning details highlighted the major findings of the study, but did highlight specific outcomes relevant to age groups and most used brands

In the next chapter, conclusions and recommendations to the study will be discussed.

CHAPTER 7: RECOMMENDATIONS AND CONCLUSIONS

7.1 INTRODUCTION

It is always encouraging to notice important links to the literature of the study in the findings of primary research undertaken. It is also true for this particular study. In this section, some of the confirmations and affirmations of the literature occurring in the findings of this study will be discussed, as well as possible recommendations for future research on the homeopathic industry. Limitations to the study will be discussed and a final conclusion will be provided.

7.2 CONFIRMATIONS, CONCLUSIONS AND RECOMMENDATIONS

The main conclusions and recommendations are discussed under the sub-headings as shown below:

7.2.1 Mothers as users of OTC homeopathic remedies

As has been mentioned in the literature specific to Chapter 2, mothers are mostly responsible for the health decisions within the family. It was also the case for this study, referring to the data analysis. Mothers were also responsible for the purchasing and administering of medication in the household. As can be seen from the findings of this study, a large number of women who are mothers, using OTC homeopathic remedies in their households, are employed in various sectors. *Noticing that a large proportion of mothers in this study are in employment, the homeopathic industry needs to take the needs of working mothers into consideration, when marketing to this specific market segment. Issues such as convenience and time are of particular importance to working mothers*.

Homeopathic remedies need to be administered on quite regular intervals, especially in acute cases, which could lead mothers to believe that the administration of these remedies are not beneficial to them from a lifestyle point of view. This is something the homeopathic industry needs to address. *Manufacturers could focus on other positive aspects of the properties of the remedies, such as that there are few or no side-effects when using OTC homeopathic remedies or that it is a natural solution to everyday ailments and health issues. Another aspect to consider*

is that the use of antibiotics could possibly be decreased, should mothers use homeopathic remedies, or that OTC homeopathic remedies support the body's natural processes instead of inhibiting them.

7.2.2 The extent of use of OTC homeopathic remedies

The findings of this study were similar to that found in the ALSPAC longitudinal study carried out in the UK, as can be seen in Chapter 3, specifically paragraph 3.7. Results regarding the use of homeopathic remedies for particular ailments, as well as the motivation behind using these remedies, were similar. *This indicates that parents from different parts of the world have similar concerns and are adjusting their decision-making with regard to their children's health in a similar way. The South African homeopathic industry needs to be aware of this, as an important international trend applicable to their South African market.*

From the findings of this study it was seen that parents used OTC homeopathic remedies for similar complaints as elsewhere in the world, as confirmed in the literature. There are several ailments for which OTC homeopathic remedies are not used as often, either because these illnesses do not occur often among children in this study, or merely because parents deem these ailments and illnesses serious enough to require conventional medical intervention. *It is recommended that the homeopathic industry look at those ailments for which OTC homeopathic remedies are not commonly used within this market segment, to ensure that the use of OTC homeopathic remedies becomes entrenched as a possible first port of call for everyday ailments or at least becomes supporting or complementary to conventional medicine for these ailments. These common illnesses and ailments, for which the industry could encourage use, include:*

- *Bladder ailments*
- *Coughs and croup*
- *Ear ailments*
- *Eye ailments*
- *Fever*
- *More serious injuries*
- *Skin ailments*
- *Thrush and fungal infections*
- *Vertigo, fatigue, hangover, jet lag and exhaustion*

7.2.3 Profile-specific recommendations and conclusions

Looking at further demographics on the findings of this study, it was seen that a majority of users of OTC homeopathic remedies were from LSM group 10. As the study was carried out in the Pretoria East area, it confirms the known facts that this area forms part of the more affluent side not only of the city of Tshwane, but also of South Africa as well, as was discussed in Chapter 2 of this study. This corresponds with the literature confirmed in previous studies, which noted the use and awareness of homeopathy to be higher amongst LSM groups 7-10, with the highest awareness and use occurring among LSM groups 9 and 10. *The homeopathic industry needs to be aware of the purchasing decisions and preferences, as well as the preferred media usage of the higher LSM groups. These details should be closely linked to possible generation-specific information and media usage.*

As has been seen from the findings and literature, segmenting a market by means of generation could be of great value to marketers. As was mentioned before, grouping generational segmentation with other demographic information would give a marketer a very good idea of not only the demographic details of a particular market segment, but also what makes that particular segment unique. Generation X and Generation Y are actively making decisions regarding their responsibilities towards their family, which includes the health of their children, as has been discussed in Chapter 2. It is also encouraging to note that for the connected generation (Generation X and Generation Y combined), the majority of respondents, specifically those who use OTC homeopathic remedies, had an education level beyond secondary schooling. This corresponds with the literature available and discussed in the earlier parts of this study, specific to Chapter 2. *It is a recommendation that the homeopathic industry take cognisance of the education level of the OTC remedy users, bearing in mind the fact that the media these market segments are exposed to are not necessarily those which the industry has used throughout history to market their products.*

As has been seen in the literature, information and the sharing of information is of extreme importance to the connected generation. As can be seen from the findings of this study, the connected generation of mothers using OTC homeopathic remedies in the Pretoria East area value the recommendation of friends and colleagues. It clearly corresponds with the moving away from push advertising, where the producers and marketers of products push their products onto the consumer. Instead, consumers are networking and learning from one another in order

to assimilate information which they find relevant and useful. This was clearly seen in the literature, as the decision-drivers specific to the connected generation. This is far more appealing to this market segment than the traditional use of well-known opinion leaders and reference groups. *A recommendation for homeopathic manufacturers and marketers is to make use of more information technology in their marketing campaigns. As far as possible, there should be a marriage between the use of technology and the personal sharing of OTC homeopathic experiences by consumers. Suggestions would be to use more social networks for parents using OTC homeopathic remedies, perhaps sharing them on social platforms such as Facebook and possibly to blog about their experiences. It would be of great use to OTC homeopathic producers to turn users into brand ambassadors, using technology to share their experiences.*

As has been mentioned above, the homeopathic industry needs to take the marketing media used in campaigns to a different level, taking the education level as well as generation of the market segment into consideration. *The homeopathic industry needs to become innovative and creative in the use of media, using actual experiences of users as key to marketing campaigns. It is important to note that celebrity endorsements will not necessarily be of beneficial use for this market segment.* As can be seen from the findings, parents using OTC homeopathic remedies did not start to use these remedies as a result of celebrities using or endorsing them. It is also important to note that the connected generation does not approve of anything artificial and much rather prefers an open and transparent relationship with a company than celebrity endorsements conveyed by means of advertising and media presence.

7.2.4 Respondent opinion on doctors, natural medicine and conventional medicine

The findings of this study suggest that parents trust their doctors with the health of their families, but parents are also searching for a more natural way of life which includes their family's health. Parents are asking their physicians for natural alternatives to prescribed medication. Physicians are not receiving any training in this regard and are thus at a loss when questions like these arise. As can be seen from the findings of the study, respondents felt strongly that doctors need more training in natural remedies and homeopathy and that natural remedies are the way of the future. Respondents felt very strongly towards an integrative approach between conventional medicine and natural remedies. *This is of extreme importance to the training of doctors in South Africa and includes a recommendation to the Ministry of Health to adapt the curriculum of*

medical practitioners in training to include training in natural remedies and natural medicine. A further recommendation is for a better working relationship between homeopaths and medical doctors, for the overall benefit of the health of families.

Parents do not seem to consult a doctor for all possible ailments and illnesses their children might contract, as is seen in the findings. Parents will treat a mild fever before considering medical intervention. Medical intervention seems to be required when a fever has reached higher than 38.5°C, when parents need to deal with something strange that they have not dealt with before and when they have done everything they know of or have read up on. As has been discussed before, the connected generation will take the time to search for information regarding the illnesses and ailments their children contract. *More information to parents on the possible remedies for the ailments and illnesses of children must be made available to parents by the homeopathic industry.* As mentioned before, having a clear understanding of the media this market segment prefers to obtain information from might be of great assistance in promoting the use of OTC homeopathic remedies at the time when initial concern and symptoms in a child become apparent.

All respondents to the study had a tendency to disagree that they only use prescribed medication. As mentioned before, this indicates that parents use other medicines, including OTC conventional medication, natural medication, OTC homeopathic remedies, traditional home remedies and the like. Another encouraging finding is that all respondents to the study had a tendency to agree with the statement regarding their belief in using natural remedies for their family. Should more information regarding OTC homeopathic remedies be made available, as well as publicly available scientific research to support claims made about the remedies, together with recommendation of friends and colleagues, there might be more interest in trying OTC homeopathic remedies for common ailments and illnesses.

Parents using OTC homeopathic remedies in the Pretoria East area did not feel that a decrease in efficacy of conventional medicine is a reason for using OTC homeopathic remedies. Looking at the responses from all respondents (users and non-users of OTC homeopathic remedies), they tend to agree that conventional medicine is still effective. Parents also tend to agree that prescribed medication works every time. However, all respondents to the study had a tendency to agree that they sometimes had to return to a doctor after a first course of prescribed

medication did not work. This indicates a possible anomaly. As mentioned in the findings, parents still trust their physicians to provide them with correct diagnosis and effective prescription medication, although finding the best fit of medication to diagnosis might not occur at the first consultation with a doctor. Even though it might have become commonplace for parents to visit physicians more than once for similar, if not the same, complaints, it is a growing concern on various levels. These levels of concern vary between the cost of not only the number of doctors' consultations, but also the prescribed medication. This is concerning for medical aids and consumers alike. Medical Aid Schemes seem to tighten the belt every year on day-to-day medical expenditure, which includes doctors' visits and prescribed non-chronic medication, forcing consumers (and in this case) parents with children in ECD centres, to pay for more and more medical services out of pocket. This is confirmed in the findings of this study. The second and perhaps more of a global medical concern is the fact that antibiotic resistance is on the rise. When the prescribed medication which does not work initially is an antibiotic, parents and doctors alike are contributing to the increase in resistant bacteria, as is discussed in detail in Chapter 3 of this study. *Even though parents had a tendency to agree that they trust their own judgement regarding the health of their families, the question is asked whether parents are aware of antibiotic resistance and the role they play in promoting it. This is a strong recommendation for future research to determine parental awareness on antibiotic resistance and the role parents play in promoting it. A further recommendation is for the Alliance for the Prudent Use of Antibiotics and the South African homeopathic industry to jointly disseminate information regarding antibiotic resistance and how homeopathy could be of importance in treating the common illnesses and ailments that families contract.*

7.2.5 Medical aid and OTC homeopathic remedies

The findings suggest that the majority of parents using OTC homeopathic remedies earn a combined average household income between R22001.00 to more than R50000.00 per month and that respondents are well educated. As mentioned in the literature, there is a strong link between education level and higher income levels, as discussed in Section 2.1.1 of this study. It was also found that the majority of parents using OTC homeopathic remedies belonged to a medical aid. Respondents have expressed their opinion regarding their medical aid coverage and membership fees. An almost equal number of parents using OTC homeopathic remedies agreed and disagreed that use of homeopathic remedies was a result of perceived decreased medical aid coverage. All respondents to the study have, however, felt strongly that medical aid

coverage was not sufficient, that medical aid membership fees are becoming less affordable and that they need to pay more and more out of their own pockets for medical services. As the literature suggests, there are a number of reasons for medical aids to increase their fees annually and cover fewer and fewer medical expenses. *However, looking at medical aid membership and the number of parents using OTC homeopathic remedies, it is a suggestion to the various medical aid schemes to consider paying for OTC homeopathic remedies. As the literature and findings suggests, homeopathy is a cheaper option in several aspects, including the actual price of the various remedies in comparison to that of conventional medicine, but also that repeat treatments of the same illness or ailment are less, owing to the effectiveness of homeopathic remedies.*

7.2.6 OTC homeopathic purchasing and brands

As has been seen in the findings, the most OTC homeopathic remedies are bought from pharmacies rather than any other retailer. This is similar to findings of the Health Products Association of South Africa and the purchases of CAM at large, as discussed in the literature. As has been suggested, the reason for purchases to be made most frequently at pharmacies could be due to the need for information from a pharmacist in order to make the right choice regarding OTC homeopathic remedies, as has also been seen in the literature. As mentioned before, this poses a conundrum for pharmacists not trained in OTC homeopathic remedies to make suggestions to parents. *Getting involved in additional training of pharmacists in OTC homeopathic remedies is an important recommendation to the homeopathic industry.*

As can be seen from the findings of the study, purchasing at a pharmacy is by far the method that occurred the most, possibly indicating that parents still want to have face-to-face interaction with a trained professional regarding OTC homeopathic remedies. Ironically, the distribution method which was selected second to that of a pharmacy was a food retailer, followed by a health shop. The convenience of a food retailer seems to indicate that parents purchasing OTC homeopathic remedies are comfortable with the amount of information available on the remedies they intend to purchase and are able to make their decisions with very little or no sales interaction. Another possible reason could be that repeat purchases of OTC homeopathic remedies occur at food retailers, indicating that OTC remedies could be seen as a convenience product. This could also be an area for further research. Health shops are more specialised retailers, with other natural and homeopathic remedies for sale. This could also be indicative of

parents searching for information from a face-to-face encounter than from a food retailer. The low frequency regarding online retail for OTC homeopathic remedies indicates that, even though parents are using technology to search for and share information, they still require the interaction of a trained professional, or at least the option to discuss their concerns of OTC homeopathic remedies, at the actual point of purchase.

Another important aspect to take into consideration regarding the distribution of OTC homeopathic remedies is that the price of these remedies is a consideration for parents. Pharmacies, such as Dis-Chem have not only increased the availability of OTC homeopathic remedies, but also the vast range of competing brands available to consumers. The price of OTC homeopathic remedies at both pharmacies such as Dis-Chem and food retailers such as Pick 'n Pay or Checkers, could be of significant importance to parents, as they have agreed with the statement that more and more medicine costs need to be paid out of pocket than are covered by medical aids. Parents have also agreed with the statement that OTC homeopathic remedies are cheaper than conventional medicine. *As previously discussed, Medical Aid Schemes cover less and require increased membership fees, so parents need to pay for more medicine out of pocket. Parents view homeopathy as cheaper than conventional medicine, and their OTC homeopathic remedy purchasing habits mirror this. It is a strong recommendation for the homeopathic industry to communicate the benefit of paying less for homeopathic remedies than conventional medicine in their marketing communications.*

As has been seen in Chapter 4 Section 4.6, homeopaths prefer to recommend Natura and Heel to their patients as over the counter options. The findings of the study also indicate that Natura is the brand found most frequently in the medicine cabinets of parents using OTC homeopathic remedies. Sister Lilian Remedies and Herbaforce have been seen as second to Natura. Natura is clearly seen as a market leader in the field of OTC homeopathic remedies. As was mentioned in the findings of the study, it is encouraging to see the market taking note of the newcomer to the industry - namely, Sister Lilian Remedies. The use of technology in the marketing campaign of Sister Lilian Remedies could be indicative of the awareness created within this market segment for the remedies available within this brand. *The homeopathic industry, specifically the well-established brands such as Natura, need to be aware of the newcomers to the market that have become successful in a relatively short period of time. It is important to analyse the market and adapt the marketing strategy accordingly on a continuous basis.*

7.2.7 Possible new markets for OTC homeopathy

Possible future markets the homeopathic industry could consider are those of pet owners and the elderly. As was mentioned in the findings of this study, the majority of parents using OTC homeopathic remedies administer these remedies to adults and children. The elderly represented the fewest users, which could be indicative of the elderly not being part of the core family living in the same household as the adults and children. Some elderly family members live in old age homes, frail care centres, retirement villages or their own properties in other areas. *The development of new markets should not be overlooked by the homeopathic industry. Possible niche markets such as the elderly could exist and should be explored.*

Pet owners are possibly not aware that homeopathic remedies can be used on their pets. Another permutation could be that pet owners are clearly advised by veterinarians not to administer conventional medication developed for human ailments and conditions to their pets, as the dosages and contents are not applicable to pets and could possibly do more harm than good. Pet owners might have taken heed of these warnings and avoid using even homeopathic remedies on their pets. *The homeopathic industry could look into developing a pet product range after consultation with veterinarians, to determine whether there is a definite need for homeopathic pet remedies.*

7.2.8 Perceptions and recommendations on OTC homeopathy

All the respondents to the study had an opportunity to provide details regarding their level of agreement specific to homeopathy and OTC homeopathic remedies. As discussed in the findings of this study, parents using OTC homeopathic remedies tend to use remedies in a complementary fashion rather than alternative to conventional medicine. This corresponds with the literature provided in Chapter 4 Section 4.5 of this study. It is encouraging to note that an almost equal number of respondents agreed and disagreed that conventional medicine is better than homeopathy. Respondents have also tended to disagree with the notion that homeopathy has no place in medicine and that homeopathy is dangerous and should be avoided at all costs. *Again, the recommendation is made to the homeopathic industry to reinforce a more positive perception with potential and current consumers (specifically parents with children in ECD centres), by means of the sharing of information. This is a strong opportunity for the homeopathic industry of which it should make good use..*

All respondents to the study tended to agree that they require scientific proof that medicine works before they are willing to try it. It is also encouraging to note that parents are willing to consult secondary information sources, such as the Internet and books, to search for details regarding their children's ailments and illnesses. *A recommendation to the homeopathic industry is to encourage scientific research and support it by every means possible. As was mentioned in the literature, homeopathic scientific research should encompass the unique nature of homeopathy and not insist that homeopathic research fit the mould as set by conventional medicine research. A further recommendation to medical journals is to publish and encourage more research on homeopathic studies. Financial support to make homeopathic research possible is a recommendation to the Ministry of Health.*

7.2.9 Positioning of homeopathy in the minds of parents with children in ECD centres in the Pretoria East region

For the purposes of this study, positioning was not carried out specific to the various homeopathic brands in relation to one another, but rather based on respondent opinion on homeopathy in relation to the most frequently used homeopathic brands. The results discussed in the positioning section mirrored those of the major findings of the study. Respondents using Herbaforce, Natura and Sister Lilian Remedies did not necessarily feel that homeopathy was a cheaper option to conventional medicine and did not feel that conventional medicine has decreased efficiency. There is a strong preference towards natural health solutions to everyday ailments and the importance of reference groups in their decision-making, as well as the trust placed in their own judgement regarding family health. The results of the multidimensional scaling (MDS) indicated that the various age groups felt certain influencers were of greater importance than others in the decision to use or not to use homeopathic remedies. The influencers used in the MDS included the use of reference groups, advertising and growing up with homeopathic remedies as children. *Homeopathic remedy manufacturers need to understand how their customers view important deciding factors not only for their own brand, but for competing brands as well. This will allow the manufacturers to understand where possible niches are in their market offering, as well as gaps in their marketing campaigns. Again the extensive use of reference groups is a key feature, which must be addressed and can be of immense value specifically to the connected generation as a market segment. Traditional advertising will not be beneficial for homeopathic manufacturers. New creative, innovative and*

interactive marketing, using technology and reference groups (and opinion leaders), is what needs to be considered.

For a summary of the link-up between the objectives and the stated main findings and recommendations of this study, refer to Table 7.1 below.

ble 7.1: Summary of the Objectives, Findings and Recommendations of the study

JECTIVE	FINDINGS	RECOMMENDATIONS
mary Objective: d a profile of the neopathic market, king at a case of OTC neopathic remedy use ongst parents with dren in Early Childhood velopment Centres in Pretoria East region.	The profile of users among parents with children in ECD centres. Parents with children in ECD centres using OTC homeopathic remedies are mostly mothers from the white ethnic group, with one or two children with the majority of children being between 1- 6 years of age. These mothers are aged between 17- 46 years, also known as the connected generation (referred to as the combined Generation X and Generation Y). They are well-educated, implying that they are educated beyond secondary schooling to tertiary level, with an average household income of more than R22001.00 per month. They belong mostly to LSM 10 High and 10 Low, are members of a medical aid scheme and are working in the accounting or financial industry, administration, education, management, medical industry or are stay-at-home moms. OTC homeopathic remedies are purchased mostly from pharmacies, followed by food retailers and health shops.	*The homeopathic industry needs to take needs of working mothers into consideration, when marketing to this specific market segment. Issue, such as convenience and time are of particular importance to working mother.*
		Manufacturers could focus on other posit aspects of the properties of the remedies and that there are few to no side-effects when using OTC homeopathic remedies that it is a natural solution to everyday ailments and health issues. Another aspe to consider is that the use of antibiotics could possibly be decreased, should mothers use homeopathic remedies, or t OTC homeopathic remedies support the body's natural processes instead of inhibiting them.
		The homeopathic industry needs to be aware of the purchasing decisions and preferences, as well as the preferred me of the high LSM groups. These details should be closely linked to possible generation-specific information and medi usage.
		It is a recommendation that the homeopathic industry take cognisance of the education level of the OTC remedy users in the light of the fact that the medi these market segments are exposed to a

		not necessarily those which the industry used throughout history to market their products.
	Parents will consult books/Internet before a visit to the doctor for everyday ailments If a friend/colleague suggests a remedy (homeopathic or otherwise), parents will try it.	*A recommendation for homeopathic manufacturers and marketers is to make use of more technology in their marketing campaigns. As far as possible, there sho be a marriage between the use of technology and the personal sharing of C homeopathic experiences by consumers. Suggestions would be to use more social networks for parents using OTC homeopathic remedies, perhaps sharing them on social platforms such as Facebo and possibly to blog about their experiences. It would be of great use to OTC homeopathic producers to turn user into brand ambassadors, using technolog to share their experiences.*
		The homeopathic industry needs to beco innovative and creative in the use of med using actual experiences of users as key marketing campaigns. It is important to n that celebrity endorsements will not necessarily be beneficial to use for this market segment.

	Medical aid rates are becoming less affordable.	*Medical aid schemes must consider payi for OTC homeopathic remedies. Homeopathy is a cheaper option from several aspects, including the actual pric the various remedies in comparison to th of conventional medicine, but also that repeat treatments of the same illness or ailment are fewer, owing to the effectiveness of homeopathic remedies.*
	Respondents have to pay for more and more medical services out of pocket; the medical aid covers less of our expenses	
	Not sufficient medical aid coverage for everyday medical needs per year, which includes doctors' visits and prescribed non-chronical medication.	
condary Objective 1: asuring the perceptions attitudes towards OTC neopathic remedies of ents with children in ly Childhood velopment Centres.	Parents feel that an integrative approach between conventional and natural medicine is necessary. It is viewed as a definite need/future prerequisite of parents to have doctors trained in natural options.	*A recommendation to the Ministry of Hea is to include training in natural remedies a natural medicine in the curriculum of medical practitioners in training. A further recommendation is for a better working relationship between homeopaths and medical doctors, for the sake of thehealth families.*
	Parents view homeopathic remedies as being not quite on a par with conventional medicine.	*More information to parents on the possi remedies for the ailments and illnesses o children must be made available to paren by the homeopathic industry*
	Trigger points within the customer decision-making process to visit a doctor: • Child has a fever higher than 38.5 degrees • Only after parents have done everything they know or have read up on • When parents deal with something they have not dealt with before (strange rash or strange cough)	

	Parents trust their own judgement when it comes to their family's health.	*The Alliance for the Prudent Use of Antibiotics and the South African homeopathic industry to jointly dissemina information regarding antibiotic resistanc and how homeopathy could be of importance in treating the common illnes and ailments that families contract.*
	The medicine a doctor (GP or paediatrician) prescribes works every time.	
	Parents have gone back to a doctor after one course of prescribed medicine could not cure an illness, ailment or infection.	
	Most frequented retail source for purchasing OTC homeopathic remedies is a pharmacy.	*Getting involved in additional training of pharmacists in OTC homeopathic remedi is an important recommendation to the homeopathic industry.*
	Homeopathy is a cheaper option than conventional medicine.	*The homeopathic industry to communica the benefit of paying less for homeopathi remedies than conventional medicine in their marketing communication*

condary Objective 2: ermining the extent of of OTC homeopathic edies among parents children in Early dhood Development ntres in the Pretoria East on.	55% of respondents use OTC homeopathic remedies. Remedies are used to treat mostly children and adults, with the following ailments: aches (59.88%) colds and flu (87.18%), digestive ailments (51.80%), emotional ailments (53.59%), minor injuries (55.69%) and throat ailments (53.59%).	*Parents from different parts of the world have similar concerns and are adjusting their decision-making regarding their children's health in a similar way. The So African homeopathic industry needs to be aware of this as an important internationa trend applicable to their South African market.* *The homeopathic industry must look at those ailments for which OTC homeopath remedies are not commonly used within t market segment, to ensure that the use o OTC homeopathic remedies becomes entrenched as a possible first port of call everyday ailments or at least become supporting or complementary to conventional medicine for these ailments These common illnesses and ailments fo which the industry could encourage use include:* • *Bladder ailments* • *Coughs and croup* • *Ear ailments* • *Eye ailments* • *Fever* • *More serious injuries* • *Skin ailments* • *Thrush and fungal infections* • *Vertigo, fatigue, hangover, jet lag and exhaustion*

condary Objective 3: luating whether parents children in Early dhood Development ntres in the Pretoria East on who use OTC neopathic remedies view neopathy as plementary or rnative to conventional dicine	An almost equal proportion of parents agreed and disagreed with the statement regarding using homeopathic remedies as complementary medicine to conventional medicine. Referring to the respondents that use OTC homeopathic remedies, it could be gathered that they use these remedies in a complementary fashion, in comparison to those who do not use these remedies at all. Parents also do not use OTC homeopathic remedies as an alternative treatment to conventional medicine.	*The homeopathic industry must reinforc more positive perception with potential current consumers (specifically parents children in ECD centres), by means of sharing of information. This is a str opportunity for the homeopathic indu which should be made use of.*
condary Objective 4: ermining the type and nds of homeopathic edies used by parents.	The OTC homeopathic brands most commonly found in these households include Natura, Sister Lilian Remedies and Homeoforce.	*The homeopathic industry, specifically th well-established brands such as Natura, needs to be aware of the newcomers to t market who are successful in a relatively short period of time. It is important to analyse the market and adapt the market strategy accordingly on a continuous bas*
condary Objective 5: cussing the positioning omeopathy in the minds arents with children in D centres in the Pretoria t region	Positioning was carried out, based on the opinion respondents had of homeopathy in relation to the most-frequently used brands. Multidimensional scaling showed how the importance of influencers varied among the different age groups.	*Homeopathic remedy manufacturers n to understand how their customers v important deciding factors, not only for t own brand but completing brands as w The extensive use of reference groups key feature, which must be addressed can be of immense value specifically to connected generation as a market segm Traditional advertising will not be benefi for homeopathic manufacturers. N creative, innovative and interactive, us technology and reference groups (opinion leaders), is what needs to considered.*

er	The elderly were the least frequent users	*The development of new markets sho not be overlooked by the homeopa industry. Possible niche markets such the elderly could exist and should explored.*
	Pets were the second least frequent users	*The homeopathic industry could look developing a pet product range a consultation with veterinarians to determ whether there is a definite need homeopathic pet remedies.*
	Parents require scientific proof that medication is effective before they will try it.	*A recommendation to the homeopa industry is to encourage scientific resea and support it by every means possible. was mentioned in the literatu homeopathic scientific research sho encompass the unique nature homeopathy and not insist that homeopa research fit the mould as set conventional medicine research. A furt recommendation to medical journals is publish and encourage more research homeopathic studies. Financial support make homeopathic research possible i recommendation to the Ministry of Health*

7.3 LIMITATIONS TO THE STUDY

There were several limitations to this study, which need to be taken into consideration. These will be discussed below:

- The sampling for this study has been problematic from the start. In order to obtain a sampling frame, the Department of Social Development was approached for a possible up-to-date and complete list of ECD centres within the Pretoria East region. Permission was granted to conduct the study at national, provincial and regional level. This was a long and lengthy process which took over three months to complete. However, a consolidated list or databases does not currently exist for ECD centres in the area. A list provided was outdated and could thus not be used. On further investigation, it was decided to approach Telkom for a list of ECD centres listed in the telephone directory. No response was received, despite several requests to both Telkom and Trudon (the company which compiles and distributes telephone directories in certain areas including Pretoria). It was decided to manually obtain ECD centre contact details from the 2010/2011 Pretoria telephone directory. A complete list was compiled for the entire Pretoria area. This study was focused on the Pretoria East area and the sampling frame needed further refining by identifying the regional boundaries for the Pretoria East region, as identified by the Tshwane Municipality, available on the Tshwane website. Only once the ECD centres in the Pretoria East area had been identified could a possible sample be drawn. As the number of ECD centres identified for the Pretoria East area was relatively small, it was decided to make use of a census and obtain permission from all the ECD centres to conduct the study. Once ECD centres had given permission to conduct the study, it was again decided to make use of a census to send questionnaires to all parents within each centre to take part in the study. The reason for a census to be used again was due to the privacy concerns ECD centres had and the need to protect contact information of the parents and children attending these centres. The limitation, as seen above, is that primary research specific to children in ECD centres is extremely challenging with limited up-to-date sampling frames from major governing bodies within the various levels of government.

- A further limitation is that only ECD centres with printed contact details as found in the telephone directory could be included in the study, as a set parameter of setting up a sampling frame. Other ECD centres with available websites or at least links to

community or other advertising pages, but not in the telephone directory, could not be included. The fact that including contact details of any individual or organisation in a telephone directory is voluntary limited the study from including more ECD centres.

- The survey was conducted using printed questionnaires, instead of a possible electronic survey. This was a self-administered questionnaire which needed to be delivered and collected again at a later stage (also known as the drop-off method). The questionnaire was also not pre-coded, which might have saved time with coding and capturing of data.

- The results from this study are limited to parents with children in ECD centres in the Pretoria East region, and cannot be extrapolated to other population groups or South Africa at large.

- There were several unforeseen administrative limitations, such as access to arranged funding and printing lead times.

7.4 FURTHER RESEARCH SUGGESTIONS

Possible suggestions on further research include the following:

- Use of OTC homeopathic remedies in other parts or regions of the country and the greater South Africa would be beneficial for the homeopathic industry, in order to get a better idea of what the over-the-counter use of these remedies is on a national scale.

- Specific research could be done to determine possible catalysts for turning non-users of OTC homeopathic remedies into users. Needless to say, the homeopathic industry could benefit from knowing the triggers that encourage a non-user to become someone who will try OTC homeopathic remedies.

- The awareness of parents and their contribution to antibiotic resistance could be beneficial to several parties, including the Ministry of Health, the Alliance for the Prudent Use of Antibiotics and the homeopathic industry of South Africa, to name but a few. As discussed in the literature, children in a pre-school environment are the largest consumers of antibiotics. Determining whether parents are aware of this and the effect it has on the child patient, the community and future treatments might encourage parents to consider first other forms of treatment such as homeopathy. This is especially true for the common illnesses and ailments as discussed in this study.

- Research into possible new markets and their viability could be beneficial to the homeopathic industry. Possible new markets as identified in this study include the elderly and pet owners.

- Research could be beneficial for the homeopathic industry to determine how customers view their OTC homeopathic remedy purchases, specifically looking at whether customers view purchases to be related to convenience products, shopping products or speciality products. This will shed some light on possible distribution channel changes required to fit the needs of customers.

- The Ministry of Health has implemented several important decisions regarding the immunisation of children. The successes of immunisation on a global scale is well documented, especially regarding the prevention of pneumococcal disease and rotavirus, which are the two leading causes of child mortality. However, the exact number of children being immunised in urban and rural areas is uncertain.

7.5 CONCLUSION

This study aimed to determine a profile of parents with children in ECD centres using OTC homeopathic remedies in the Pretoria East region. There were a number of secondary objectives specific to the attitudes and perceptions of respondents regarding OTC homeopathic remedies; the extent of use of OTC homeopathic remedies; whether OTC homeopathic remedies are used in a complementary of alternative fashion and determining the brands of OTC remedies used by parents. The literature chapters of this study covered aspects specific to profiling a market segment, the illnesses, ailments and treatments of children in ECD centres, as well as an overview of homeopathy in the context of complementary and alternative medicine. These chapters supported the notion that homeopathy and indeed OTC homeopathic remedies have a place within the mind of the consumer and the medical industry and should be investigated from a marketing perspective.

The findings of this study presented new feedback on respondents' opinions, perceptions and use of OTC homeopathic remedies, as well as a clear and identifiable profile of OTC homeopathic remedy users among parents with children in ECD centres. The positioning of homeopathy in the minds of parents was also investigated. It is clear that traditional means of

segmenting and profiling need to be reviewed in order to take generations, specifically the connected generation, into consideration.

Recommendations as a result of this study could be provided to the homeopathic industry, the Ministry of Health, medical professionals, Medical Aid Schemes, pharmacists and the pharmaceutical industry, as well as the Department of Social Development. As can be seen from this study, even though homeopathy has had a tumultuous history worldwide and in South Africa, it is here to stay. With a new approach to segmenting and profiling the target market, specific to parents with children in ECD centres, various OTC homeopathic remedy manufactures and marketers could revolutionise marketing to this market segment.

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APPENDICES

APPENDIX A: QUESTIONNAIRE

APPENDIX A
QUESTIONNAIRE

November 2011

Dear Parent

Like you, I am a parent. My children are aged 4 and 3. I need your help, please; no, **not** the financial type of help, but rather information.

I am embarking on a MCom study (Masters in Commerce at Unisa). I chose to do a study on Homeopathy and the use of it in the homes of parents with children in pre-school in the area. We all know how often our kids get sick!!

I would like to know what you opinion is of Over the Counter (OTC) homeopathic remedies, for which ailments you might use these remedies, or if you don't use these remedies at all. What I am referring to might be products you use in your home or have used in the past **12 months**. These remedies are found on the shelves of pharmacies and health shops, online and food retailers. These might include Natura's Rescue drops/tablets, Pharma Natura's Arnica cream/gel. Perhaps if you have a baby suffering from cramps, you might have used Bioforce's Tissue salts number 8, or Natura's MagPhos. Please don't be concerned if you haven't heard of these OTC homeopathic products, don't use them, or don't believe in OTC homeopathic remedies. Your contribution to my study will still be immense.

You will notice that I also refer to conventional medicine. What I am referring to here are examples such as Iliadin pediatric nose drops, Panado syrup or Bactroban ointment or any other medicine your GP (General practitioner) or paediatrician might prescribe.

What is required from you?

- Please complete the enclosed questionnaire as honestly as you can. It might seem long to complete, but it will take you about 20 minutes at maximum.
- Only one questionnaire per family is required.
- There is no wrong or right answer: just be honest, please.
- Please return your completed questionnaire in the supplied unmarked envelope to the pre-school your child(ren) attend, by the **30th of November 2011.**
- The information you supply is for academic purposes, not commercial. You cannot be identified by the information you supply. Your anonymous information will not be given to a third party for any purposes at all.
- There is no obligation to be part of the study. Should you wish to be excluded from the study, do not complete the questionnaire and do not return it to your school.

What's in it for you?

YOU CAN WIN ONE OF THREE DIS-CHEM VOUCHERS TO THE VALUE OF R1000.00 EACH

All completed questionnaires will go into a draw for this voucher. The winner will be notified by sms and telephone call. Please ensure that your cellphone number is included at the end of the questionnaire to ensure that you are included in the draw. The draw will take place during the middle of January 2012.

What is in it for your nursery school/pre-primary/creche?

The Unisa Centre for Business Management will **sponsor a prize to the value of R5000.00** for the school with the highest return rate of completed questionnaires. This allows schools of various sizes to compete for the prize. The prize will consist of either a Makro voucher or Lapa Books voucher to the value of R5000.00 (depending on the winning school's need). Should the response rate of the schools be too close for a decision to be made, a lucky draw of the top ten schools with the highest response rate will take place by the deanery of the Unisa College of Economic and Management Sciences. The winning school will be notified in writing, by the middle of January 2012.

The vouchers for the school and parents are subject to the individual suppliers' rules and regulations regarding the use of vouchers. These vouchers cannot be redeemed for cash from the various suppliers or the Unisa Centre for Business Management. Winners will be notified as mentioned above.

I am looking forward to your response.

Kind regards

Natasha da Silva-Esclana

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HOMEOPATHY QUESTIONNAIRE
MUST BE ANSWERED BY THE PERSON(S) WHO ADMINISTER MEDICATION IN THE HOUSEHOLD

This questionnaire is part of an MCom study at Unisa and will take approximately 20 minutes to complete. Only one completed questionnaire per family is required.

Please read the questions carefully and answer the questions as honestly as you can.

Please complete and return the questionnaires on/before the **30th of November 2011.** Return instructions are on the last page of this questionnaire.

SECTION A : GENERAL HEALTH ISSUES OF CHILDREN

1. Please indicate the number of children in your household:	

2. Please rank the ages of the children in your care (in years for over 1 year old, if under 1 year old, provide the months):

Child number (eldest to youngest)	Age (Indicate Y for years and M for months)
1	
2	
3	
4	
5	
6	

VERY IMPORTANT: The following question needs to be completed with only the **youngest child** in mind. This should be the child that is the **youngest in the household and attending pre-school.** Should there be more children attending pre-school, please focus only on the youngest child. Should your youngest child be a baby not attending pre-school yet, please only focus on the youngest child in the pre-school phase.

3. My youngest child attending pre-school gets the following common ailments and illnesses regularly (once a month, once every six months, once annually or never). (**Mark all the applicable illnesses, but choose only one time period per illness/ailment)**

Illness/ailment	Once per month	Once every three months	Once every six months	Once annually	Never	Illness/ailment	Once per month	Once every three months	Once every six months	Once annually	Never
Colds and Flu						Tummy aches					
Ear infection						Vomiting					
Coughs and croup						Upper respiratory infections					
Headaches						Diarrhoea					
Bumps, bruises, insect bites						Tonsillitis					
Eye inflammation and infection						Rashes and eczema					
Fungal infections						Teething problems					

4. Do you use Over the Counter (OTC) homeopathic remedies in the household?

Yes	No

If you have answered **YES** in the question above, continue to **Section B.**
If you have answered **No** in the question above, continue to **Section C.**

SECTION B : HOMEOPATHY USE

Instructions: Below are statements that describe possible reasons for using homeopathy. Use the following scales to indicate your level of agreement or disagreement with each statement. Choose only one option to indicate your level of agreement for each statement.

Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6

Homeopathy versus conventional medicine

1. Conventional medicine did not work for us any longer.	1	2	3	4	5	6
2. Homeopathy is a cheaper option than conventional medicine	1	2	3	4	5	6
3. I prefer a more natural health solution to everyday ailments.	1	2	3	4	5	6

Homeopathy and your medical aid

4. Our medical aid no longer covers all our medicine expenses and homeopathy seems to be the next best thing.	1	2	3	4	5	6

Exposure to homeopathy (Influencer)

5. A friend or colleague suggested homeopathic remedies.	1	2	3	4	5	6
6. Celebrities use homeopathic remedies and I thought to try it.	1	2	3	4	5	6
7. I saw an advertisement for homeopathic remedies and thought to try it.	1	2	3	4	5	6
8. A homeopathic brand had an in-store promotion and I tried it.	1	2	3	4	5	6
9. I grew up with homeopathic remedies and continue using them for my family.	1	2	3	4	5	6

10. If you have any other possible reasons for using OTC homeopathic remedies, please specify in the space below.

11. I use the following **OTC homeopathic remedy brands.** (Please mark all that apply. More than one option can be chosen)

Brand	**Mark with X**
Bioforce	
Boiron laboratories	
Heel	
Herbaforce	
Homeoforce	
Hyland's	
Natura	
Nature's Way	
Pegasus	
Pharma Natura	
Similasan	
Sister Lilian's Remedies	
There's a remedy for that	
Other(please specify)	

12. I obtain my OTC homeopathy remedies from the following sources. (**More than one option can be chosen**)

Source	**Mark with X**
Pharmacy	
Food retailer eg Checkers	
Health shop	
Online retailer	
Directly from the manufacturer	
Manufacturer Agent/Consultant	
Other (please specify)	

13. I use OTC homeopathic remedies for the following members in my family. (Please mark all that apply. More than one option can be chosen. Also indicate the number of members at each applicable option, for which homeopathic remedies are used.)

Family member	**Mark with X**	**Indicate the number of members**
Adults		
Children		
Pets		
Elderly		
Other(please specify)		

14. I use OTC homeopathic remedies for the following ailments, wounds and illnesses in my family. (Please mark all that apply. More than one option can be chosen)

Ailments, injury or illnesses	**Mark with X**
Aches (eg backache, sciatica, spinal disorders, growing pains, joint inflammation, arthritis, gout, fidgety/restless or aching legs, arthritis, menstrual pains, after surgical procedure, after dental procedures, lumbago, headache, migraine, toothache, tooth abscess and gumboils, babies teething)	
Bladder ailments (eg bladder irritations, cystitis, urinary tract infection)	
Colds and Flu (eg runny nose, sinusitis, hayfever, blocked nose)	

Coughs and croup	
Digestive ailments (eg bloatedness, distention, flatulence, heartburn, indigestion, tummy ache, constipation, nausea, vomiting, diarrhoea, food poisoning, gastric disorders, motion sickness, cramps, colic)	
Ears (eg earache, infection, disorders, sensitivity, temporary deafness)	
Emotional ailments (eg anxiety, fear, worry panic, depression, irritability, exam nerves, mental focus, mental fatigue, grief, hysteria, insomnia, restlessness, nightmares, night terrors, shock, trauma, disappointment, sleeplessness)	
Eyes (eg inflammation, strain, conjunctivitis, styes, inflammation, blocked tear duct)	
Fever	
Minor injuries (eg insect bites, stings, abrasions, sunburn, grazes, minor cuts, bruises, sores, nosebleeds, muscle sprains, ligament, tendon and joint strains, lactic acid build-up, eye injury)	
More serious injuries (eg puncture wounds, 2nd and 3rd degree burns, concussion, head injury, large cuts, bone injuries or fractures)	
Skin ailments (eg acne, pimples, boils, splinters, fever blisters, cold sores, hair loss, ingrowing toenails, nail biting, cracked skin, scars, rash eczema, hives, psoriasis, inflammation, warts, piles)	
Throat ailments (eg sore throat, tonsillitis, pharyngitis, laryngitis, snoring, hoarseness, loss of voice)	
Thrush and fungal infection	
Vertigo, fatigue, hangover, jet lag and exhaustion	

Other(please specify)	

Please continue to **Section D** of this questionnaire

SECTION D : RESPONDENT OPINION

Instructions: Below are statements that describe your opinion about homeopathy, conventional medicine, medical aids etc. Use the following scales to indicate your level of agreement or disagreement with each statement. Choose only one option to indicate your level of agreement for each statement.

Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6

Opinion on Homeopathic remedies compared to conventional medicine

1. I use homeopathic remedies before using conventional medicine.	1	2	3	4	5	6
2. I believe homeopathy is equal to conventional medicine.	1	2	3	4	5	6
3. I use OTC homeopathic remedies **instead** of conventional medicine.	1	2	3	4	5	6
4. I use OTC homeopathic remedies **together** with my conventional medicine; I get the best of both worlds.	1	2	3	4	5	6
5. Homeopathy has no place in medicine.	1	2	3	4	5	6
6. Homeopathy is dangerous and should be avoided at all costs.	1	2	3	4	5	6

Opinion on conventional medicine

7. I believe conventional medicine to be better than homeopathy.	1	2	3	4	5	6
8. Conventional medicine (like antibiotics) is not as effective any more.	1	2	3	4	5	6
9. I only use prescribed conventional medication.	1	2	3	4	5	6
10. The medicine my doctor (GP or paediatrician) prescribes works every time.	1	2	3	4	5	6
11. I have gone back to a doctor after one course of prescribed medicine could not cure an illness, ailment or infection.	1	2	3	4	5	6

Opinion on natural remedies

12. I think doctors today need more training in homeopathy and other natural remedies.	1	2	3	4	5	6
13. I think natural remedies are the way of the future.	1	2	3	4	5	6
14. I think more should be done to integrate natural remedies with conventional medicine.	1	2	3	4	5	6
15. I need to have scientific proof that medicine works before I will try it.	1	2	3	4	5	6
16. I do not believe in using natural remedies for my family.	1	2	3	4	5	6

Confidence to self-medicate

17. If a friend or colleague should suggest a remedy (homeopathic or otherwise), I would try it.	1	2	3	4	5	6
18. I trust my own judgement when it comes to my family's health.	1	2	3	4	5	6
19. I will consult books or the Internet before a visit to the doctor (GP or paediatrician) for everyday ailments.	1	2	3	4	5	6
20. I generally feel ill-equipped to deal with my child/children's illnesses and ailments; doctors know better than me.	1	2	3	4	5	6

Medical aid

21. Medical aid membership rates are becoming less affordable	1	2	3	4	5	6
22. We have to pay for more and more medical services and medicine out of our pocket; the medical aid covers less of our expenses.	1	2	3	4	5	6
23. My medical aid coverage is sufficient for my family's everyday medical needs per year (including doctors' visits and prescribed non-chronical medication)	1	2	3	4	5	6

When it comes to my child or children I will call a doctor or emergency room when the following occurs. Use the following scales to indicate your level of agreement or disagreement with each statement. Choose only one option to indicate your level of agreement for each statement.

Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6

24. If my child has a fever, no matter what the thermometer reading is, we go to the doctor or emergency room.	1	2	3	4	5	6
25. When my child has a fever higher than 38.5°C.	1	2	3	4	5	6
26. At the first sign of illness.	1	2	3	4	5	6

27. Only after I have done everything I know or have read up on.	1	2	3	4	5	6
28. When I deal with something I have not dealt with before eg a strange rash, or strange cough.	1	2	3	4	5	6
29. I feel I do not know enough about medicine and would rather consult my doctor for all my children's ailments and illness	1	2	3	4	5	6
30. I do not have the time to search for information about my children's illnesses and ailments, that's why doctors are there.	1	2	3	4	5	6

31. How often have prescribed antibiotics been administered to the members of your family living in your household, in the past twelve months? (once a month, once every six months or once annually). **(Choose only one time period per person in the household)**

Family member: (please indicate e.g. mother, father, grandmother where applicable for adult members and child members numbered (1) oldest to youngest (6), where applicable.	**Once per month**	**Once every three months**	**Once every six months**	**Once annually**	**Not at all**
Adult member: ……					
Adult member: ……					
Adult member: ……					
Adult member: ……					
Child member: ……					
Child member: ……					
Child member: ……					
Child member: ……					
Child member: ……					
Child member: ……					

Antibacterial products (Please mark the appropriate answer with an x)

Statement	**Yes**	**No**
32. Do you use antibacterial personal hygiene products in your household e.g. Dettol Bar soap or Savlon Body wash?		
33. Do you use antibacterial general products in your household e.g. ICU floor cleaner or Dettol all-purpose cleaner?		

Vaccinations (Please mark the appropriate answer with an x)

Statement	Yes	No	Not sure
34. Are your youngest child's vaccinations up to date?			
35. Did the vaccinations administered to your youngest child include the vaccination against pneumococcal disease e.g. Prevenar			
36. Did the vaccinations administered to your youngest child include the vaccination against the Rotavirus e.g. Rotarix			

Please continue to **Section E** of this questionnaire

SECTION E : SELF-CARE

1. I use Over the Counter (OTC) conventional medication	Yes	No
2. I give my children vitamins	Yes	No
3. I give my children herbal remedies such as Echinacea and Olive leaf extract	Yes	No
4. I give my children additional supplements such as Omega 3 and Iron	Yes	No
5. I am the person responsible for the purchase of medication in the household	Yes	No

Please continue to **Section F** of this questionnaire

SECTION F : BIOGRAPHICAL INFORMATION

1. Age of the person answering this questionnaire (in years)

Under 17	
17 – 20	
21 – 25	
26 – 30	
31 - 35	
36 – 40	
41 – 46	

47 - 50	
51 - 59	
60 – 64	
65 and older	

2. The highest level of education of the person completing this questionnaire (**Mark the appropriate box with an X**)

Highest level of education	**Mark with X**
Primary (Grade 1-7)	
Secondary (Grade 8-12)	
Completed diploma	
Completed degree	
Post-graduate qualification (please specify)	

3. The child(ren) in my care are currently in the following daycare or pre-school(s):

4. Average **household** income per month (this is the total income from all salary earners contributing to household expenses) after tax. (**Mark the appropriate box with an X**)

Monthly Income	**Mark with X**
Less than R1500	
R1500 – R1999	
R2000 – R2999	
R3000 – R5999	
R6000 – R8999	
R9000 – R10 000	
R10 001 – R12 000	
R12 001 – R14 000	
R14 001 – R16 000	
R16 001 – R19 000	
R19 001 – R22 000	
R22 001 – R30 000	
R30 001 – R50 000	
More than R50 000	
Don’t know	

5. Which of the following do you have in your household (**Please mark all that apply**)

TV set	
VCR	
DVD player	
M-Net/DStv subscription	
Hi-fi/music centre	
Computer / Laptop	
Vacuum cleaner/floor polisher	
Dishwashing machine	
Washing machine	
Tumble dryer	
Home telephone (excluding a cell)	
Deep freezer	

Fridge/freezer (combination)	
Electric stove	
Microwave oven	
Built-in kitchen sink	
Home security service	
3 or more cell phones in household	
2 cell phones in household	
Home theatre system	
Tap water in house/on plot	
Hot running water from a geyser	
Flush toilet in/outside house	
At least one motor vehicle	

6. Please answer yes or no to the following questions. (**Mark your answer with an X**)

Question	**Yes**	**No**
Are you a metropolitan dweller?		
Do you live in a house, cluster or town house?		
There are radios, or only one radio (excluding car radios) in my household		
There is a domestic worker or household helpers in my household (both live-in & part-time)		

7. Ethnic group(**Mark your answer with an X**)

Black	Coloured	Indian	White	Other(specify)

8. We belong to a medical aid scheme

(**Mark your answer with an X**)

Yes	If you have answered **yes**, go to **question 10**.
No	If you have answered **no,** go to the next question.

9. Please supply your reason(s) for not being on a medical aid scheme.

10. To which medical aid scheme do you belong?

11. What is your profession?

12. What is your relation to the children in your care? (eg mother, nanny, grandfather, godparent)

You have reached the end of the questionnaire!!
Thank you for your willingness to complete the questionnaire!!

If you wish to be placed in the **draw for a Dischem voucher to the value of R1000.00**, please provide a cell number to which an sms can be sent and you could be called, should you be the lucky winner.	Cell number

Please place the completed questionnaire in the unmarked envelope supplied, seal it and leave it at the reception office of the pre-school your child(ren) attend.