A prospective, epidemiological pilot study to investigate the level of knowledge of homeopathy and its contextualization in health shops in the Gauteng area.

By

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I, Janet Tatalias declare that this mini-dissertation represents my own work in both conception and execution.

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DEDICATION

I would like to dedicate this research to my husband Michael and my two children, Courtney and Brendan. For their support and patience.

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Abstract

Globally, complementary and alternative medicine is a rapidly expanding sector of which homeopathy and the sale of ‘over-the-counter’ homeopathic medicines is an integral part. In South Africa, the sale of homeopathic products in 2003 increased by 16.4% over figures for 2000. The sale of homeopathic medicines specifically, increased by 23% for the same period, and the sale of homeopathic medicines consists of 67% of all homeopathic products sold. The main method of distribution of these products is via retail outlets like health shops and pharmacies (Health Products Association, 2005).

It is thus expected that health shop staff have a basic understanding of complementary therapies, including homeopathic medicines, due to the fact that these products are available ‘over-the-counter’ in health shops. To be effective health service providers, they are expected to understand the principles of homeopathy and its application via the available ‘over-the-counter’ homeopathic products.

However, at best we can only assume the understanding that the health shop staff have. Thus, the level of understanding of homeopathy amongst health shop staff was examined through the use of a quantitative questionnaire. The questionnaire was validated by the use of a focus group consisting of participants who were specifically selected by the researcher as representative of areas of expertise that would be required to validate the questionnaire content.

The questionnaire was then refined taking into consideration comments made by the focus group. The questionnaire was then submitted to four qualified homeopaths for comment, their suggestions taken into account, and the questionnaire was then pre-tested (piloted) on health- shop assistants.

The Gauteng area was selected because it is the region with the highest concentration of health shops in South Africa. As a result the population under study consisted of 49 health shops that fulfilled the health shop inclusion criteria. A maximum of two participants per shop were recruited to complete the questionnaire, therefore allowing for a total of 98 responses. Of the 33 health shops (67 %) that agreed to participate, 38

questionnaires were returned allowing for a total 39% response rate in respect of the questionnaires.

The owner / manager in the shop selected the participants who were fluent in written and spoken English, who interacted with the public, giving advice and selling health products, and who are neither qualified nor student homeopaths. This is acknowledged as a factor that may have biased results, in that the owner/ manager may have selected the participants they thought most knowledgeable about homeopathy, however the owner / manager had set criteria by which to select the participants.

The questionnaires were collected and the captured data was then forwarded to a statistician. SPSS version 11.5 (SPSS Inc., Chicago, Ill, USA) was used to analyse the data. Frequency tables and bar charts were used to describe the demographics and responses to questions in the sample. A knowledge score was computed by assigning a score of 1 to each correct answer to the questions on knowledge (Section F questions 1-3, section G and section H) and summing up the scores for each participant. Question G12 was given a weighting of 2 points. Knowledge score was expressed as a percentage out of a possible total of 45 points. This was then categorized at the median score of 78%, lower than this score indicated a relatively poor level of knowledge and higher than this score indicated a good level of knowledge. Factors associated with a good level of knowledge were assessed by chi square tests or Fishers exact tests in the case of two by two tables. Multivariate analysis was not performed due to small sample size. A p value of <0.05 was considered as statistically significant.

The demographic profile exhibited by the health shop staff, and particularly those who were knowledgeable is very similar to that of complementary and alternative medicines (CAM) users internationally, indicating that CAM users and suppliers are subject to similar dynamics and by default similar levels of knowledge.

There was generally a satisfactory level of knowledge regarding homeopathy in the sample. The mean score was 72.8% and the median was 77.8%, which is just below the split point average of 78 %. The lowest score was 17.8% and the highest was 97.8%, thus the sample was split at a score of 78%, indicating the knowledge at best was patchy and irregular as all scores below this score were considered as relatively poor

level of knowledge, while scores above this were considered as good. This trend is further reflected in that there were 22 participants (57.9%) with poor scores and 16 participants (42.1%) with good scores, none indicated very good or exceptional knowledge.

On analysis however, the type of knowledge displayed by a majority of the sample group was factual in nature and in some instances based on incorrect conceptual understanding of the terms. There were far fewer participants who displayed an in-depth inferential understanding of the principles of homeopathy. In addition, the knowledge reflected the interaction of the participants with homeopathy in the health shop environment (superficial), which was reinforced by the fact that most training was done by the products suppliers.

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Introduction

This chapter aims to identify national and international trends that indicate that the use of Complementary and Alternative Medicine (CAM) is experiencing rapid growth (The United Kingdom Parliament, 2000). In European countries with available statistics, complementary therapies are used by 20-50% of the population (Fisher and Ward, 1994). Slightly higher figures are available in the USA, from the National Centre for Complementary and Alternative Medicine, which released figures in May 2004 showing that 36% of adults were using some form of CAM (National Centre for Complementary and Alternative Medicine, 2004). This international trend has brought with it a change of attitude in the public towards health and healthcare with respect to CAM. Natural lifestyles, a healthy environment and greater attention to personal well being are aspects which are increasingly becoming part of all cultures as well as the knowledge base of today's healthcare-consumer. Associated with this change in attitude, is the emergence of a desire to take greater responsibility for personal health which has resulted in an expanding market for natural healthcare products globally (National Pharmacy Association, 2004).

In the South African context, the only official and readily available indicator is that of the Health Products Association of South Africa market survey, which indicated that in 2003, South Africans spent over R1.9 billion on natural health care products (Health Products Association, 2005).

Homeopathy is a commonly cited CAM therapy, and is likewise an area of expanding growth. Over-the-counter sales of homeopathic medicines worldwide reflect the above growth, in that the total European 'over-the-counter' (OTC) market for homeopathy was £590m in 1991 (Fisher and Ward, 1994). Furthermore, United Kingdom retail sales of complementary medicine (herbals, homeopathic preparations and aromatherapy essential oils) totalled £93m in 1998, with £23 million being made up of homeopathic

medicines. The report also showed that these figures were increasing and that the total revenue was up 50% from £63m in 1994. Overall retail sales in 2000 were predicted to reach £109 million and predictions for 2002 were £126 million (The United Kingdom Parliament, 2000).
This is in line with the South Africa health care market where R61 million was spent on OTC homeopathic products in 2003, which is 16.4% higher than similar figures cited in a similar survey conducted in 2000 (Health Products Association, 2005).

Furthermore, the 2005 South African Health Products Association survey showed that the homeopathic sector accounted for 4% of total market sales, a 23.9% increase on the 2000 figures. However, it is interesting to note that in terms the distribution of homeopathic products, practitioners accounted for only 1% of total distribution. This indicates that the predominant means of distribution of homeopathic products in South Africa is via the retail market (viz. health shops and pharmacies) (Health Products Association, 2005).

Homeopathy is based on:

- A unique system of principles, the most central one being the one of “like cures like” (Vickers and Zollman, 1999).
- Homeopathic medicines are prepared in a very specific manner and their application is dependant upon these central principles.

This poses a dilemma as it assumes that the retail market, being responsible for a large majority of the distribution of homeopathic medicines, is aware that Homeopathy is subject to these principles and is able to apply them accordingly.

Thus by implication, homeopathic treatment differs from conventional medicine because the use of homeopathic medicines in a beneficial manner, requires an understanding of the principles of homeopathy in order to maximise their treatment effect. This implies that the homeopath is well versed in applying the appropriate principles in order to achieve maximal healthcare consumer benefit. However, when this is seen in the

context of 1% of the total distribution of homeopathic products being accounted for by homeopaths, it stands to reason that there is another group of people that are responsible for the distribution of homeopathic products (viz those working in health shops and pharmacies), who may not have an understanding of the basic principles of homeopathy. However, there is a limited amount of research available internationally in the area of CAM itself, and even less available in the area of OTC homeopathy that supports this assumption.

The studies that have been conducted (Reid, 2002; Kayne, Beattie and Reeves, 1999; Daphne, 1997; Davies and Kayne, 1992) have centred primarily on pharmacy staff, who have been surveyed with respect to their attitudes to and perceptions of homeopathy and / or purchasers of OTC homeopathy. While these aspects are important in assessing the role of the pharmacy staff in distributing homeopathic products, it does little to underscore the need for understanding whether the pharmacy staff have sufficient knowledge of the principles of homeopathy in order to maximise the treatment effect of the homeopathic medicines distributed. Furthermore, the results obtained in the treatment of healthcare consumers directly impacts on the healthcare consumers' perception of the homeopathic profession, especially when one considers that when healthcare consumers enter a retail outlet (viz health shop) they expect the person assisting them to have knowledge of the products available and be able to give informed advice relative to their condition (Ernst, 2004). This is further complicated in that many healthcare consumers are also under the misperception that all natural medicines are by definition homeopathic (Borneman, 2001).

Thus, in conducting this pilot study, it was hoped that an initial probe could be made in order to investigate the level of knowledge of homeopathy by front-shop staff and to interrogate the contextualization of homeopathy in health shops in the Gauteng area.

1.1. Aim / Purpose of study

A prospective, epidemiological pilot study to investigate the level of knowledge of homeopathy and its contextualization in health shops in the Gauteng area.

1.1.1. Objective one.

The first objective was to develop a profile of health-shop staff in terms of various demographic factors identified as pertinent to determining their knowledge of homeopathy (viz. age, language, ethnicity, gender and level of education).

Hypothesis one

These factors would determine a profile of the health shop staff different from that of the CAM user.

1.1.2. Objective two

The second objective was to establish a profile of health shops with respect to homeopathy: specific attention being placed on the availability and use of homeopathic products, as well as staff knowledge and training in Homeopathy.

Hypothesis two

It would be determined that health shops stock a limited range of homeopathic products.

1.1.3. Objective three

The third objective was to determine the level of understanding of homeopathy amongst health-shop staff.

Hypothesis three

There would be a poor understanding of homeopathy amongst health shop staff.

1.1.4. Objective four

The fourth objective was to determine which factors related to the health-shop staff profile as well as the health-shop profile that influenced the level of understanding of homeopathy amongst health-shop staff.

Hypothesis four

There would be no association between the staff profile and health shop profile with respect to the level of understanding of homeopathy.

1.2. Rationale for the study and research questions

Globally, complementary and alternative medicine is a rapidly expanding sector of which homeopathy and the sale of OTC homeopathic medicines is an integral part. In South Africa the sale of homeopathic products in 2003 increased by 16.4% over figures for 2000. The sale of homeopathic medicines specifically increased by 23% for the same period. The main method of distribution of these products is via retail outlets like health shops and pharmacies (Health Products Association, 2005).

It is therefore expected that health shop staff have a basic understanding of complementary therapies, including homeopathic medicines, due to the fact that these products are available OTC in health shops. To be effective health service providers, they need to understand the principles of homeopathy and its application via the available OTC homeopathic products.

The level of understanding of homeopathy amongst shop staff needs to be ascertained in order to protect healthcare consumers from incorrect advice, and to protect the integrity of the field of homeopathy, including professional homeopaths.

By conducting this research the researcher hoped to highlight problem areas in the knowledge of those working in health shops and in so doing to provide data for further research and education in this area.

1.3. Limitations of the study

It is assumed that the respondents to this study will have answered the questionnaire openly and honestly therefore allowing the research the best approximation of the knowledge and perception held by the front shop assistants in health shops with respect to Homeopathy.

The purposive sampling type of recruitment for observation may not be fully representative of the population group and may lead to error in results. It is inevitable that any sampling process, no matter how carefully carried out, will always result in a sample that is less than perfectly representative of the population (Dyer, 1997).

1.4. Conclusion

In order to elaborate on the study, chapter two will be utilized to give an overview of relevant literature, with chapter three indicating the materials and methods applicable to this study. Chapter four presents the results attained from the statistical analysis of the data, as well as the discussion of the trends observed in the results. Chapter five completes the dissertation with the conclusions of this study and recommendations for future studies in this field.

Chapter Two

Literature Review

2.1. Introduction

Most people who come into contact with homeopathy do so through the use of over-the-counter (OTC) homeopathic medicines (Reid, 2002), and it for this reason that OTC homeopathy has a valuable role to play in furthering the profession of homeopathy. It is important, then, that the public is given the best opportunity to experience homeopathic medicines in the most beneficial manner available in order to foster a continued growth in demand for these products and, by association, a related growth in the demand for more focused professional homeopathic services.

2.2. Homeopathy and Complementary and Alternative Medicine

Complementary and Alternative Medicine (CAM) is a title used to refer to a diverse group of health-related therapies and disciplines which are not considered to be a part of mainstream medical care. Other terms sometimes used to describe them include 'natural medicine', 'non-conventional medicine' and 'holistic medicine'. However, CAM is currently the most often used term. CAM embraces those therapies that may either be provided alongside conventional medicine (complementary) or which may, in the view of their practitioners, act as a substitute for it. Alternative disciplines purport to provide diagnostic information as well as offering therapy (The United Kingdom Parliament, 2000).

Homeopathy is a significant CAM therapy and is widely used internationally as a practitioner based therapy as well having extensive over-the-counter (OTC) usage, in both human and animal care (Lees, 2000). Nevertheless homeopathy is one of the more

controversial CAM therapies because of it therapeutic method and its reliance on the use of ultra-high dilutions in the manufacture of its medicines (Reilly, 2005).

2.3. The medical paradigm vs homeopathy

Homeopathy, as a result of its methods and its use of ultra-high dilutions, finds itself in conflict with the medical framework or paradigm. Homeopathy is supposedly not 'scientifically plausible' (Reilly, 2005), because it does not go along with the objective, biological view of humans and disease, and it's outcomes do not readily fall into the present evidence-based medical 'gold standard':- the 'double blind, placebo controlled, randomised trial' (RTC) (British Homeopathic Association, 2005b).

The current medical paradigm is a branch of natural science, and thus a biological theory of disease has developed. Accordingly, this mechanistic theory sees disease in terms of anatomy and physiology. Disease is regarded as a biological dysfunction, a fault in the human biological system. This stance has also led to the simplistic notion that health and disease can be easily defined and distinguished from each other; that diseases are entities which, as it were, attack patients from outside. It has in addition been responsible for the reliance on objective data to the detriment of anything subjective (Wulff, Pedersen and Rosenberg, 1990).

The medical paradigm is the predominant framework at present, and because the paradigm has made many inroads in areas such as infectious diseases and surgery there is an inability or desire to look outside this paradigm (Wulff, Pedersen and Rosenberg, 1990).

The RTC has become *the* method for evaluating research in academic medicine, because of its ready applicability to pharmaceutical interventions and its ability to deal with systematic bias (Thompson, 2004). It does not, however, necessarily fit the purposes of homeopathy. Many authors favourable to homeopathy have argued that

much research conducted in homeopathy centres around its clinical efficacy (an area fraught with controversy), whereas the emphasis of research in homeopathy should revolve around its perceived real-world effectiveness (Reid, 2002), and include other types of research that are more applicable to the practise of homeopathy (The British Homeopathic Association, 2005b).

There have been positive trials conducted in laboratory situations using ultra-high dilutions with positive results which lead Reilly (2005) to observe that these new laboratory results may challenge the scientific paradigm's belief in the supposed scientific implausibility of the methods of homeopathy. He also points to observational and outcome studies conducted at the Glasgow Homeopathic Hospital and at the Charite University Hospital Medical Centre in Berlin, which both showed that homeopathy had a better outcome overall in the treatment of certain conditions compared to conventional treatment at a lower cost and reduced iatrogenesis (Reilly, 2005).

Another area of homeopathic research that is increasing in popularity is that of homeopathic pathogenic trials (HPTs) (also known as provings), where the principle of 'like cures like' is examined through the administration of medicinal substances to healthy volunteers who then report on the symptoms experienced. These substances are then used to treat patients who are presenting the same symptoms (Walach, Sherr, Schneider, Shabi, Bond and Rieberer, 2004).

However, despite this apparent incompatibility between homeopathy and the current medical paradigm (or what is known as 'conventional medicine'), CAM and homeopathy are seeing an unprecedented growth in popularity both internationally and here in South Africa (Health Products Association, 2005; Thomas and Coleman, 2004).

2.4. Growth of homeopathy

One of the areas in which the growth of CAM and particularly homeopathy can be tracked is via the increases in the sale of OTC homeopathic medicines (Vickers and Zollman, 1999).

Statistics are more readily available in Britain and the European community, than in other parts of the world. The United Kingdom has among the lowest per capita spending in the European Union for OTC homeopathy, but the British OTC market is growing by 20% a year (Fisher and Ward, 1994). In a survey in the UK, Thomas, Nicholl and Coleman (2001), found that 22.1% of adults had purchased OTC homeopathic or herbal medicines over the last 12 months. An estimated 14.6% of the English population had used OTC homeopathy sometime in their life, while 8.6% had used it in the past year. Furthermore OTC homeopathy was more popular than consultations with homeopathic practitioners.

Other countries with low per capita spending have had even more rapid growth in the OTC market with a 30% a year increase in spending in Greece and Portugal (Fisher and Ward, 1994).

A survey conducted in Italy for the period 1997-1999 found that homeopathy was the most frequently used alternative therapy, with 8.2% of the population using it and 7.7% of Italian children being treated with it. These figures have nearly doubled since a comparative study done in 1991 (Menniti-Ippolito, Gargiulo, Bologna, Forcella and Raschetti, 2002). It is interesting to note that the Italian NHS issue conventional medication free of charge but homeopathy has to be paid for ‘out-of-pocket’. The researchers concluded that there must therefore be a derived benefit over and above the equivalent free conventional treatments.

In France for the period 1982 to 1997 sales of homeopathic medicines rose 3.7 fold (Borneman, 2001). Interestingly, France has the Europe’s largest market for

homeopathy, and over 80% is dispensed on prescription rather than over the counter (Fisher and Ward, 1994). France, with 18 000 practising homeopathic physicians, would also appear to have one of the highest numbers of homeopathic physicians per capita (Borneman, 2001). In addition to this difference in the distribution of homeopathic medicines (more distributed by practitioners than retailers), there are at least six French medical schools offering homeopathic courses leading to degree qualifications. Homeopathy is taught in all mainstream Schools of Pharmacy and in four Veterinary Schools (Borneman, 2001). Furthermore, the most popular cold-and-flu treatment in France is a homeopathic medicine (Mansoor, 2005).

In the Netherlands there are 4 700 practising homeopathic physicians and 37% of the population has purchased homeopathic medicines (Borneman, 2001).

In Germany, it was estimated in 1998 that 34% of the population used homeopathic medicines (Borneman, 2001), while the number of active physicians with a qualification in homeopathy grew from 1 905 in 1993 to 3 604 in 1998, and up again to 4 285 in 2001 (Dixon, Riesberg, Weinbrenner, Saka, Le Grand and Busse, 2003). The most popular hayfever treatment in Germany is a homeopathic medicine (Mansoor, 2005).

By contrast, in the USA, there are fewer than 2000 homeopathic practitioners in the whole of the country, yet the yearly expenditure on homeopathic medicines exceeds a quarter of a billion dollars (Borneman, 2001).

In countries outside of Europe and the USA, statistics are harder to come by but, by and large, reflect similar trends. There has been an increase of homeopathic usage in countries like Russia (Mansoor, 2005). It is estimated that in Australia approximately 4.4% of the population in 1996 had purchased OTC homeopathic medicines and that 1.2% had visited a homeopathic practitioner (MacLennan and Wilson, 1996). In Cuba, formal training in homeopathy was first offered in 1993, and at this point there are already 922 homeopaths, including 320 physicians, 141 dentists, 161 pharmacists and 220 veterinary surgeons, who have added homeopathic training to their existing

conventional training (Kayne and Guajardo-Bernal, 2000). In India homeopathy has surprisingly made great strides in terms of public acceptance, and there are as many as 100 000 homeopathic doctors and over 180 homeopathic medical colleges (Mansoor, 2005).

South Africa mirrors these international growth trends, where R61 million was spent on homeopathic products in 2003, which is 16.4% higher than similar figures cited in a similar survey conducted in 2000 (Health Products Association, 2005). It is significant to note that although there are 499 registered homeopaths practising in South Africa (Porter, 2005), they account for only 1% of the gross turnover of homeopathic products sold annually in South Africa (Health Products Association, 2005).

2.5. Demographic profile of CAM users

Research in Europe, Asia, Australia and the United States indicates that there is widespread usage of CAM and homeopathy (Thomas and Coleman, 2004). This research, although not extensive, indicates that there is a pattern of usage which is reflected in the demographic profile of users, one that transcends continents.

CAM demographics from England, Italy, Germany, South Australia and America have been analysed. The most common finding was that **more women than men** used CAM; (Härtela and Volgera, 2004, National Centre for Complementary and Alternative Medicine, 2004; MacLennan and Wilson, 1996), and that **women were "older**" (Menniti-Ippolito, et al. 2002; Reid, 2002; Kayne, Beattie and Reeves, 1999).

Higher education levels are associated with greater CAM usage: (Härtela and Volgera, 2004; National Centre for Complementary and Alternative Medicine, 2004; Menniti-Ippolito, et al. 2002; Reid, 2002; Austin 1998; MacLennan and Wilson 1996). Thomas and Coleman (2004) report full time education after the age of 18 as being a factor.

Access to more financial resources was found to be an indicator (Austin, 1998). Thomas & Coleman (2004) stated people with higher gross income levels were likely to be higher CAM users and **employment** was found to be an indicator (MacLennan, Wilson, 1996).

Other factors associated with higher CAM usage were being **hospitalised in the last year,** being **former smokers** (National Centre for Complementary and Alternative Medicine, 2004) and having a **reported lower health status** (Austin, 1998).

Kayne, Beattie and Reeves (1999) found that a large number of healthcare professionals, complementary medicine practitioners, and people from other professional occupations were purchasing OTC which led him to postulate that users of OTC homeopathy are generally from **higher socioeconomic groupings** and are often have some sort of **tertiary education.**

In summary, major indicators for increased CAM and likewise OTC homeopathic usage are: being female; having a higher level of education and coming from a higher socioeconomic grouping.

2.6. Factors determining the use of CAM and Homeopathy

In addition to this distinct profile of CAM users, there is a commonality in the factors that determine individual usage. Ernst (2000) sees these factors as a broad range of interacting positive and negative motivations which include: dissatisfaction with conventional medicine care (Avina and Schneiderman, 1978) ; distrust of conventional doctors and hospitals (Austin, 1998); fear of iatrogenic disease (Endrizzi, Rossi, Crudeli and Garibaldi, 2005; Menniti-Ippolito, et al. 2002); having a holistic philosophical approach to life (The United Kingdom Parliament, 2000; Austin, 1998); the desire for increased personal autonomy over their own healthcare (Lewith, 2000); having a transformational experience (Austin, 1998); conventional medicine failed to give relief for

symptoms being experienced (Avina and Schneiderman, 1978); the consultation process itself with its patient-centred care, especially in homeopathic treatment (Mercer, Reilly and Watt, 2001); a belief that the products are natural and have no side effects (Ernst, 2004; Reid, 2002; Kayne, Beattie and Reeves, 1999); the popularity of CAM is a fad perpetuated by the many articles and advertisements in the lay press (The United Kingdom Parliament, 2000; Ernst, 2004); and that CAM therapies may be considered cost effective compared to the usual care for various conditions (Reilly, 2005; Herman, Craig and Caspi, 2004).

2.6.1. Characteristics of CAM users

Both Austin (1998), and Kersnick (2000) took this a step further and found that having a more active approach to managing their own health problems was characteristic of CAM users. In addition, Austin (1998) identified that CAM users could be categorized into two broad sub groupings. The first, consisting of those who **only used alternative therapies**, and the second, those who **use CAM in conjunction with mainstream medicine.** Each of these sub groupings exhibited distinct determinants for the usage of CAM:

1 Austin (1998) found that only 4.4% of the population under study reported relying **primarily on alternative therapies**. The research found that by examining this group in isolation, a distinctive pattern emerged. These individuals had:

- a distrust of conventional physicians and hospitals,
- a desire for exclusive control over their health matters,
- a belief in the importance and value of their inner life and experiences.

2 In comparison, Austin (1998) found that the users of **CAM in conjunction with conventional medicine** had a different profile. This sub-group tended to:

- have a holistic philosophical orientation,

- be more likely to have had some form of transformational emotional experience that has changed their world view,
- be part of a sub-culture known as New Agers by the media - this description has been empirically defined by Ray 1997 (cited in Austin,1998),
- report poorer health status than non-users, be better educated and to have experienced specific healthcare problems (e.g. back problems, chronic pain, anxiety and urinary tract problems).

Interestingly, Austin (1998) also found that the relief of symptoms was the main reported benefit and that it was cited nearly twice as often as other reported benefits.

2.6.2. Factors determining the use of homeopathy

Overall the factors determining the use of homeopathy are similar to those determining the use of CAM, however some variations are noted.

2.6.2.1. The homeopathic consultation

Avina (1978) found a slightly different trend in that the respondents in his study showed that dissatisfaction with and distrust of conventional medicine were considered the most common motivations for homeopathic usage, and homeopathic usage was largely due to negative perceptions of, and experiences with, mainstream medicine.

The homeopathic consultation has been cited as an important motivation as to why patients consult homeopaths. The homeopathic consultation allows for what Di Blasi and Kleijnen (2000) describe as the therapeutic alliance formed between the patient and the practitioner, and it is this collaborative bond that is the beneficial aspect of the consultation. This bond is fostered by what Reilly (2001) terms empathy and this in turn leads to enablement, all of which are factors that in recent times have been lacking in

the orthodox medicinal approach. This “has meant relative neglect of self-healing and holism and from this shadow complementary medicine has emerged” (Reilly, 2001).

2.6.2.2. Motivations for the use of OTC homeopathy

Despite its popularity there is a “paucity of research concerning OTC homeopathy” (Reid, 2002). However, what is available indicates that the motivations for the use of OTC homeopathy revolve mainly around the belief that homeopathic medicines are ‘natural’ and ‘not harmful’, and the one of the main motivations for the purchase of OTC homeopathic medicines is a recommendation by a friend or family member.

In a study conducted by Kayne, Beattie and Reeves (1999) in the UK, it was found that the main reasons that led respondents to buy homeopathic medicines was that “they always used them” and that being told by someone else was an important influence, with over 25% of the respondents being persuaded to purchase OTC homeopathic medicines on this basis. Reid (2002) in a similar study found that the most common reasons for OTC homeopathic use was because it was a “more natural treatment”, and that “homeopathy can cause no harm”. The most influential factor (as in the Kayne, Beattie and Reeve’s study) in prompting the initial purchase of a homeopathic medicine was because of a recommendation by a friend or family member (45%), whereas only 20% used OTC homeopathy on recommendation of an alternative medicine practitioner.

2.7. The Difference between OTC and practitioner-based homeopathy

Homeopathy is a therapeutic method which was developed by Samuel Hahnemann (1755-1843) and is now practised throughout the world (Cummings and Ullman, 1997). Homeopathy clinically applies the “law of similars” and uses medicinal substances in weak or infinitesimal doses (Jouanny, 1993). The law of similars is synonymous with ‘**like cures like’** and means that “the same things which cause the disease cure it" (Jouanny, 1993). In other words, substances which cause certain symptoms in healthy

individuals have the ability to cure the same symptoms when they arise in diseased persons (Cummings and Ullman, 1997).

The homeopathic medicines are mainly identified by what are termed "**provings**". Cummings and Ullman (1997) describe provings as "the procedure for giving doses of a substance to healthy subjects, in order to find what it causes in overdose, and thus, what it has the capacity to cure when given to ill people in potentized dose".

In this respect potentization is the means by which **ultra-high dilutions** are manufactured and is defined by Cummings and Ullman (1997) as "the pharmaceutical process of repeated **dilution** with **succussion** (vigorous shaking) by which homeopathic medicines are prepared".

Potency refers to the product of **potentization.** The different potencies are a product of the dilution process, and serial dilutions are produced according to a number of different scales. The most common dilution scales being a ratio of one drop to 10, or one drop to 100, of medicine to solvent. The 1:10 scale is denoted by either an **x**, or a **D** following the number of dilutions that have occurred. The 1:100 scale is denoted by a **C** or **cH**.

In homeopathic terms, the higher the dilution the more homeopathically powerful the medicine and, in consequence, the more accurate the prescription needs to be (Vithoulkas, 1980).

Practitioner-based-homeopathy is practised by applying the fundamental principles of homeopathy, viz. the law of similars, the single medicine, and the ultra-high dilution. An integral part of the prescription of a homeopathic medicine is a lengthy interview to determine all the symptoms the patient is experiencing. The homeopathic physician then determines which medicine best matches the symptoms the patient is experiencing and prescribes it. The principle of the single remedy states that a single medicine should cover all the symptoms the patient is experiencing: **mental, emotional, and physical** (Simon, 2006).

OTC treatment, on the other hand, consists predominantly of the use of **complexes,** ("combination medicines" or "formulas"). These complexes are made up of three to eight low-potency (usually 3x to 12x) homeopathic medicines mixed together. The various manufacturers choose the medicines most commonly prescribed for specific symptoms and assume that one of them at least will help cure the ailment that the consumer has. These combination medicines are popular on the OTC market because they are easy to prescribe, they work, and are much safer than conventional drugs, making them preferable to a growing number of consumers (Ullman, 1995; Ullman, 1991:22).

Also available OTC (but less prevalent) are what are, termed "**simplexes'.** A simplex medicine is a term applied to a single homeopathic medicine. The type of simplex medicines commonly found OTC are the **polychrests** – a single homeopathic medicine with a wide spectrum of activity, making them suitable for the OTC environment (Kayne, Beattie and Reeves, 1999). Commonly known examples of polychrests include; Arnica for bruising and Thuja for warts.

2.8. Regulation of OTC medicines in South Africa

There are no regulations specifically aimed at regulating complementary medicine, as such, in South Africa, but the industry is subject to general regulations relating to the manufacture, sale and distribution of medicine as contained in the **Medicines and Related Substances Control Act, 101 of 1965.**

Section 22A(3) of the Medicines Control Act states "Any Schedule 0 substance may be sold in an open shop." As the Law presently stands, this infers that OTC medicines are not prescription medicines, and therefore there is no restriction in the level of potency that can be sold in a health shop. This is an area of concern for many in the homeopathic profession as the more homeopathically powerful dilutions can have unintended and potentially serious consequences if incorrectly prescribed (Vithoulkas, 1980), and has resulted in the development of an 'industry understanding' that any

potency over 30cH is only distributed to retailers who are judged by the wholesaler to have knowledge of homeopathy (Peter, 2005).

2.9. Safety of OTC homeopathic medicines

Safety is an area of concern when considering OTC homeopathic medicines. There is little evidence on the safety of homeopathic medicines and it is a subject that is not commonly referred to in the homeopathic literature and, apart from letters and editorials, is seldom a focus of attention in conventional medical journals (Dantas and Rampes, 2000). According to the Italian National Institute of Statistics (ISTAT), the belief that natural therapies are harmless has encouraged self-prescribing (Endrizzi, et al. 2005). However, even homeopathic medicines are not without adverse effects (Endrizzi, et al. 2005). Though the adverse effects experienced are generally minor and transient (Dantas and Rampes, 2000), there should be an awareness by the retailers of OTC medicines of their existence and potential effects: particularly considering that most adverse effects occur through the use of complex medicines, those readily available within the OTC sphere (Dantas and Rampes, 2000; Endrizzi, et al. 2005).

The areas of concern that have been highlighted by various authors, and that can impact on the OTC setting, include: distinguishing between adverse events and homeopathic aggravations; self-prescription of homeopathic OTC products in conjunction with the use of conventional medication; and the use of homeopathic treatment OTC or otherwise without the knowledge of the attending medical practitioner.

Homeopathy as a therapy lacks the life-threatening side effects associated with pharmaceuticals, but is not without adverse effects (Endrizzi, et al. 2005). A review of data from 1970 to 1995 highlighted a higher incidence of adverse drug reactions in homeopathic medicines compared to placebo controlled trials, although these were minor and transient (Dantas and Rampes, 2000). Both Endrizzi, et al. (2005) and Anelli, Scheepers, Sermeus and Van Wassenhoven (2002) found that homeopathic adverse

effects during homeopathic treatment occurred at an incidence of 2.7%, whereas Riley, Fischer, Singh, Haidvogl and Heger (2001), found that adverse effect to treatment occurred at in incidence of 7.8%, but at a far lower rate than the adverse effects reported during conventional medicinal treatment (22.3%).

These adverse effects associated with homeopathic treatment can be divided into two main categories:

1 **Indirectly caused adverse effects.**

These adverse reactions can be attributed to homeopathy being misapplied, and though present are not intrinsic to homeopathy itself (Reilly, 2005). They include the possibility of misdiagnosis and an over reliance on the power of homeopathic therapeutics (Dantas and Rampes, 2000). Dantas and Rampes (2000) mentioned coming across reports in conventional medical journals of critical delays in treatment due to an over reliance on homeopathic treatment. Another area of potential harm is that patients wish to discontinue conventional therapy inappropriately (Endrizzi et al 2005).

2 **Directly caused adverse effects**

Within the category of directly caused adverse effects two areas need to be considered:

- **The 'homeopathic aggravation'** occurs after the administration of a homeopathic medicine and is: "an initial aggravation of the patient's symptoms, followed by an improvement" (Endrizzi, et al. 2005). This reaction is welcomed by the homeopath assessing the patient, as long as it is accompanied by a general improvement and the duration and intensity are kept to a minimum. The aggravation is seen as a negative adverse reaction when not followed by an improvement. This type of aggravation may occur due to the homeopathic medicine: not covering the patient's symptoms; being given too frequently or given in the incorrect potency; or the patient being 'hypersensitive' to the homeopathic medication (Endrizzi, et al. 2005), where

'hypersensitive' refers to patients that react in an excessive manner to homeopathic medicines where new symptoms are produced rather than a reappearance of the patient's old symptoms.

- **The second category of direct adverse effects consists of reactions that are associated with more conventional presentations.** These types of reactions are rare and generally mild not requiring specific treatment (Endrizzi, et al. 2005). Endrizzi, et al. (2005) found that many adverse effects reported by the public were due to multiple homeopathic medicines in low dilution, administered simultaneously, or in homeopathic complexes and, in 35% of the cases, had been recommended by a person who was not a doctor or pharmacist. However, there have been a few serious cases including one of lactose intolerance (Endrizzi, et al. 2005) and one of an allergic reaction to a mixture of grass pollens (Dantas and Rampes, 2000).

  Where serious adverse events have been reported, authors are quick to point out that these adverse effects have occurred not in reaction to homeopathic dilutions per se, but due to products that have been mislabelled and their contents misrepresented. These adverse events have occurred where the homeopathic dilutions are mixed with mother tinctures of plants or low concentrations of toxic metals or acids (Endrizzi, et al. 2005; Dantas and Rampes, 2000). They also point out that it is important to only use reputable manufactures that follow their National Pharmacopoeia (Reilly, 2005).

  There have been no studies in South Africa on the reported incidence of adverse effects of OTC homeopathy, but lactose is a carrier vehicle for dry homeopathic medicines so could cause an allergic reaction, and most OTC homeopathic medicines consist of complexes.

2.9.1. Potential drug interactions.

Kayne, Beattie and Reeves (1999) and Reid (2002) found that 13% of respondents using OTC homeopathy were doing so in conjunction with their conventional medication. There has been no research into this aspect of safety concerning OTC homeopathy, but as Reid points out there is a possibility of an interaction that could cause an adverse effect, and moreover, either the homeopathic medicine could negate the effect of the conventional medicine or vice versa.

2.10. Conditions being treated with OTC homeopathic medicines

Reid (2002) and Kayne, Beattie and Reeves (1999) found that users of homeopathic medicines commonly resorted to OTC products in order to treat the following types of conditions:- respiratory, mental/psychological (including anxiety and depression), bruising and injuries, gastrointestinal, migraine and headaches, musculoskeletal, skin complaints, hangover, cardiovascular, infections, allergies, constitutional, rheumatic, urogential, general pain, ear, eyes, colds, coughs, flu.

2.11. Ignorance concerning homeopathy

It would appear that although homeopathic medicines are being widely distributed there is a paucity of knowledge displayed concerning homeopathy in general, what is being taken by both the general public and, more concerning, those who are retailing OTC homeopathic medicines.

2.11.1. Ignorance of the public

Furham (1999) concluded that that the British public, though they “seem relatively well disposed” toward homeopathy, were “fairly ignorant” about the topic. When the results

were analysed it was found that only 5% of respondents actually mentioned the central tenet of 'like cures like' and the giving of very small (dilute) doses. A majority of respondents (43%) said that homeopathy was a natural or herbal medicine, whereas 25% thought it meant an alternative/complementary therapy. 12% of respondents confused homeopathy with psychotherapy or aromatherapy. The results of the study were surprising considering the history and popularity of homeopathy in Britain, that homeopathy is available under the National Health Service (NHS), and that 30% of the population under study had received some form of homeopathic treatment. This sudy indicates that far less is known about the basic principles of homeopathy than previously thought.

In the USA Borneman (2001) asserts that consumers who purchase OTC homeopathic medicines (usually complex products), via chain drugs stores, chain grocery stores and mass merchandisers, do not actually know that the medicines are homeopathic. All they appear to know is that the products are 'natural', have no side effects, and, judging by repeat sales, that the medication has been effective. He adds that most consumers of homeopathic medicines cannot distinguish between homeopathic medicines and herbal medicines.

2.11.2. Ignorance by the retailers of OTC homeopathy

In South Africa most OTC homeopathic medicines are retailed via pharmacies and health shops. There has been no research in health shops concerning OTC homeopathy. However, a study conducted by Daphne (1997) found that South African pharmacists had a positive and accepting attitude towards complementary medicine, but lacked knowledge of these therapies. The therapy that South African pharmacists displayed the most awareness and knowledge of was homeopathy, and most believed that homeopathic medicines were effective. 17.5% had received some type of training in homeopathy during their pharmacy education, 27.5% had consulted a homeopath, and out of the 74% who had referred patients to complementary practitioners, 51% had referred to homeopaths.

Daphne (1997) found that though this was the case overall there was a decided lack of knowledge concerning homeopathic medicines. Forty two point five percent thought that homeopathic medicines were effective because they contained herbal ingredients, and 77% thought that they were effective because people had faith in them (the placebo effect). When it came to examining the principles of homeopathy, only 36.9% attributed effectiveness to ‘like cures like’, only 3.1% knew about succussion, and only 22.5% knew about dilutions.

Likewise, a study of pharmacists in England found a similar pattern of ignorance regarding homeopathy. A minority of respondents thought homeopathic medicines were effective, none of the respondents knew about succussion or dilution, 35% knew about the principle of ‘like cures like’, and 77% thought homeopathic medicines worked by faith, namely the placebo effect (Davies and Kayne,1992).

When the same questions were asked of pharmacy shop assistants and technicians they were found to be more knowledgeable and had a more favourable attitude to homeopathic medicines. The authors attributed this difference to the nature of pharmaceutical training which embraces the same paradigm as conventional medicine (Davies and Kayne, 1992).

This ignorance of homeopathy is particularly concerning when one considers that most patients according to Ernst (2004) are reluctant to tell their General Practitioner (GP) about their use of CAM, and often rely on the pharmacists for advice concerning CAM matters, mainly because pharmacists are generally accepted as having the prerequisite levels of knowledge.

2.12. The Health shop environment and implications.

In general, the majority of OTC homeopathic medicines are marketed through retailers that sell health products (including large retail chains like Clicks in South Africa and Boots in the UK), through pharmacies, health shops, grocery stores and via mail-order over the internet. In the USA retailers also include mass merchandisers. There is little or no research on health shops, particularly in the area of OTC homeopathic medicines. Available information is, on the whole, particularly disparaging about health shops and advice given both within conventional medicinal and homeopathic circles (The Flouroquinolone Toxicity Research Foundation, 2005; Mills, Ernst, Singh, Ross and Wilson, 2003; Healy, Burgess, Siebers, Beasley, Weatherall and Holt, 2002).

The public internationally tend to assume that natural is synonymous with harmless and healthy, and are seeking treatment advice from health shop staff for conditions that range from colds and influenza to adjuncts for chemotherapy. Studies show that few health shop staff have any kind of formal training in health or CAM. Approximately 34% receive in-store training, while 15% to 35% acquire their knowledge from books or suppliers (Canadian Egg Marketing Agency, 2005).

In South Africa, historically, there has always been a close association between the health shop industry and homeopathy-: many of the original South African homeopaths started health shops from their places of practise in the 1950's and 60's (Prinsloo, 2006). The first such shop was opened by the founder of Pharma Natura - now one of the country's leading homeopathic suppliers (Pharma Natura, 2006). It is hoped that this relationship has had a beneficial effect on the attitudes to, and the understanding of, homeopathy by the present day health shop staff.

2.13. Conclusion

Most people come into contact with homeopathy via the retail market, and mostly through the recommendation of an unqualified person. They are using homeopathy because they generally believe that homeopathy is natural and free from harm (Reid, 2002; Kayne, Beattie and Reeves, 1999). The users of homeopathy and OTC homeopathy appear to be generally quite ignorant concerning homeopathy and what they are taking (Borneman, 2001; Furnham, 1999). The people who are selling OTC homeopathy also appear to be lacking in knowledge about the topic, and advice given by health shop staff seems to be questionable (Healy, et al. 2002).

Pharmacy and health shop staff are in a position to have a one-to-one relationship with the users of OTC homeopathy, and as such are in a position to act as educators of the public, giving advice on the OTC homeopathic medicine required, possible effects of treatment, safety issues, as well as how to take the medicines correctly, and to be able to recognize where referrals to practitioners are necessary. This is only possible if the pharmacy and health shop staff themselves have a good basic understanding of homeopathy.

Thus there is a need to ensure that those who are responsible for selling OTC homeopathy have some basic level of understanding of the principles of homeopathy, because the application of homeopathy is different to most other forms of medicine, natural and conventional alike. Homeopathy is a system of medicine that is based on a set of principles the central one being “like cures like”. Homeopathic medicines are made in ultra-high dilutions, and their manufacture and administration are dependent on these principles for their most beneficial application.

Because of these methods, homeopathy finds itself in conflict with the current scientific and medical paradigm. There is little research in the area of OTC homeopathy and what little there is has been conducted in pharmacies. It has been suggested that because pharmacists are trained within the current medical paradigm, their understanding of

homeopathy will be limited (Davies and Kayne, 1992). Health shops on the other hand have not been surveyed and it is anticipated that because their focus is CAM that they will display a greater degree of understanding of the principles of homeopathy.

Thus the aim of this research was to assess the level of understanding of homeopathy and homeopathic medicines within the health-shop environment in South Africa to ascertain whether this widespread lack of knowledge was also present in this environment.

Chapter 3

Methodology

3.1. Design

A prospective epidemiological study, which is quantitative in nature, and assesses the understanding of health shop assistants in relation to homeopathy in the Gauteng area.

3.2. Sample

3.2.1. Recruitment

The researcher obtained a list of health shops in the Gauteng area. The owner/manager in the shop was approached either directly by the researcher by visiting the health shop, or by telephone, and asked to participate. They were asked to nominate two participants from their staff who were fluent in written and spoken English, who interacted with the public giving advice and selling health products, and who were not student or qualified homeopaths. The owner/manager could nominate themselves.

3.2.2. Sample method

The sample was stratified by region. A list of all the health shops in the greater Gauteng area was obtained. The locations of the health shops were plotted on a map of the Greater Gauteng area (Borrageiro, Borrageiro and Morrison, 2003: ii-v), then the area was divided into 4 sections and the sample group was proportionately calculated.

Table 3.1. sample group calculation

Sections	A	B	C	D	Totals
Number of health shops	14	20	19	14	67
% Ratio of area to area	21%	30%	28%	21%	100%
Minimal regional requirement of 12%	2	3 (as the relative ratio is higher)	3 (as the relative ratio is higher)	2	10 (at 15%)

A minimal regional requirement of 12% is necessary for a statistically significant result (Langworthy and Smink, 2000), however because the size of the population was relatively small a minimal regional requirement of 15% was used. The sampling method resulted in 67 health shops being selected for the study.

3.2.3. Sample Size

All the health shops in the Greater Gauteng were contacted and their participation requested. Out of the 67 health shops on the original list of all health shops in the Greater Gauteng area, only 49 fulfilled the health shop selection criteria. The health shops were restricted to a maximum of 2 responses per shop, and therefore there was a maximum population size of 98 participants. The eventual sample size was 38, which represented a 39% response rate.

3.2.4. Sample characteristics

3.2.4.1. Inclusion criteria

3.2.4.1.1. Health shop inclusion criteria

1. Proof that the health shop was a legitimate enterprise (e.g. VAT registration number).
2. The health shop could be part of a chain or franchise.
3. The health shop had to fall within the parameters of the Greater Gauteng region (Borrageiro, et al. 2003:ii-v).
4. The health shop had to be an independent entity and not associated with any other business entity (e.g. it could not be situated within a pharmacy).

3.2.4.1.2. Population group inclusion criteria

1. Population group had to be fluent in written and spoken English because the language of the questionnaire was English.
2. Population group had to deal directly with the customers, selling and giving advice on health products.

3.2.4.1.3. Questionnaire inclusion criteria

1 Informed consent had to be completed by the participants prior to inclusion into the study. In this respect the participants had to read the letter of information (Appendix J), agree to answer the questionnaire and sign the informed consent form (Appendix C) prior to answering the questionnaire (Appendix K).

3.2.4.2. Exclusion criteria.

3.2 4.2.1.Health shop exclusion criteria

1 . No proof that the health shop is a legitimate enterprise

2 . The health shop was located outside of the parameters of the greater Gauteng region.

3 . The health shop was situated within the premises of another business, for example, situated within a pharmacy.

4 No permission from the health shop owner/manager for the use of their premises/employee time in order to complete the research.

3.2.4.2.2. Population group exclusion criteria

1 . Population group was not fluent in written and spoken English**.**

2 . Population group did not deal directly with the customers, selling and giving advice on health products.

3 . Population group was a qualified or student homeopath.

3.2.4.2.3. Questionnaire exclusion criteria

1 . If informed consent was not received or the participants did not read the letter of information or did not agree to answer the questionnaire and did not sign the informed consent prior to answering the questionnaire.

2 . Any person who participated in the focus group or pre-test questionnaire

3.3. Method

3.3.1. Contact with health shop

The researcher contacted the shop owner/manager either by entering the health shop directly, or by telephone.

3.3.2. Initial contact

The researcher introduced themselves as a Masters student conducting research on homeopathy, which required the completion of a questionnaire. The researcher either explained what was entailed in the shops participation, or if it was not convenient at that time made an appointment for the same purpose.

3.3.3. Discussion with manager/owner

As part of the discussion the researcher explained that the research entailed the completion of a questionnaire (Appendix K) by the members of staff who serve customers in the shop. The owner/manager was given a letter of information outlining all the requirements of the research (Appendix I). Permission to conduct research in their place of business was requested, and a consent form was signed by the owner/manager (Appendix C).

The researcher then discussed the inclusion and exclusion criteria and requested that the owner/manager nominate two suitable participants. The researcher confirmed that the participants' identities and that of the health shop would remain confidential and that the researcher would not be present during the completion of the questionnaire.

Once the owner/manager agreed to allow the questionnaire to be completed, the researcher established a convenient time, which was suitable for the questionnaire to be handed to the nominated staff members. The manager/ owner could be included as a participant.

3.3.4. Contact control procedure

The researcher utilized a control sheet to record all contact or telephone calls to prospective population groups.

3.3.5. Site visit

Contact was made directly with the nominated participants. The participants were given the letter of information (Appendix J) to read in the presence of the researcher. This was to ensure that the letter was read, the contents understood and any questions by the participants answered. The letter of information was retained by the participants. The participants were then given the informed consent to read and sign (Appendix C).

The signed informed consent form was retained by the researcher as proof of participation. The participant was reassured that their identity would remain anonymous and were given the questionnaire to complete (Appendix K). A time was agreed upon for completion and collection of the questionnaire.

3.3.6. Completion of questionnaires.

A maximum of two participants per health shop were permitted to complete the questionnaire. The participants were instructed both verbally and via the letter of information that the respondents were to complete the questionnaire on their own, without consultation with any other person or book.

The health shops sampled and the completed questionnaires were coded to ensure confidentiality and anonymity of participants and shops. The coding system identified the area in which the health shop was located but not the name of the shop.

3.4. Research tool

3.4.1. Background

The research tool utilized was a questionnaire that had been developed by the researcher and a concurrent researcher (de Villiers, 2006) looking at the same concepts

in a different population group viz pharmacy front shop assistants. The similarity between the two population groups lent itself to the use of the same questionnaire. Both groups were generally lay people who work behind the counter selling and giving advice on health products.

According to Hall and Hall (1996) a social survey using questionnaires is widely recognized as a standard method of collecting information. Its purpose is to generate information in a systematic fashion by presenting all participants with questions in a similar manner, and recording their responses in a methodical way. It addresses the issue of reliability of information by reducing and eliminating differences in the way in which questions are asked, and how they are presented.

The purpose of this questionnaire was to assess the level of understanding of homeopathy by health shop assistants. Questionnaires that had been utilized in similar research studies were examined, namely, Davies and Kayne (1992), (Daphne (1997), Wortmann (1997) and Small (2004). The questionnaire was then formulated using generally accepted guidelines as set out by, Lavan (1985), Hall and Hall (1996), Mouton (1996), Eckhardt and Ermann (1997) and Bernard (2000).

It was assumed that the health shop assistants would already have a basic understanding of homeopathy in order to do their job, and the questions were formulated to assess this basic understanding. The format of a series of self-administered, fixed choice, or closed ended questions were selected for the following reasons:

1. Time and budgetary constraints.
2. Self administered questionnaires allow for a larger population group to be sampled in a shorter period of time.
3. The nature of this research study lends itself to this format. The aim of the research was to determine whether the population group concerned had a basic understanding of the core concepts of homeopathy. In-depth interviewing was not necessary.
4. Self-administration reduces bias due to interviewer manner or

characteristics, (Hall and Hall, 1996).

5. Participants are afforded a greater sense of privacy and anonymity, (Eckhardt and Ermann, 1997).
6. Closed ended questions are efficient and unambiguous for the purpose of analysis (Bernard, 2000).

3.4.2. Focus group

Once the questionnaire had been developed, a focus group was conducted to validate the content of the questionnaire and the suggestions were noted.

The group consisted of ten participants:

1. Two pharmacy front shop assistants.
2. Two health shop assistants.
3. One pharmacist.
4. One statistician.
5. One homeopath.
6. Two researchers.
7. A supervisor / scribe and transcript recorder.

The participants were specifically selected by the researchers as representative of areas of expertise that would be required to validate the questionnaire content.

The questionnaire needed to fulfil the following criteria:

1. The questions asked needed to be aimed at the correct level of understanding.
2. The language and terms used needed to be understandable.
3. The questions needed to be logical and meaningful.
4. The questions needed to be relevant to the subject of the research.

The focus group consisted of two pharmacy front shop assistants and two health shop assistants for the following reasons:

1. The population group being surveyed by this researcher was health shop assistants.

2. The population group being surveyed by the concurrent researcher were pharmacy front shop assistants.

The pharmacist was present because he was aware of the working environment within a pharmacy. His input as far as the above criteria are concerned was particularly relevant in the following areas: Factors that could cause resistance to the completion of the questionnaire including:

1. Length of the questionnaire.
2. Time taken to complete the questionnaire in a busy shop environment.
3. Types of questions that may prevent the shop owner from wanting to participate in the survey.

The reason for the presence of the homeopath was twofold. The homeopath concerned was a qualified homeopath, as well as having spent time working in and managing a health shop, and therefore was able to give input on the homeopathic validity of the questions, check the questions fulfilled the criteria above as well as giving the same type of input as the pharmacist in terms of the overall functioning of health shops.

The statistician was present to ascertain the statistical viability of the questionnaire.

The researchers presented the questionnaire, and noted comments.

The supervisor acted as facilitator and scribe.

Before commencing the focus group each participant was required to:

1. Read an information letter (Appendix A).
2. Sign a confidentiality statement (Appendix B).
3. Sign an informed consent form (Appendix C).
4. Sign a Code of Conduct Form. (Appendix D).

Each participant was given a copy of the proposed questionnaire (Appendix E). The

questions were presented numerically by the researchers and feed back was requested from the participants (Appendix F).

The researchers modified the questionnaire according to the suggestions made. At the end of the discussion opportunity was given for any comment on the questionnaire and it was suggested that a pre-test questionnaire be conducted.

3.4.3. Pre-test questionnaire (Appendix G; Appendix H)

A pre-test study was conducted on a selected health shop to assess the following:

1. Period of time to complete questionnaire.
2. Any ambiguity or misunderstanding.
3. Clarity of the instructions.
4. Layout.
5. Anything that offended or made the participant uncomfortable.
6. Further suggestions regarding linguistics of the questions.

Based on both the focus group and pre-test group suggestions, the questionnaire was finalised and submitted to the Durban Institute of Technology Research Committee. The Committee felt that there was not enough homeopathic input on the validity of the questionnaire and that the questionnaire needed to be expanded. The questionnaire was then given to four qualified homeopaths with health shop experience for their assessment and expanded based on their suggestions. The questionnaire was pre-tested again before being finalized.

3.4.4. Validity

A focus group was used because within a questionnaire one needs to address issues that surround validity, the components of which are: face validity, content validity, construct validity and criterion validity. The definitions of these concepts and how they are addressed in the respected questionnaires are as follows (definitions taken from Bernard, 2000 unless otherwise stated):

3.4.4.1. Face validity

Face validity is the simplest type of validity, which is determined by agreement between researchers and those with a vested interest in the questionnaire (i.e. interpreted in this study as those participants of the focus group), that 'on the face of it' the tool seems valid, unambiguous and easily interpreted by a lay person.

3.4.4.2. Content validity

An instrument has *content validity* when the content of the questionnaire is considered effective, and well rounded enough to be able to assess a particular concept.

3.4.4.3. Construct validity

Construct validity measures how accurately answers to questions in the questionnaire reflect theoretical predictions of a particular construct. The focus group is here utilized to ensure that the questionnaire is sound in establishing that which it is to be used for within the context of the research aim and objectives.

3.4.5. Discussion of questionnaire (Appendix K)

The questionnaire consisted of eight sections: A to H. A majority of the questions were fixed choice.

3.4.5.1. Demographic questions related to participant

Sections A and B, Questions A1 to A5, and B1. to B7., pertained to the population under study and served to establish, age race, home language, educational levels, employment position, and length of time worked in health shops.

3.4.5.2 Questions related to the health shop

Section C, Questions 1,2, 3, 4, 5, 6, 7 and 8. These questions aimed at finding out:

1. If homeopathic medicines were stocked.
2. If homeopathic simplexes were stocked.
3. What potencies were stocked.

4 If homeopathic complexes were stocked.

5 What ranges of homeopathic medicines were stocked.

6 Were homeopathic medicines dispensed as per script.

7 Who did the dispensing.

8 The qualification of person doing the dispensing.

9 Was there a qualified or student homeopath working in the health shop.

3.4.5.3. Questions related to the health shop assistant

Section E, Questions 1 and 2 relate to the participant concerned and aimed at gathering information about their interaction with homeopathy:

1 Had the assistant had a homeopathic consultation.

2 Had the assistant ever taken homeopathic medication.

Section E Question 3 and Section F, Question 4 relate to the assistant and were aimed at gathering information about their perceptions of homeopathy:

1 Did the assistant think that homeopathic medicines are effective?

2 Why did the assistant think they are effective?

Section E, Question 4 asks the assistant if they thought that they required more comprehensive training in homeopathy.

Section D, Questions 1 and 2 related to the application of homeopathy in the health shop by the assistant.

1 Approach used by the participant when selecting homeopathic medicines for customers.

2 For which conditions did the participants recommend homeopathic medicines.

Section D Question 1 aims to find out if the assistant ever referred customers to any other practitioners and if so to whom.

3.4.5.4 Questions relating to the understanding of homeopathy by the participant

Section F examined knowledge of storage and administration of homeopathic medicines by the participant.

Section G**.** This is a fixed choice section that examined levels of understanding of the following homeopathic concepts:

1 . Law of similars.
2 . Totality of symptoms.
3 . Potentization.
4 . Homeopathic aggravation.
5 . Homeopathic proving.
6 . Succussion.
7 . Homeopathic simplexes.
8 . Homeopathic complexes.
9 . Centesimal and decimal dilutions.

Question G1, requested the participant to assess their own level of knowledge of homeopathy, and the remainder of the section G2 - G12 allowed for five choices and requested that the participant indicate the statement that related to their understanding of the concept concerned.

Section H, was a true/false section that had three functions:

1 As a check for section G.
- Question H 12 is a check for Question G 3.
- Question H 13 is a check against G4.
- Question H 14 is a check against G2.
- Question H 15 is a check against G 9.
- Question H 16 is a check against G 12.

2 As a means of checking popular misconceptions.
- Questions H1 and H2 test the perception that anything natural is classified as homeopathic.
- Questions H7, H8 and H9 look at the perception that homeopathy is

unscientific and based on a placebo effect.

3 As a means for checking basic concepts.

- Questions H3, H4, H5 and H6 examine knowledge of homeopathic medicinal administration; how homeopathic medicines should, and can be taken and what can interfere with this process.
- H10 examines knowledge of homeopathic medicinal origins.
- H11 tests basic safety knowledge that should be present when advising the public.

3.4.5.5. Questions relating to factors that could influence the participants understanding of Homeopathy

These factors included:

1 Educational levels, Questions A5, B3, B4, B5, B6 and B7.

2 Length of time worked in health shops, Question B2.

3 Employment position, Question B1.

4 Whether homeopathic medicines were stocked or not, Question C1.

5 Whether homeopathic medicines were dispensed or not. Question C7.

6 Access to a homeopath, Question C6.

7 Past experience with homeopathy;

- had the participant ever been treated by a homeopath, Question E1.
- Had the participant ever used homeopathic medicines, Question E2.

8 Did the participant think that homeopathy was effective, Questions E3 and F4.

3.5. Data and its analysis

3.5.1. Statistical methods

The completed questionnaires were collected by the researcher and captured. The captured data was then forwarded to a statistician. SPSS version 11.5 (SPSS Inc., Chicago, Ill, USA) was used to analyse the data. Frequency tables and bar charts were used to describe the demographics and responses to questions in the sample. A knowledge score was computed by assigning a score of 1 to each correct answer to the questions on knowledge (Section F Questions 1-3, section G and section H) and summing up the scores for each participant. Question G12 was given a weighting of 2 points. Knowledge score was expressed as a percentage out of a possible total of 45 points. This was categorized at the median score of 78%:- lower than this score indicated a relatively poor level of knowledge and higher than this score indicated a good level of knowledge. Factors associated with a good level of knowledge were assessed by chi square tests or Fishers exact tests in the case of two by two tables. Multivariate analysis was not performed due to small sample size. A p value of <0.05 was considered as statistically significant.

Chapter 4

Results and discussion of results

4.1. Introduction

This chapter will examine and discuss the results of this study in relation to the research objectives as elucidated in Chapter One.

4.1.1. Research objectives

4.1.1.1. Objective one

The first objective was to develop a profile of health-shop staff in terms of various demographic factors identified as pertinent to determining their knowledge of homeopathy (viz. age, language, ethnicity, gender and level of education).

Hypothesis one

These factors would determine a profile of the health shop staff different from that of the CAM user.

4.1.1.2. Objective two

The second objective was to establish a profile of health shops with respect to homeopathy with specific attention being placed on the availability and use of homeopathic products, as well as staff knowledge and training in homeopathy.

Hypothesis two

It would be determined that health shops stock a limited range of homeopathic products.

4.1.1.3. Objective three

The third objective was to determine the level of understanding of homeopathy amongst health-shop staff.

Hypothesis three

There would be a poor understanding of homeopathy amongst health shop staff.

4.1.1.4. Objective four

The fourth objective was to determine which factors related to the health-shop staff profile as well as the health-shop profile, influenced the level of understanding of homeopathy amongst health-shop staff.

Hypothesis four

There would be no association between the staff profile and health-shop profile with respect to the level of understanding of homeopathy.

The type of data, its collection, the composition of the sample, the limitations of the study and key terms will be discussed initially. The results will then be presented under the following sections:

4.4. Demographics
4.5. Work experience and training
4.6. Homeopathy in the health shop environment
4.7. Personal experience of homeopathy by health shop staff
4.8. Assessment of levels of knowledge of participants
4.9. Summary and conclusions

The objectives of the research will be discussed with the relevant section, with objective one being discussed at the end of section 4.4. (Demographics), objective two being discussed in section 4.6. (Homeopathy in the health shop environment), and objectives three and four being discussed at the end of the chapter under section 4.9. (Summary

and conclusions).

4.2. Data

4.2.1. Primary Data

The primary data in this study was collected by means of a quantitative questionnaire consisting of a series of fixed choice, or closed ended questions, that were self-administered.

4.2.2. Secondary Data

The secondary data used consisted of literature from various sources including journal articles, research dissertations, books, interviews, the internet, emails, media articles and anecdotal through various qualified homeopaths and the health shop staff talked to in the course of the research. In addition the researcher has experience of working in a health shop.

4.2.3. Data admissibility

The sample group was selected using a list of all the health shops in the Greater Gauteng area. The original list consisted of 67 health shops and was found to be out of date. The researcher located an additional 12 shops taking the total number on the list up to 79.

Table 1: Population and sample group.

Shops excluded from participation	
Closed	16
Beauty therapy	4
Body building/sports shops	1
Pharmacies	5
Other	3
Used for piloting of questionnaire	1
Total Number of shops excluded	**30**
Shops included	
Did not want to participate	16
Participated	33
Total number of shops included	**49**

There were 49 health shops that fulfilled the health shop inclusion criteria (Table 1). A maximum of two participants per shop were recruited to complete the questionnaire, therefore allowing for a total of 98 responses. Of the 33 health shops that agreed to participate, 38 questionnaires were returned allowing for a total 39% response rate.

Most of the health shops in the area were small concerns, and the researcher found that in approximately 20% of cases, there was only one staff member present in the shop managing and serving customers. This meant that many of the shops would only have a maximum of one response therefore making the sample group more representative of the population group.

4.2.4. Limitations of the study

The data collected from the questionnaires, was assumed to have been completed by the participants recruited with out any collaboration of any kind, however, because the questionnaire was complete out of the presence of the researcher, this could not be guaranteed.

The managers or owners of the health shops were requested to select the members of the staff (including themselves), who fulfilled the population inclusion criteria (i.e. .those members of staff who deal with the public and are fluent in both written and spoken English - the language of the questionnaire).

This purposive sampling type of recruitment was used because the owners/managers were in a position to correctly identify the staff members who fulfilled the population inclusion criteria. The managers/owners may have biased the results of the study by recruiting those members of staff who they felt were most knowledgeable about homeopathy. However, it is inevitable that any sampling process, no matter how carefully carried out, will always result in a sample that is less than perfectly representative of the population (Dyer, 1997).

4.3. Key terms

Knowledge: as used here is the awareness and understanding of facts, truths or information gained in the form of experience or learning. The two main types of knowledge examined by this study are - inferential and factual knowledge (Knowledge, 2005).

Factual Knowledge is based on direct observation, it is the knowing of what, not how (Knowledge, 2005).

Inferential knowledge is based on reasoning from facts or from other inferential knowledge such as a theory, and is based on the how (Knowledge, 2005).

p value of <0.05 was considered as statistically significant.

4.4. Demographics

4.4.1. Gender

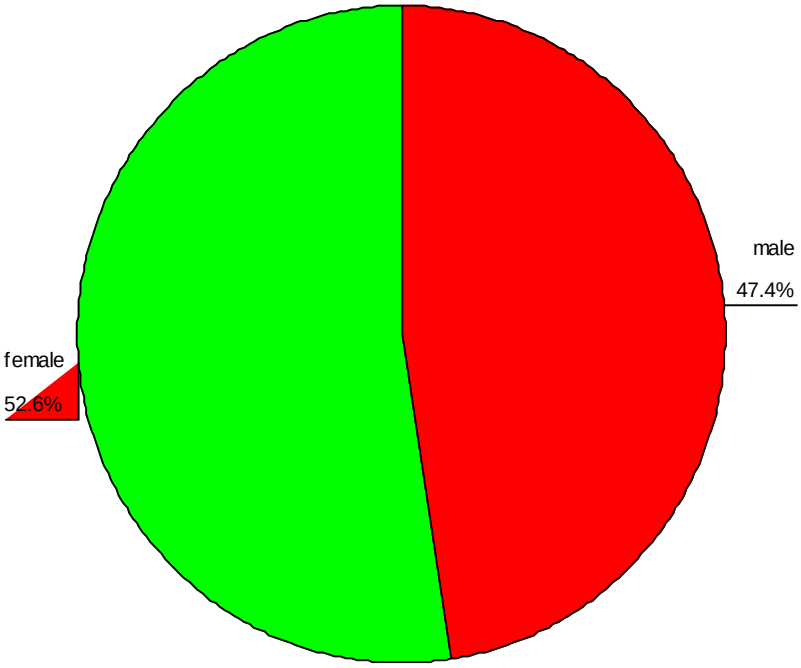

Figure 1: Pie chart of gender distribution of sample (n=38)

Thirty-eight participants were included in the analysis. There were 18 (47.4%) males and 20 (52.6%) females. The gender distribution of the sample is shown in Figure 1 above.

4.4.1.1. Cross-tabulation of knowledge score category and gender

Table 2: Cross-tabulation of knowledge score category and gender

Sex		Knowledge score category		Total
		poor	good	
Male	Count	12	6	18
	%	66.7%	33.3%	100.0%
Female	Count	10	10	20
	% within sex	50.0%	50.0%	100.0%
Total	Count	22	16	38
	% within sex	57.9%	42.1%	100.0%

P=0.342

An interesting finding in terms of gender is that one of the significant characteristics in the generalized and internationally consistent demographic profile of homeopathic users was that they tended to be female (Härtela and Volgera, 2004, National Centre for Complementary and Alternative Medicine, 2004; MacLennan and Wilson, 1996). Although gender was not statistically associated with knowledge, when the association was examined (Table 2), more female respondents tended to have good levels of knowledge of homeopathy (50%), than their male counterparts of whom only 33.3% had good levels of knowledge of homeopathy (refer to Chapter Two: Demographic profile of CAM users).

4.4.2. Age

The sample group was analysed according to five age categories as follows: Age 26-35, 36-45, 46-55, 56-65 and 65 years and over. The numbers of participants per age group

are indicated in figure 2 below.

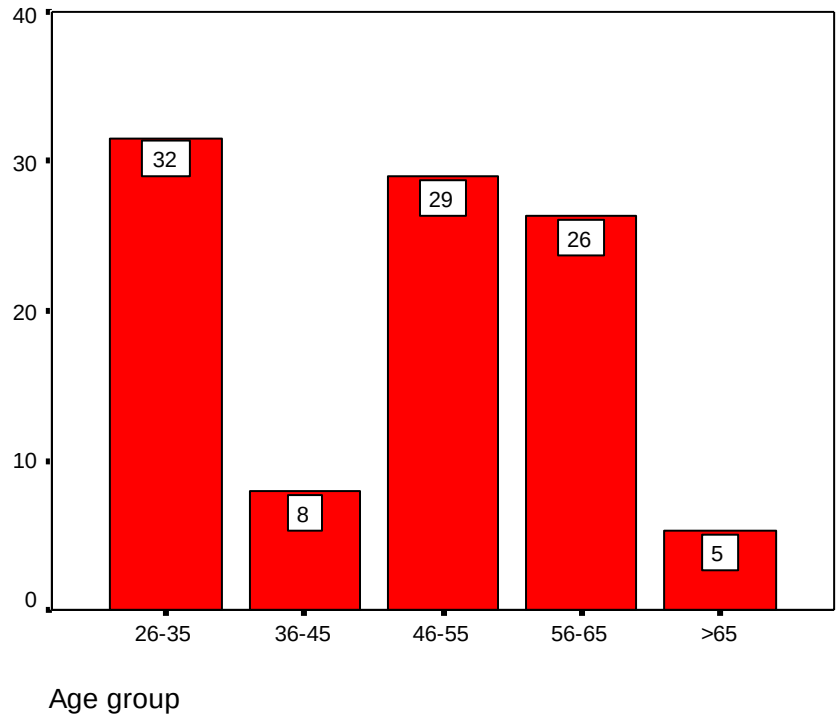

Figure 2: Percentage of participants per age group (n=38)

As seen in figure 2 above, the highest number of participants in any one group (32%) were within the 26 to 35 year old category. Collectively, the majority of participants (55%) were between the ages of 46 and 65 years old, with 29% of the participants between the ages of 46 and 55 years old, and 26% between 56 and 65 years old. There were two participants in the over 65 year old age group, accounting for 5% of the sample group, and no one under the age of 26.

The pattern of distribution of age groupings could be attributed to several factors including the method of recruitment of participants by owners and managers, as well as direct age-related factors such as studying and retirement, all of which will be discussed below.

As ***regards method of recruitment***, the participants who fulfilled the population inclusion criterion were selected by the owners or managers. The owners or managers were permitted to select themselves as participants, as most health shops surveyed were small concerns with staff complements of between one and five individuals, with the owners and managers playing an integral role in serving customers, as well as running the shop. This resulted in 52.6% of participants being owners and 15.8% of participants being managers (Table 8)**.** Owners and managers are often associated with an older age profile, as in the case of owners, accumulating capital and purchasing a business takes time and in the case of managers, because this position is often associated with experience and length of service.

In addition to this, within the South African political situation there are many older white people who have been overlooked for jobs because of age and colour, and have therefore purchased their own businesses. This may have influenced the demographic profile of participants because the owners and managers, in selecting those who they thought would be most knowledgeable, were highly likely to select themselves.

The drop-off in the over 65 year old age group could be attributed to ***retirement***. Most of the general population has retired by the age of 65, with 55 being the age when people start to take retirement, and hence the drop off in the 55 to 65 year old age group.

The low representation in the 36-45 year age group could be attributed to the fact that this is an age group most likely to be self-employed elsewhere in their capacity as health care practitioners. It could be attributed to the selectivity of the recruitment method of the study.
There were no participants under the age of 25. There are a number of reasons why this could have occurred:

1 Firstly, the managers/owners may have recruited the more experienced (usually more senior in age) staff to complete the questionnaire.

2 Secondly, student homeopaths who often work in health shops during their training, and who generally fall below the age of 25, would have fallen within the exclusion criteria and could have biased the sample.

3 Thirdly, a majority of the participants (58%) (Figure 3), had completed some form of tertiary education in the form of degrees or diplomas prior to employment within the shop, which could have led to the predominance of over 26 year olds.

4.4.2.1. Cross-tabulation of knowledge score category and age group

Table 3: Cross-tabulation of knowledge score category and age group

Age group		Knowledge score category		Total
		Poor	good	
26-35	Count	8	4	12
	% within age group	66.7%	33.3%	100.0%
36-45	Count	2	1	3
	% within age group	66.7%	33.3%	100.0%
46-55	Count	8	3	11
	% within age group	72.7%	27.3%	100.0%
56-65	Count	2	8	10
	% within age group	20.0%	80.0%	100.0%
>65	Count	2	0	2
	% within age group	100.0%	.0%	100.0%
Total	Count	22	16	38
	% within Age group	57.9%	42.1%	100.0%

P=0.066

When age was cross tabulated with level of knowledge (Table 3), the age group that showed the highest level of knowledge was the age group between 56 and 65 years old, and the age group that displayed the least knowledge was the over 65 year olds. The remaining age groups were not too dissimilar in their levels of knowledge with

approximately a third having a good level of knowledge and two thirds having a poor level of knowledge.

Although there was no statistically significant relationship between age and knowledge scores, the higher level of knowledge score of the older age group could be attributed to firstly, the overall demographics of CAM (complementary and alternative medicine) usage, where the typical user is older (Menniti-Ippolito, et al. 2002; Reid, 2002; Kayne, Beattie and Reeves, 1999), and this is reflected in the profile of the participants of this pilot study.

Secondly, there are aspects related to the history of homeopathy in South Africa that account for the increased levels of knowledge attributed to the 56-65 year old age group. According to Prinsloo (2006) this age group was born between the 1940s and 1950's, and grew up in an era where homeopathy was practiced extensively. There were only 49 Homeopaths in South Africa in 1965, however, by 1974 when the official registration process in South Africa was initiated; there were 2,500 applicants for official recognition. This age group were in their early 20s and 30s when this registration process occurred, and because only approximately 350 homeopaths were officially registered out of the 2500 applicants received, a number of these individual could have found their way into the health shop industry and hence account for the high levels of knowledge scores associated with the 56-65 year old age group.

The reasons for the distinct lack of knowledge scores displayed by the over 65 year old age group are not clear and further research would need to occur for the reason(s) to be elucidated.

4.4.3. Language

Table 4: Frequency and percentage of participants per language (n=38)

	Frequency	Percent
English	20	52.6
Afrikaans	12	31.6
Ndebele	1	2.6
Tswana	1	2.6
German	2	5.3
Dutch	1	2.6
English and Afrikaans	1	2.6
Total	38	100.0

First language of sample participants is shown in Table 4. Greater than 50% of participants were English speaking, 32% were Afrikaans, and few participants spoke other languages.

The predominance of English, followed by Afrikaans can be attributed to the locations and consumer sector serviced by the health shop industry. A majority of health shops are located in affluent areas frequented by people of European extract and it makes sense that the shop owners and staff reflect the demographics of this market, most speaking English, closely followed by Afrikaans. The health shop market does not cater for the traditional South African medicinal health care system with its traditional healers and sangomas. The methods of treatment and the type of medicinal products utilized by this sector are very different to those offered in a health shop environment, and hence very few health shops assistants spoke indigenous South African languages.

4.4.4. Ethnicity

Table 5: Racial distribution of participants (n=38)

	Frequency	Percent
Black	2	5.3
Indian	2	5.3
White	34	89.5
Total	38	100.0

Ethnicity of participants is shown in Table 5. The vast majority was white (89.5%).

At the 2001 census the population of Gauteng was made up as follows: 73.8% of the population was black, 3.8% was coloured, 2.5% was Indian and 19.9% was white (Gauteng Provincial Government, 2006).

The participants in this study do not reflect this regional breakdown. The researcher noted that a majority of health shops in the Greater Gauteng area were located in shopping malls or centres that were located in predominately white neighbourhoods. There were a few exceptions to this rule but not many and hence the vast majority of white participants.

Another reason for a majority of white participants is the predominance of traditional medicine within the black sectors of the population. In the region of 80% of South Africans rely on traditional health care systems in some form or another (Bodeker, 2005). The traditional health care system functions largely separate to the formal health care system, providing practitioners and access to traditional medicinal substances with in its own informal sector.

There were no coloured participants and only 5.2% Indian participants. The populations of these two groups are low within the Gauteng region. The 2001 census showing that

the coloured population accounted for 3.8% of the total population of the region and the Indian population accounted for 2.5% of the total population (Gauteng Provincial Government, 2006).

4.4.5. Educational qualifications

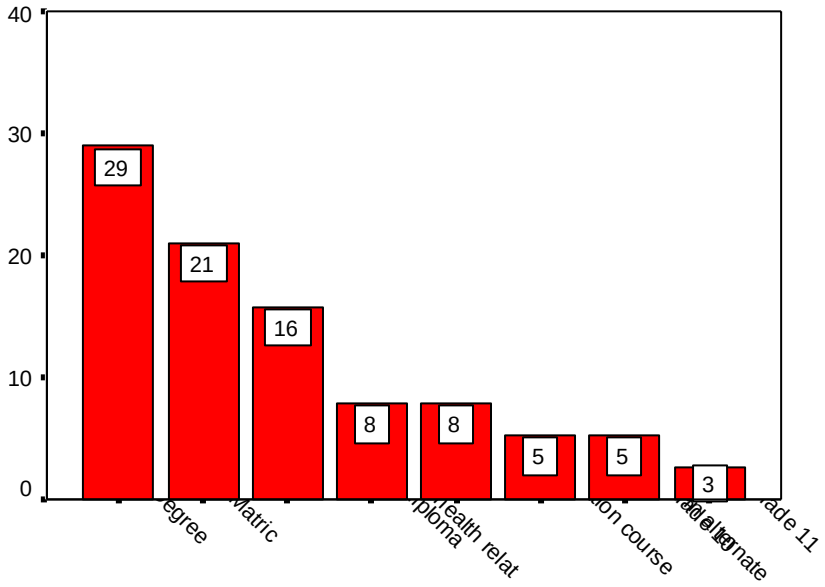

Figure 3: Highest education level of participants

Figure 3 shows the percentage of participants by highest educational qualification. The majority had a degree (n=11, 29%). A majority of participants, 66%, had some form of tertiary education, with 29% having a degree qualification.

The fact that so many participants had degrees and other tertiary qualifications was unexpected because ordinarily the job of shop assistant is not associated with a high level of qualification.

There are a number of reasons for this anomaly. Firstly, many of the demographics examined so far reflect the profile associated with CAM users internationally, and higher

education levels are associated with greater CAM usage (Härtela, et al. 2004; National Centre for Complementary and Alternative Medicine, 2004; Menniti-Ippolito, et al. 2002; Reid, 2002; MacLennan and Wilson, 1996.; Austin, 1998). In addition, Vincent and Furnham (1999) found that a high percentage of CAM patients attending clinics are educated to degree level (cited in Kayne, Beattie and Reeves, 1999).

Secondly, because of the personalized service offered by health shops, particularly in terms of advice given, the staff dealing with the public requires certain levels of knowledge of products and of health care and disease. This requirement of knowledge would thus imply a higher level of education.

Thirdly, the predominance of participants with tertiary education could be linked to the sample bias discussed previously, with the owner or manager selecting those who they perceived would be most qualified to give the correct answers and reflect the health shop in the best light.

4.4.5.1. Cross-tabulation of knowledge score category and education

Table 6: Cross-tabulation of knowledge score category and education

Highest qualification		Knowledge score category		
		Poor	Good	Total
Matric	Count	5	3	8
	% within highest qualification	62.5%	37.5%	100.0%
Degree	Count	4	7	11
	% within highest qualification	36.4%	63.6%	100.0%
Diploma	Count	3	0	3
	% within highest qualification	100.0%	0%	100.0%
Diploma in alternate health	Count	0	2	2
	% within highest qualification	.0%	100.0%	100.0%
Certificate in alternate health	Count	2	1	3
	% within highest qualification	66.7%	33.3%	100.0%
Grade 11	Count	1	0	1
	% within highest qualification	100.0%	0%	100.0%
Grade 10	Count	1	1	2
	% within highest qualification	50.0%	50.0%	100.0%
Diploma health related	Count	4	2	6
	% within highest qualification	66.7%	33.3%	100.0%
Total	Count	20	16	36
	% within highest qualification	55.6%	44.4%	100.0%

P=0.335

Table 7: Qualification and length of service

		Frequency				
	Count	1 year or less	1-3 years	3 - 5 years	5 - 10 years	more than 10 years
Degree	11		3	2	4	2
Diploma in alternate health	2		1			1
Diploma health related	6		1	1	3	1
Diploma	3	2			1	
Certificate in alternate health	3			2		1
Matric	8	1	2	2	1	2
Grade 11	1				1	
Grade 10	2			2		
Total	36	3	7	9	10	7
	100.00 %	8%	19%	25%	28%	19%

When the educational qualification of participants is cross tabulated with knowledge levels (Table 6), though not statistically significant it showed that participants with higher levels of education tended to have higher levels of knowledge scores than those with a matric or lower qualification.

Approximately 30% of participants had a matriculation and lower, while 70% had some form of tertiary education. Of those that had a tertiary education, approximately 48% had good levels of knowledge compared to 52% who had poor knowledge level scores. In the group with a matriculation or lower qualification 36.4% had a good score, while 63.3% had a poor score.

When the qualification categories are examined independently, the category that scored the highest was the group that had a ***diploma qualification in alternate health***. This finding is consistent with what would be expected, because alternate health is that area of expertise associated with the activities of a health shop, and homeopathy is one of the more popular areas of alternate health (National Centre for Complementary and Alternative Medicine, 2006). However, when the category of diploma in a health related field was examined, it was found that the group had much lower levels of knowledge, with a third of the group having a good level of knowledge scores compared to two thirds

with poor levels of knowledge scores.

Most diplomas in the health care field are taught with in the parameters of the current medical model and this has a definite influence on the understanding and perceived effectiveness of CAM (Furnham and McGill, 2003; Baugniet, Boon and Østbye, 2000). This factor could have influenced the knowledge levels of this group by either making the participants more sceptical of homeopathy and its methods, and therefore decreasing their desire to learn about the topic, or decreasing their ability to understand the concepts involved.

In numeric terms the group that had ***degrees*** had the highest number of participants with good level of knowledge scores. When length of service is investigated, to assess its impact on levels of knowledge and qualification (Table 7), the group with degrees also had more participants who had worked in health shops for periods in excess of five years.

The degree level of education is more academically orientated than a diploma qualification. Graduates with degrees should therefore have an ability to construct logical arguments and to abstract and manipulate complex information (Bell, 1996). Diploma qualifications on the other hand are more technically orientated. The degree qualified participants have more of an ability to assess the knowledge levels associated with homeopathy and this factor, together with their higher average length of service, accounts for the higher number of participants with good level of knowledge scores in this category.

The category containing participants who had general ***diplomas that are not health related*** had level of knowledge scores that are notably negatively affected by length of service. A majority of participants in this category worked in health shops for less than a year, and this lack of experience could have lead to the poor results in this category with all participants having poor levels of knowledge. What was concerning was that the participant who had a diploma and had more than a year of experience, had been

working in health shops for over five years, yet the level of knowledge was limited.

The group of participants that fell into the category of ***certification course in alternate health*** had similar scores to the group in 'diploma in health related topics' category. The reason for this result could be related to the nature of certification courses which are generally specific in topic and are not as in-depth as higher levels of training. As far as the researcher could ascertain, there were no certification courses available in homeopathy, and hence, although having a certification in alternate health the topics were not homeopathically related and therefore were not conducive to a high levels of knowledge of homeopathy.

The participants who had a ***matriculation qualification*** had similar results to the 'certification in alternate health' and 'diploma in health related topics' groups, with 37.5% having a good level of knowledge score and 62.5% having a poor level of knowledge score.

4.4.6. Discussion: Demographics-Objective One

Objective one

The first objective was to develop a profile of health-shop staff in terms of various demographic factors identified as pertinent to determining their knowledge of homeopathy (viz. age, language, ethnicity, gender and level of education).

The statistical analysis of results found that none of the demographic variables were significantly associated with knowledge score, many non-significant associations were formed, and a profile of health shop assistants in association with knowledge materialized. In addition, this demographic profile is consistent with the profile of CAM users internationally.

From the study the generalized demographic profile of health-shop assistants can be deduced as follows: health-shop assistants are more likely to be female than male; they

tend to be older, speak English, are generally white, and have some form of tertiary education, often a degree.

When this profile is associated with levels of knowledge, health shop assistants who had good level of knowledge scores, were more likely to be female, fall with in the age category of 56 to 65 years of age, have English as a first language, be white, have a degree qualification and have worked in health shop for more than 5 years.

The profiles that have emerged are remarkably consistent with the comparable aspects of the demographic profile of CAM users internationally. CAM users tend to be female, have a tertiary education, often a degree, are older, have access to financial resources, are employed, have been hospitalized in the last year, are former smokers, and have a low health status (Härtela, et al. 2004; National Centre for Complementary and Alternate Medicine, 2004; Menniti-Ippolito, et al. 2002; Reid, 2002; Kayne, Beattie and Reeves, 1999; Austin, 1998; MacLennan and Wilson, 1996).

The first objective was to develop a profile of health-shop staff in terms of various demographic factors identified as pertinent to determining their knowledge of homeopathy (viz. age, language, ethnicity, gender and level of education).

> ***Hypothesis one***
> *These factors would determine a profile of the health shop staff different from that of the CAM user.*

The factors that determined the profile of health shop staff are not different to those determining the profile of CAM users and therefore ***hypothesis one has been rejected****.*

4.5. Work experience and training

4.5.1. Position

Over half the participants were the owners of the shops (n=20, 52.6%). This is shown in Table 8.

Table 8: Position held in health shop

	Frequency	Percent
Owner	20	52.6
Manager	6	15.8
Full time	8	21.1
Part time	4	10.5
Total	38	100.0

There are a number of factors that would account for this predominance of owners within the sample group. Firstly, most health shops in the Greater Gauteng area are small concerns with limited staff, and in many shops the owner or manager is the only person present, both serving customers and managing the shop.

Secondly, the owners or managers were responsible for the selection of the participants, and this may have lead to a sampling bias. In addition, the researcher was under the impression that in many cases (despite being advised to the contrary) the participants felt like they were being tested and needed to do well. This could have resulted in the selection of participants who were perceived to be most knowledgeable and experienced, and the managers and owners could have selected themselves to the exclusion of other full-time and part-time staff.

Thirdly, student and qualified homeopaths were excluded from the research, and many homeopathic students work in health shops during their training, and hence the low

representation of part-time participants resulted.

4.5.1.1. Cross-tabulation of knowledge score category and position held

Position held was one of the factors statistically associated with knowledge score (p=0.044, Table 9).

Table 9: Cross-tabulation of knowledge score category and position held

Position held		Knowledge score category		Total
		Poor	Good	
Owner	count	11	9	20
	% within position held	55.0%	45.0%	100.0%
Manager	count	5	1	6
	% within position held	83.3%	16.7%	100.0%
Full time	count	6	2	8
	% within position held	75.0%	25.0%	100.0%
Part time	count	0	4	4
	% within position held	0%	100.0%	100.0%
Total	count	22	16	38
	% within position held	57.9%	42.1%	100.0%

P=0.044

The highest knowledge score was associated with the part-time position category with 100% of the participants falling within the good knowledge score category (n=4, 100%). The lowest levels of knowledge were associated with the participants who were managers, with one manager falling into the good knowledge score category. The managers were followed closely by the full-time staff with 25% of full-time staff possessing good knowledge scores. The owners of the health shops stores scored the highest knowledge scores after the part-time staff with 45% falling into the good level category.

The pattern of these results could be explained by the method of recruitment of the study, which inadvertently allowed the owners or managers to nominate themselves or those perceived as more knowledgeable, and hence, the managers and full-time staff only making up 37% of the sample. On the reverse side however, if the participants were selected because they were considered more knowledgeable the results are cause for concern because a majority of participants, 58%, had poor levels of knowledge, and all but one of health shops surveyed stocked homeopathic medicines.

All of the part-time staff had good levels of knowledge, and the factors influencing the outcome of these results include, firstly, the age of the group. The part-time staff were all over the age of 26 (figure 2), making it unlikely that they were students working over the weekends. Secondly, in discussion with some of the participants the researcher found that the part-time staff often supplemented their income by part-time work in health shops, but also were actively involved as CAM practitioners of various types. The group that had the highest levels of knowledge was the group that had diplomas in alternate health (Figure 3), making it likely that some of these participants fell into that category, and hence this group having high levels of knowledge of homeopathy.

The results associated with the category of owners were of concern. The owners of health shops, particularly if they are dealing with customers, should have knowledge of the products they are selling generally and because they are selling homeopathic products, they should be aware of what homeopathy is, and how it works. However, 55% of this group has poor levels of knowledge of homeopathy, and clearly do not have an understanding of the principles of homeopathy. To compound the problem, these products are being recommended to customers who are purchasing them most often through the recommendation of a friend or family member and not an alternative practitioner who has knowledge of their method of action (Reid, 2002; Kayne, Beattie and Reeves, 1999). It must be concluded that most of the homeopathic medicines sold are being done so on disease-based system that is more consistent with conventional medicine than the principles of homeopathy.

The situation is further exacerbated by the results of the managers and full-time staff, which clearly have low levels of knowledge, and therefore little understanding of the principles of homeopathy.

4.5.2. Work experience

Figure 4: Work experience of participants (n=38)

The participants in this sample group were generally experienced health shop staff. Most of the participants had worked in health shops for 5-10 years (n=10, 26.3%). This is shown in Figure 4.

4.5.2.1. Cross-tabulation of knowledge score category and work experience

Table 10: Cross-tabulation of knowledge score category and work experience

Work experience		Knowledge score category		Total
		Poor	Good	
1 year or less	count	3	0	3
	% within work experience	100.0%	0%	100.0%
1-3 years	count	6	2	8
	% within work experience	75.0%	25.0%	100.0%
3-5 years	count	5	4	9
	% within work experience	55.6%	44.4%	100.0%
5-10 years	count	4	6	10
	% within work experience	40.0%	60.0%	100.0%
>10 years	count	4	4	8
	% within work experience	50.0%	50.0%	100.0%
Total	count	22	16	38
	% within work experience	57.9%	42.1%	100.0%

P=0.322

The pattern of results in the above table is consistent with the notion that the more experience an individual has in a field of work, the more knowledge they gain. The association of work experience to knowledge increases consistently as the category of age group increases, the pattern is only disrupted with a 10% decrease in association in the ‘over 10 years of experience group’.

4.5.3. Training

4.5.3.1. General training in topics other than homeopathy.

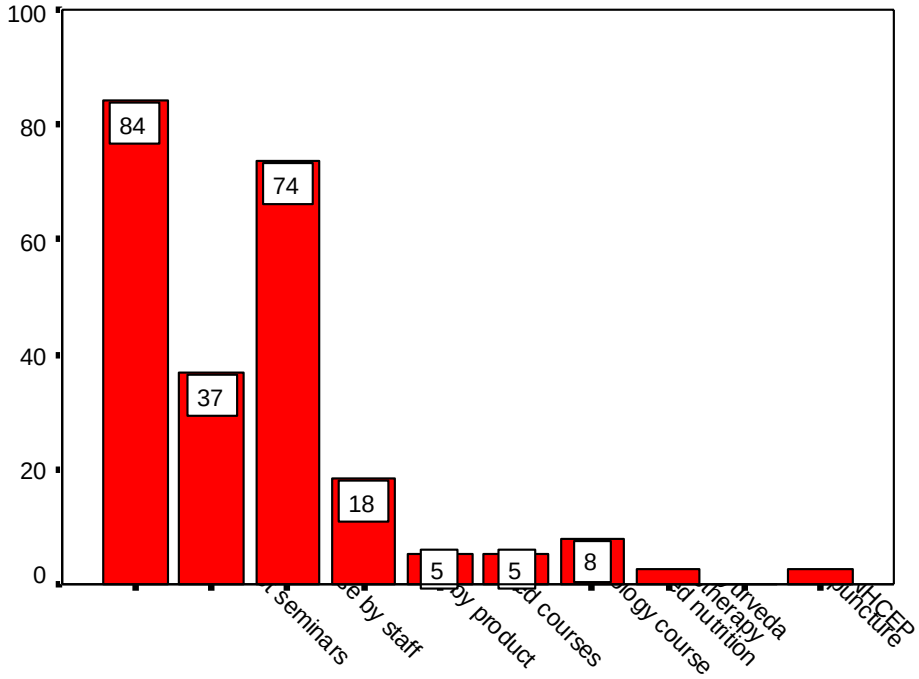

Figure 5: Type of general training received by study participants

The vast majority of the participants had been given training on subjects other than homeopathy while working in a health shop (n=36, 94.7%). Figure 5 shows the type of training given to the participants who indicated that they had received some form of training. Product seminars (84%) and in-house training by product representatives (74%) was the most common form of training. These two forms of training, together with in-house training by staff (37%), may be considered as training provided directly or indirectly by the health shop concerned.

The other forms of training such as registered courses, Ayurveda, Acupuncture and NHCEP courses cannot be viewed as generalized forms of training received by health shop staff, but rather as specific courses and training which have been funded and

attended by the individual(s) concerned, and ultimately considered to be of some benefit to the shop by the particular health shop owner or manager.

Table 11: Cross-tabulation of knowledge score category and general training

General training		Knowledge score category		Total
		Poor	Good	
Yes	count	20	16	36
	% within general training	55.6%	44.4%	100.0%
No	count	2	0	2
	% within general training	100.0%	.0%	100.0%
Total	count	22	16	38
	% within general training	57.9%	42.1%	100.0%

P=0.499

There was no statistical significant relationship between the participants who had general training and their knowledge of homeopathy. This is consistent with the fact that many training courses are on topics unrelated to homeopathy, and therefore not necessarily adding any particular benefit to a general knowledge regarding homeopathic principles and practice.

4.5.3.2. Homeopathic training

Of the total sample 73.7% indicated that they had received some form of training in homeopathy whilst employed at the health shop (n=28), while n=10, 26.3% had not. It is interesting to note that more participants were trained in topics other than in homeopathy.

4.5.3.2.1. Type of homeopathic training

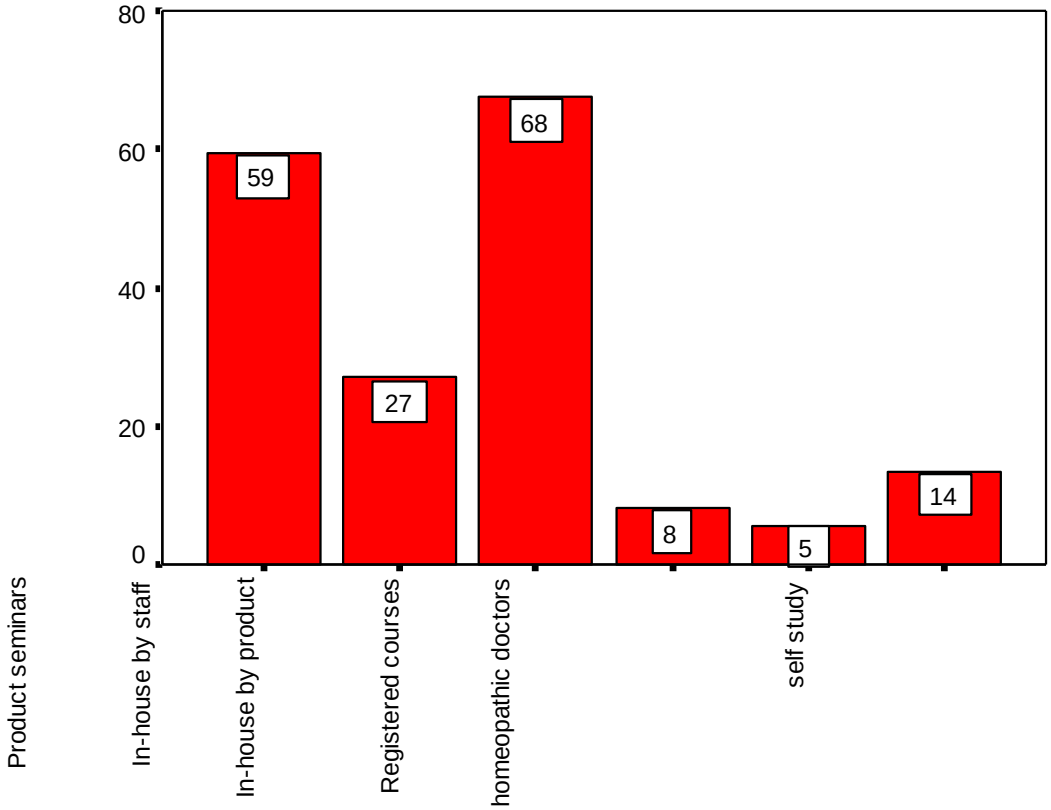

Figure 7: Type of homeopathic training

Figure 7 indicates the type of training received by the participants who indicated 'yes' when asked if they had received homeopathic training. Most of the participants, 68%, had received training in-house by product representatives, while 59% had received their training through product seminars, and 27% through in-house staff.

Homeopathic doctors were responsible for 5% of the training of health shop staff. Most of the training done in homeopathy is through the companies whose products are sold in the health shops. The registered courses indicated above refer to courses offered by suppliers who do training in their range of products.

4.5.3.2.2. Homeopathic training topics

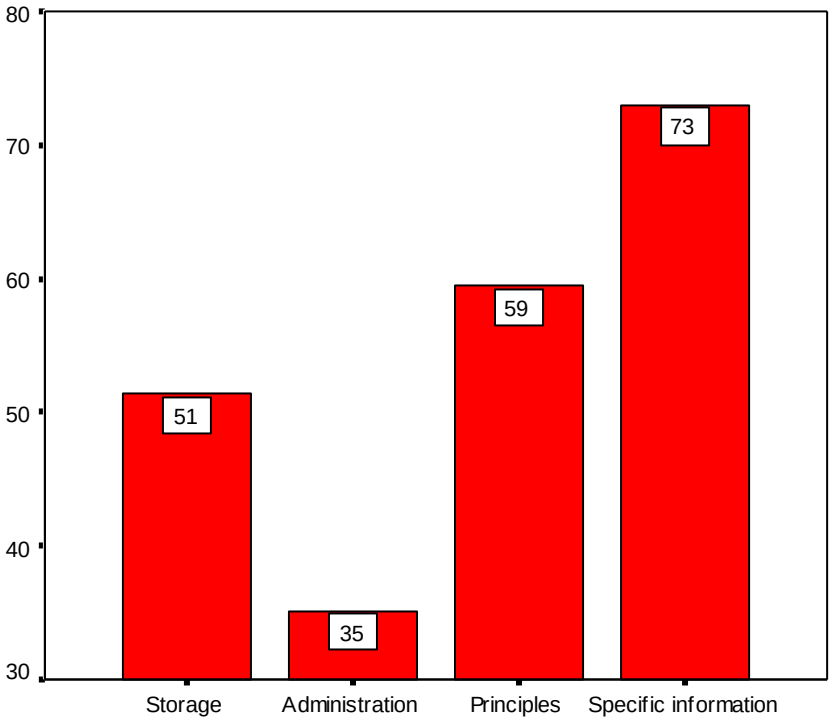

Figure 6: Homeopathy training topics

Figure 6 above indicates type of topics covered by the training given and shows that the area most covered was that of specific information (73%), whilst that of administration of medicines was least covered (35%).

4.5.3.2.3. Cross-tabulation of knowledge score category and homeopathic training

Table 12: Cross-tabulation of knowledge score category and homeopathy training

Homeopathic training		Knowledge score category		Total
		Poor	Good	
Yes	count	15	13	28
	% within homeopathy training	53.6%	46.4%	100.0%
No	count	7	3	10
	% within homeopathy training	70.0%	30.0%	100.0%
Total	count	22	16	38
	% within homeopathy training	57.9%	42.1%	100.0%

P=0.469

There was no statistically significant association between homeopathic training received and levels of knowledge.

4.5.3.2.4. Discussion: Homeopathic training

The fact that health shops are retail outlets reflects the type of training that the participants have received, with a vast majority of the training being done via the product suppliers, through product seminars and product representatives. This factor has resulted in an emphasis of training in the area of specific products information.

Many of the participants, 59%, had received training on the principles of homeopathy, 51% had training on the storage of homeopathic medicines, and 35% had training in the administration of homeopathic medicines.

When the relationship between having had homeopathic training and knowledge levels

is assessed there is no statistically associated relationship (Table 12). In fact, when the general training and levels of knowledge of homeopathy are compared to this group (Table 11), there is very little difference between the groups, with 44.4% of those who have had general training having good level of knowledge scores, and 46.4% of those who have had specific homeopathic training having good level of knowledge scores. The reasons for these findings will be explored when the answers to the knowledge questions are examined in Section 4.8. (Assessment of levels of knowledge of participants).

4.5.3.4 Informal training by exposure to a Homeopath

Table 13: Response to "Do you have a qualified or student homeopath working in your health shop?"

	Frequency	Percent
Yes	10	26.3
No	27	71.1
Total	37	97.4
Missing	1	2.6
	38	100.0

As shown in the above table, over a quarter of respondents (26,3%) had a qualified or student homeopath working in the shop with them.

4.5.3.4.1. Cross-tabulation of knowledge score category and student / qualified homeopath working in shop

Table 14: Cross-tabulation of knowledge score category and student / qualified homeopath working in shop

Qualified homeopath working in shop		knowledge score		Total
		poor	good	
Yes	count	6	4	10
	% within qualified homeopath working in shop	60.0%	40.0%	100.0%
No	count	15	12	27
	% within qualified homeopath working in shop	55.6%	44.4%	100.0%
Total	count	21	16	37
	% within qualified homeopath working in shop	56.8%	43.2%	100.0%

P=1.000

The fact that 26.3% of participants had a student or qualified homeopath working in the shop with them, did not seem to have an impact on knowledge levels, as the group who had no access to a homeopath had similar knowledge levels scores to the group that did not have access to a homeopath.

What may have occurred in this situation is that homeopathic queries are being dealt with by certain more knowledgeable members of staff, or the homeopath when present, without any sharing of information between the parties, thus limiting the benefit to the front shop assistant.

4.5.3.5. Need for training

Table 15: Responses to question about need for further training in homeopathy

	Frequency	Percent
Yes	32	84.2
No	6	15.8
Total	38	100.0

Table 9 above shows that 84.2% of participants felt that they needed more training in homeopathy.

This is consistent with the experience of the researcher. In the interaction with the staff in the health shops the researcher found there to be a positive reaction to homeopathy, with many individuals expressing desire to learn more about homeopathy, and many feeling that they needed more training.

4.6. Homeopathy in the health shop environment

4.6.1. Homeopathic products stocked

Only one participant responded that homeopathic medicines were not stocked for sale over the counter in the shop where he/she was working

4.6.1.1. Homeopathic complexes

Table 16: Responses to "Does the shop you work in stock homeopathic complexes?"

	Frequency	Percent
Yes	30	78.9
No	2	5.3
Don't Know	5	13.2
Total	37	97.4
Missing	1	2.6
	38	100.0

As is shown in the above table, the majority of participants, 78.9% responded that their shop stocked homeopathic complexes (n=30). There were 5 participants (13.2%) who did not know if the shop stocked homeopathic complexes (16).

4.6.1.2. Simplexes

Table 17: Responses to "Does the shop you work in stock homeopathic simplexes?"

	Frequency	Percent
Yes	29	76.3
No	6	15.8
Don't know	3	7.9
Total	38	100.0

As can be seen above in Table 11, most of participants (76.3%) indicated that the shop within which they worked stocked homeopathic simplexes.

4.6.1.2.1. Potencies of homeopathic simplexes stocked

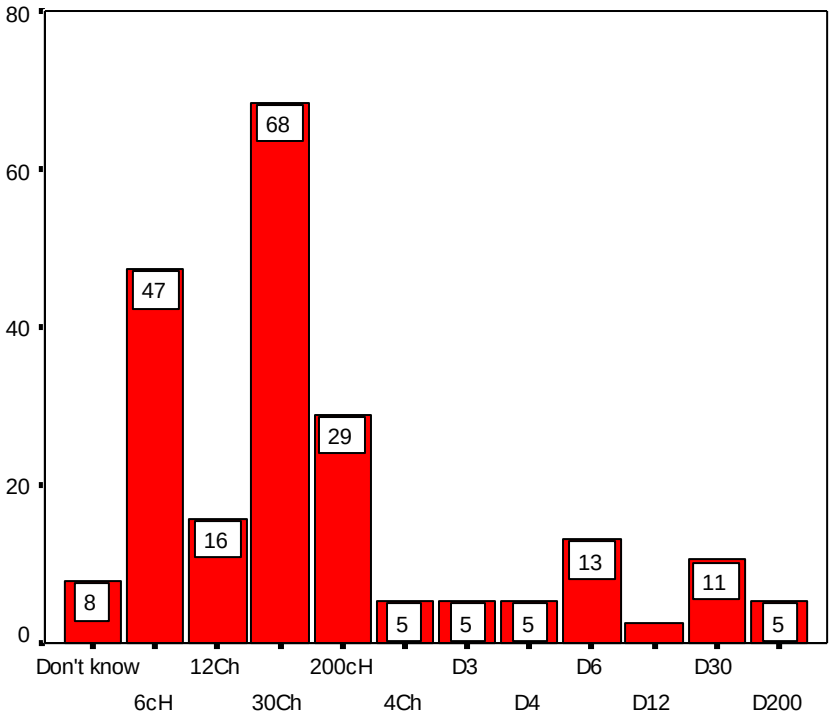

Figure 8: Potencies of homeopathic simplexes stocked

Responses to the potencies of simplexes stocked are shown above in Figure 8. The 30CH category was the most commonly stocked potency (68%), followed by 6CH (47%) and 200CH (29%). These values are consistent with the general trends of homeopathic prescribing, in that these 3 potencies are very commonly prescribed in everyday homeopathic practise (Cason, 2006). In the decimal (D) scale potencies the highest percentages had similar results as the centesimal (C) scale, in that the D6 (13%), D30 (11%) and D200 (5%) were highest and again it was verified that these 3 potencies are frequently prescribed in practice (Cason, 2006). It can therefore be stated that, apart from a small percentage (8%) who did not know what potencies were stocked, that the majority of health shops are stocking the most frequently prescribed potencies of homeopathic simplexes.

4.6.1.3. Ranges stocked

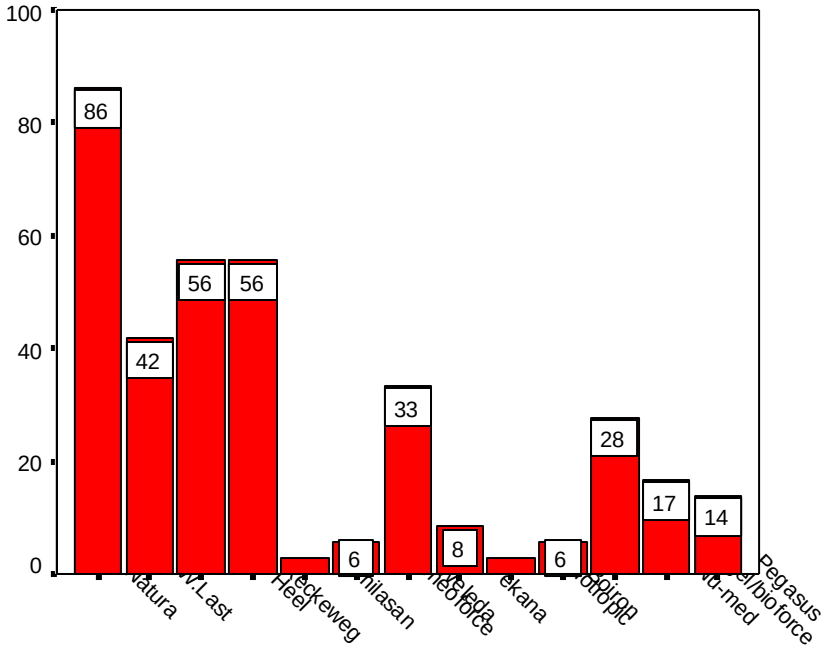

Figure 9: Percentage of participants whose shop stocked the specified homeopathic ranges

The homeopathic ranges stocked are shown in Figure 9. The most common range was Natura (86%) followed by Dr Rekeweg and Heel (56% each).

4.6.2. Dispensing

4.6.2.1. Dispensing: Response to "Does the health shop you work in dispense homeopathic medicines as per script?"

	Frequency	Percent
Yes	13	34.2
No	24	63.2
Total	37	97.4
Missing	1	2.6
	38	100.0

Table 18: Response to "Does the health shop you work in dispense homeopathic medicines as per script?"

Only 34.2% of participants indicated that the health shop within which they work dispensed homeopathic medicines as per scripts. The majority of participants (63.2%) indicated that they do not dispense homeopathic medicines as per scripts, as indicated in table 18 above.

4.6.2.1.1. Dispensing: Cross-tabulation of knowledge score category and who dispenses

Table 19: Cross-tabulation of knowledge score category and dispensing homeopathic medicine

Dispense homeopathic medicines as per script		Knowledge score category		Total
		Poor	Good	
Yes	count	4	9	13
	% within dispense homeopathic medicines as per script	30.8%	69.2%	100.0%
No	count	17	7	24
	% within dispense homeopathic medicines as per script	70.8%	29.2%	100.0%
Total	count	21	16	37
	% within dispense homeopathic medicines as per script	56.8%	43.2%	100.0%

P=0.036

There was a statistically significant association between knowledge scores and working in health shops that dispensed homeopathic medicines per script. In shops that dispensed, 69.2% of participants had good levels of knowledge, whereas in shops that did not dispense, only 29.2% of participants had good knowledge scores.

4.6.2.2. Dispensing: Responses to the question of "who dispenses the homeopathic medicine to the public."

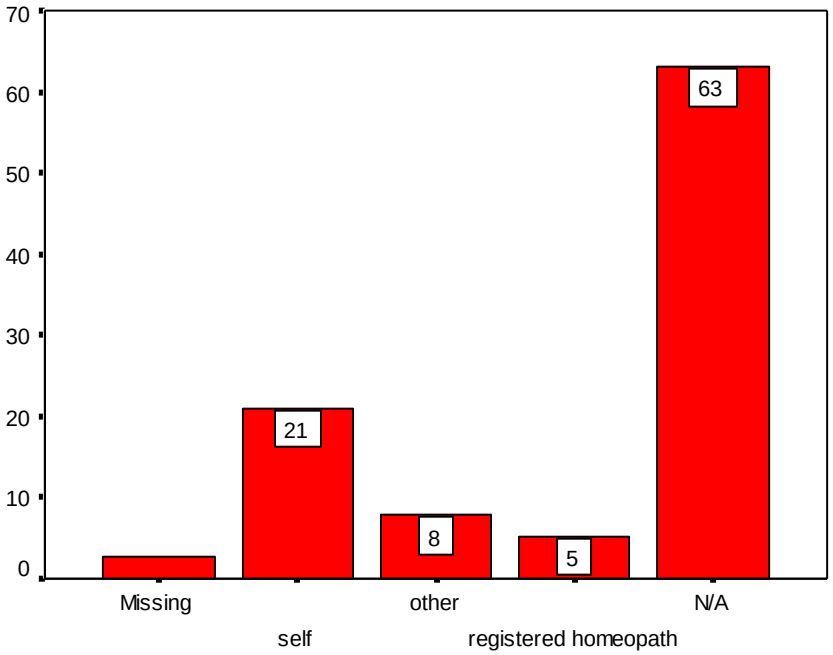

Figure 10: Responses to the question of who dispenses the homeopathic medicine to the public.

Of those shops where dispensing was done, the majority of the dispensing was done by the participants themselves (Figure 10). Only 5% of participants responded that a registered homeopath filled homeopathic scripts.

4.6.2.2.1. Cross-tabulation of knowledge score category and who dispenses

Table 20: Cross-tabulation of knowledge score category and who dispenses

Who dispenses		Knowledge score category		Total
		Poor	Good	
Self	count	2	6	8
	% within who dispenses	25.0%	75.0%	100.0%
Other	count	1	2	3
	% within who dispenses	33.3%	66.7%	100.0%
Registered homeopath	count	1	1	2
	% within who dispenses	50.0%	50.0%	100.0%
N/A	count	17	7	24
	% within who dispenses	70.8%	29.2%	100.0%
Total	count	21	16	37
	% within who dispenses	56.8%	43.2%	100.0%

P=0.115

Although there is no statistically significant association between who is dispensing and knowledge levels, Table 20 shows that 75% of those who are dispensing have high levels of knowledge scores. This is means that 25% of those surveyed who are dispensing have relatively poor levels of knowledge.

4.6.2.2.2. Discussion: Dispensing

Approximately one third of health shops surveyed dispensed homeopathic prescriptions. There is a positive statistically significant relationship between shops that dispense and the levels of knowledge of homeopathy of participants. Most participants dispensed themselves, with only 5% of health shops having registered homeopaths doing the dispensing.

A majority of homeopathic practitioners dispense their own homeopathic medicines. The dispensing of homeopathic medicines is generally not a health shop function and would occur because the health shop is closely aligned with a particular practitioner or practitioners in some type of reciprocal relationship, financial or otherwise. A homeopathic prescription does not necessarily consist of only homeopathic medicines, but can include other types of natural products and it may not be financially expedient for the practitioner concerned to carry a large stock of medicines, and thus an arrangement is made with the health shop to fill scripts.

The health shops that are dispensing, will have a relationship with a homeopath or homeopaths and this has had a positive relationship on the levels of knowledge displayed by participants. As previously noted (Table 14), the presence of a homeopath on the premises had no notable effect on levels of knowledge, probably because the homeopathic functions were handled by the homeopath. However, dispensing and therefore having an association with homeopaths functioning independently of the shop has allowed the responsibility of the homeopathic function within the health shop to fall on the staff and this is reflected in the 69.2%, of participants in this situation having good levels of knowledge (Table 19).

Of the participants who are actually dispensing, 75% have high level of knowledge score, but what is concerning is that 25% have below average levels of knowledge.

4.6.3. Method of selection of homeopathic medicines for customers

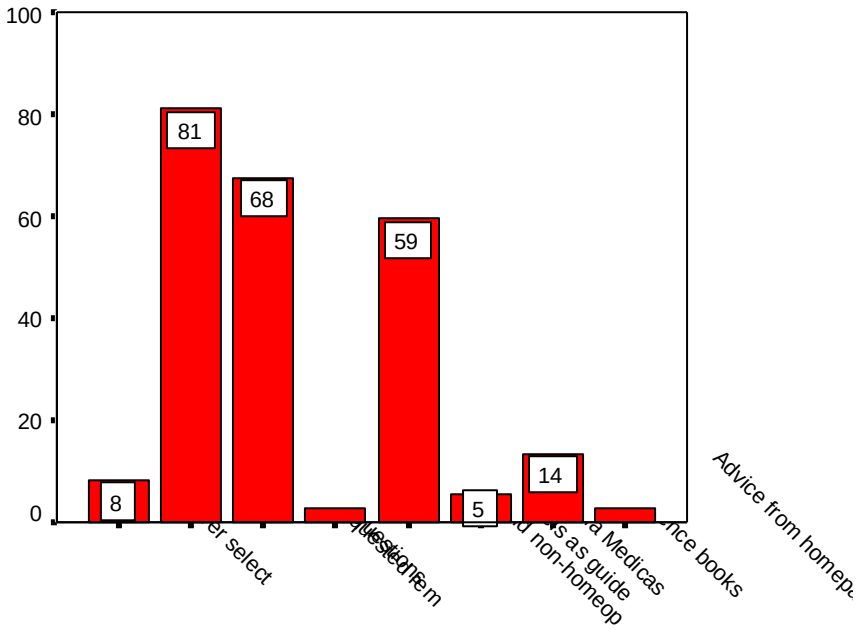

Figure 11: Methods which respondents used to select a homeopathic medicine for customers

When the participants were asked how they went about selecting a medicine for their customers, the results can be seen in Figure 11 above.

All the participants at some time or another would have supplied a customer with the homeopathic medicines that they requested, unless homeopathic medicines were not stocked by the health shop concerned, or the participants themselves had a negative perception of homeopathic medicines. Hence, most participants, 81%, agreed that they supplied the medicine requested. There was a high frequency of positive responses to questions asked relating to the ailment in order to find the appropriate homeopathic remedy (65.8%, n=25), and using labels as a guide (n=22, 57.9%). A few participants used reference books and homeopathic specific materia medicas to assist in the appropriate choice of medication. Only 1 participant (2.6%) did not recommended homeopathic medicines to customers.

4.6.4. Ailments for which homeopathic medicines have been recommended

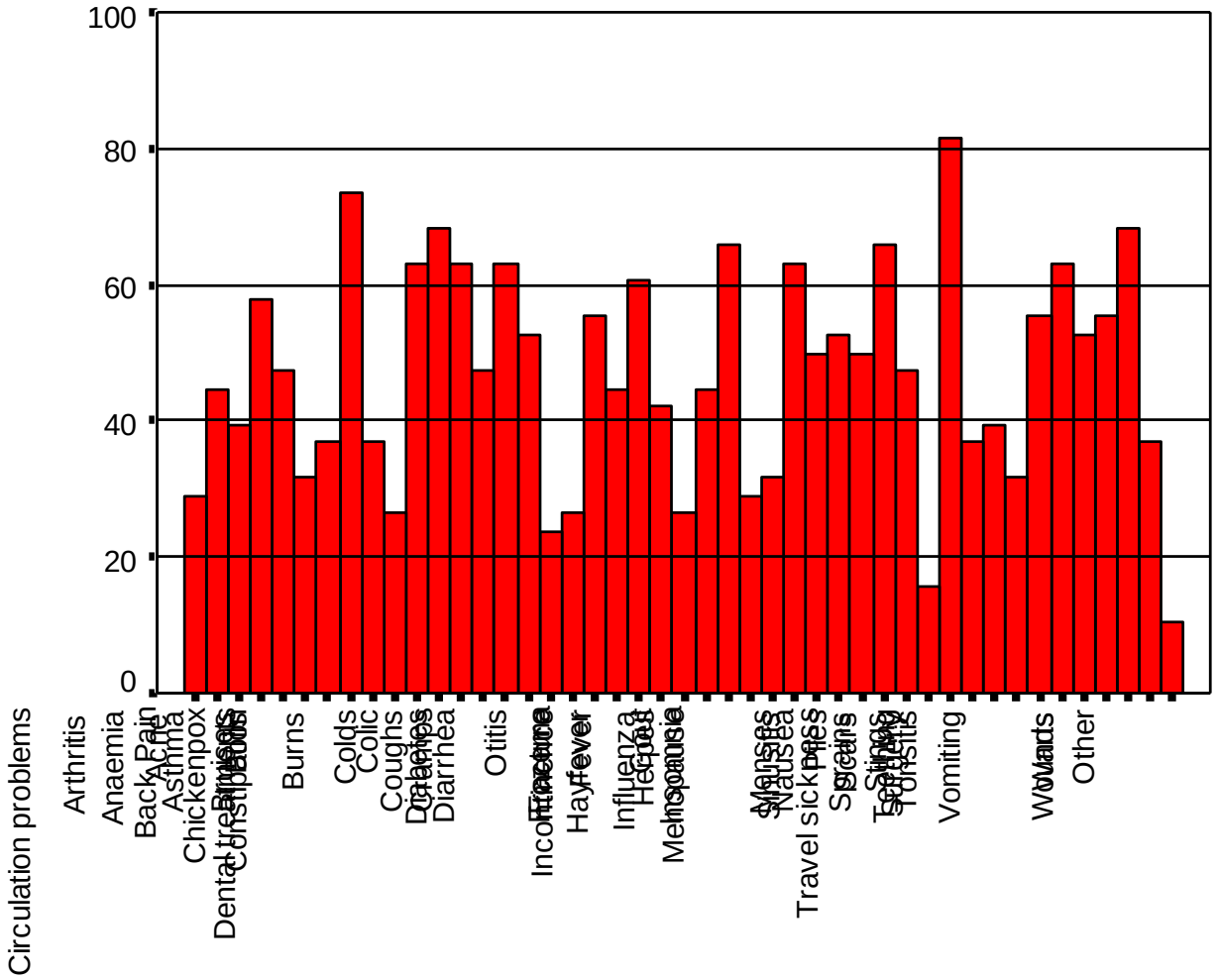

Figure 12: Ailments for which respondents have recommended homeopathic medicines

The complaints for which homeopathic medicines were recommended were wide ranging. Figure 12 shows the percentage of participants who have recommended homeopathic medicines for various complaints. There was only one participant who had not recommended homeopathic medicines to their customers. Of the rest of the sample approximately 10% had recommended homeopathic medicines for all the conditions listed.

More than 60% of participants had recommended homeopathic medicines for bruises, circulatory problems, colic, colds, coughs, eczema, hay-fever, influenza, nausea, sinusitis, tonsillitis, and warts. From this list the majority of complaints can be classified as either Upper Respiratory Tract Infections (sinusitis, hay fever, colds, influenza) or Lower Respiratory Tract Infections (coughs), (Merck Manual, 1999). This is very interesting in the light of the fact that research has shown that OTC homeopathic medicines are most frequently purchased for respiratory complaints (Steinsbekk, Bentzen, Fønnebø and Lewith, 2005; Reid, 2002).

It was found that bruising is also a frequent indication for OTC homeopathy (Reid, 2002), which was supported in the results as bruising scored second highest in the list of ailments for which homeopathic remedies were recommended.

Both Reid (2002) and Kaynes, Beattie and Reeves (1997) found that OTC homeopathy was commonly used for psychological/mental conditions, but this type of complaint was not included in the list of conditions presented to the participants in this sample group, and this was unfortunate because it would be of benefit to include these conditions for comparison purposes. It is suggested that this question be added in future such studies in order to allow for comparison with these findings.

Most conditions listed are acute or self-limiting conditions that are appropriately treated via the OTC route. However, there are a number of conditions that could be life threatening (such as asthma and diabetes), or that could be indicative of a possible serious underlying disease (such as circulatory problems, anaemia and vomiting). These types of conditions need to be dealt with appropriately both homeopathically and medically and referred if necessary to ensure the safety of customers and the protection of the homeopathic profession. Fortunately this seems to be the case, as is seen in chapter 4.6.5 below (Referral of customers by health shop assistants)

4.6.4.1. Cross-tabulation of knowledge score category and recommending homeopathic medicines for dental treatments

Table 21: Cross-tabulation of knowledge score category and recommending homeopathic medicines for dental treatments

Dental treatments		Knowledge score category		Total
		Poor	Good	
Yes	count	2	7	9
	% within dental treatments	22.2%	77.8%	100.0%
No	count	20	9	29
	% within dental treatments	69.0%	31.0%	100.0%
Total	count	22	16	38
	% within dental treatments	57.9%	42.1%	100.0%

P=0.021

“Having recommended homeopathic medicines for treatment of dental complaints” was statistically associated with high levels of homeopathic knowledge scores. Less than 25% of participants have recommended homeopathic medicines for dental treatments and the type of treatment recommended would differ depending on the dental condition being treated. The participant recommending the treatment would have to distinguish between a number of different options that would not necessarily be obviously labelled, requiring an application of homeopathic knowledge, and hence an association with high level of knowledge scores.

4.6.5. Referral of customers by health shop assistants

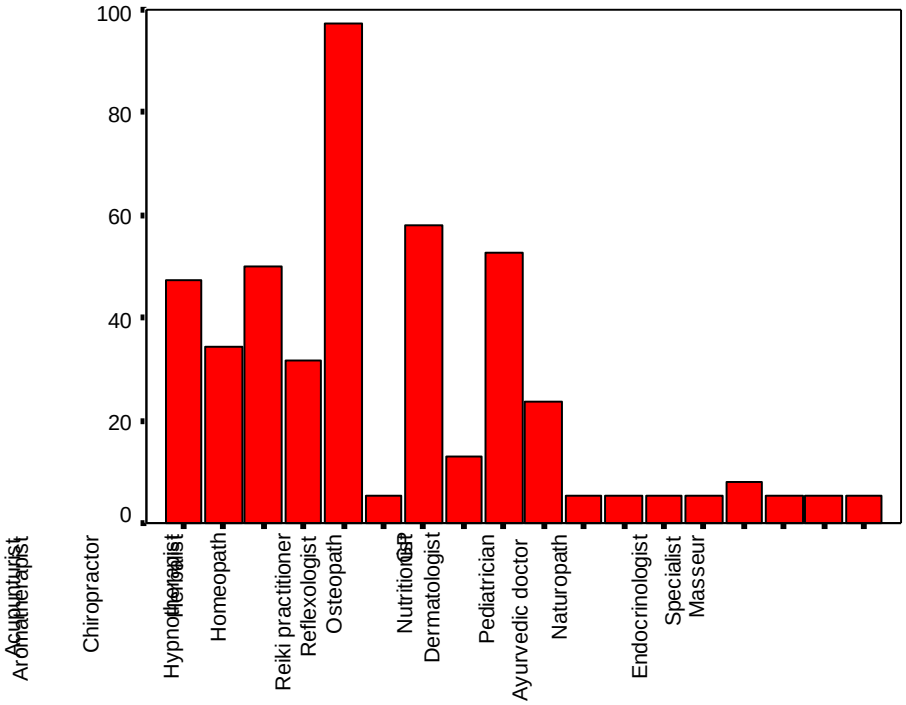

Figure 13: Percentage of participants who have referred customers to other practitioners

Figure 13 shows the referral patterns of participants. The majority of subjects referred customers to a homeopath (97%). Referral to a GP scored second highest (59%), followed by Reflexologists (51%), Chiropractors (49%) and Acupuncturists (48%). Referral to any other type of practitioner thereafter was below 39%.

The rate of homeopathic referrals is very high. Reid (2002) found that the CAM practitioner most often selected by OTC homeopathic users was a homeopath, and most negative attitude was towards hypnotherapists. This reflects a similar pattern to the results above and indicates that in addition to the similarity in the demographic profile of CAM users internationally and those surveyed in this study, that the sellers of homeopathy are influenced by similar dynamics to users.

The high rate of homeopathic referrals may be attributed to a number of factors. Firstly, the health shop industry in South Africa is traditionally aligned to homeopathy, with many of the original health shops being founded by homeopaths (Prinsloo, 2006), and this close relationship between health shops and homeopathy has continued with approximately a third of health shops surveyed dispensing homeopathy per script (Table 18), and 63.2% of participants having had a homeopathic consultation (Table 22.). Secondly, many medical aid schemes will pay for homeopathic consultations. And thirdly, the participants were aware that the survey involved homeopathy and this factor could have favourably influenced their responses to towards homeopathy.

With the health shop industry being traditionally aligned to homeopathy as mentioned above (Prinsloo, 2006) it can be reasoned that this is also the reason for many referrals to other 'complementary' health practitioners such as chiropractors and acupuncturists, as the health shop industry would have a fair knowledge of these therapies by way of association. Many complementary health practitioners use health shops as a place to advertise their therapies as it is generally assumed that a health shop attracts people who are seeking alternative forms of health care (Cason, 2006).

A fair percentage of referrals were to a GP (59%), which is reassuring in the light of concerns raised in chapter 4.6.4 regarding proper care and investigation of certain symptoms which may be a part of an underlying serious condition.

4.6.6 Discussion: Homeopathy in the health shop environment - Objective Two.

Objective two

The second objective was to establish a profile of health shops with respect to homeopathy: specific attention being placed on the availability and use of homeopathic products, as well as staff knowledge and training in homeopathy.

The following profile of health shops emerged. All health shops with the exception of one, stock homeopathic medicines, and over 75% stock both complexes and simplexes. The potencies most often stocked were a 6CH, 30CH and 200CH, which is consistent with the trends of practicing homeopaths. There was a broad range of 13 different homeopathic ranges stocked, with Natura the most popular range, stocked by 86% of health shops. Dr Reckeweg and Heel products were next, both stocked by 58% of shops surveyed.

Dispensing of homeopathic remedies took place in approximately a third of the health shops surveyed. The dispensing was done by the research participants, many of whom were the shop owners, without formalized homeopathic training, but with reasonable levels of homeopathic knowledge. Very few health shops (5%) had qualified homeopaths responsible for dispensing.

Training is taking place in the health shops, predominantly through the suppliers of products. Ninety four point seven percent of participants had received training in subjects other than homeopathy, and 73.7% had been given training in homeopathy.

The training in homeopathy occurs predominately via the product representatives. The next most common form of training is via product seminars. There was minimal training done in-house and only 5% of training was done by homeopathic doctors.

It is not surprising then, that the most common topic of training reported was specific information about the different products and that storage of homeopathic medicines was

also commonly indicated.

Hypothesis two

It would be determined that health shops stock a limited range of homeopathic products.

Health shops do not stock a limited range of homeopathic products and therefore ***Hypothesis two was rejected.***

4.7. Personal experience of homeopathy by health shop staff

4.7.1. Homeopathic consultations by participants

Table 22: Responses to question "Have you ever consulted a homeopath as a patient?"

	Frequency	Percent
Yes	24	63.2
No	14	36.8
Total	38	100.0

A majority of participants, 63.2%, had seen a homeopath as a patient.

4.7.1.1. Cross-tabulation of knowledge score category and having consulted with a homeopath

Table 23: Cross-tabulation of knowledge score category and having consulted with a homeopath

Have you consulted a homeopath		Knowledge score category		Total
		Poor	Good	
Yes	count	11	13	24
	% within have you consulted a homeopath	45.8%	54.2%	100.0%
No	count	11	3	14
	% within have you consulted a homeopath	78.6%	21.4%	100.0%
Total	count	22	16	38
	% within have you consulted a homeopath	57.9%	42.1%	100.0%

P=0.049

There was a statistically significant association between having had a homeopathic consultation and knowledge scores. Those participants who had seen a homeopath and experienced a homeopathic consultation would have a better insight into the methods of homeopathy than those who had not seen a homeopath. Fifty four point two percent of participants who had seen a homeopath had good levels knowledge, compared to 21.4% who had not seen a homeopath.

4.7.2. Use of homeopathic medicines by participants

Table 24: Responses to question "Have you ever taken homeopathic medicines?"

	Frequency	Percent
Yes	36	94.7
No	2	5.3
Total	38	100.0

There were only two participants, 5.3%, who had never taken homeopathic medicines, and 94.7% who had.

4.7.2.1. Cross-tabulation of knowledge score category and taken homeopathic medicines

Table 25: Cross-tabulation of knowledge score category and taken homeopathic medicines

Taken Homeopathic Medicines		Knowledge Score Category		Total
		Poor	Good	
Yes	count	20	16	36
	% within taken homeopathic medicines	55.6%	44.4%	100.0%
No	count	2	0	2
	% within taken homeopathic medicines	100.0%	.0%	100.0%
Total	count	22	16	38
	% within taken homeopathic medicines	57.9%	42.1%	100.0%

P=0.499

There was no statistical correlation between taking homeopathic medicines and

knowledge levels; however, it would seem that if the sample had been larger, it may have reflected to a greater extent the two participants who had not taken homeopathic medicines and had poor levels of knowledge of homeopathy.

4.7.3. Perceived effectiveness of homeopathic medicines by participants

Table 26: Responses to question "Do you think homeopathic medicines are effective?"

		Frequency	Percent
Are homeopathic medicines are effective?	Yes	37	97.4
	No	1	2.6
Are homeopathic medicines ineffective?	Yes	1	2.7%
	No	36	97.3%

As can be seen above in Table 15, in both questions asked concerning the effectiveness of homeopathic medicines, 97% of participants perceived homeopathic medicines to be effective. Only one subject responded to the contrary.

Table 27: Cross-tabulation of knowledge score category and whether homeopathic medicines are effective

Homeopathic medicines effective		Knowledge score category		Total
		Poor	Good	
Yes	count	22	15	37
	% within homeopathic medicines effective	59.5%	40.5%	100.0%
No	count	0	1	1
	% within homeopathic medicines effective	.0%	100.0%	100.0%
Total	count	22	16	38
	% within homeopathic medicines effective	57.9%	42.1%	100.0%

P=0.421

There was no statistically significant relationship between knowledge and the perceived effectiveness of homeopathic medicines. It is interesting to note however, that the only participant who did not perceive homeopathic medicines to be effective had a good level of knowledge of homeopathy, and it can only be assumed that the participant had had a negative interaction with homeopathy.

4.7.3.1. The placebo response and homeopathy

Table 28 Responses to questions assessing attitude to homeopathy

Work because of the placebo effect	True	6	16.2%
	False	24	64.9%
	Don't Know	7	18.9%
People have faith in the medicines	Yes	5	13.5%
	No	32	86.5%

Although 97.4% of participants thought that homeopathic medicines were effective, (Table 26) and 94.7% of participants had taken homeopathic medicines, (Table 24), it was surprising to find that 13.5% to 16.2% of participants thought that homeopathy was effective because of the placebo effect (Table 28 above).

The health shop environment is often assumed to be very removed from the medical paradigm, and this finding was unexpected because the belief that homeopathy is a placebo is often associated with the medical paradigm (Shang, Huwiler-Muntener, Nartey, Juni, Dorig, Sterne, Pewsner and Egger, 2005; Linde and Clausius, 1997; Davies and Kayne, 1992).

The same question concerning homeopathic medicines being effective because people of having faith in them, was asked of South African pharmacists, (Daphne, 1997) and pharmacy staff in England, (Davies and Kayne, 1992). Forty percent of pharmacists in the South African survey, and 50% pharmacy staff in the British survey thought the medicines worked because of placebo. These results were attributed to the close alignment of pharmacy to the medical paradigm.

In examining the results of this section more closely (Table 28), had the conclusions been made using the initial question using the term “placebo” it could have been argued that because there were 18.9% (n=7) of participants that did not know whether placebo

was responsible for the effectiveness of homeopathic medicines or not, that there may have been a lack of understanding of the term placebo. However, this does not account for the result in the second confirmatory question investigating the same concept using different terminology.

4.7.4. Discussion: Personal experience of homeopathy by health shop staff

The health shop industry in South Africa is traditionally associated with homeopathy, and this study has highlighted the extent of this relationship (Prinsloo, 2006). There were very high levels of interaction between the participants of this study and homeopathy. Homeopathic medicines were used and perceived as effective by almost all participants surveyed, and furthermore, over 60 of participants had seen a homeopath as a patient. There was only one participant that did not perceive homeopathic medicines as being effective, and only two participants who had never used homeopathic medicines.

The study did show however, that between 13.5% and 16.2% of participants thought that the effectiveness of the homeopathic medicines was due to a placebo response. In light of the above findings, to find that there were more than two or three participants with this view was unexpected.

4.8. Assessment of levels of knowledge of participants

The results of the investigation into the levels of knowledge of the participants, and factors affecting these results, will be examined under the following headings:

4.8.1. Administration of homeopathic medicines
4.8.2. Storage of homeopathic medicines
4.8.3. Manufacture of homeopathic medicines
4.8.4. Knowledge levels of the principles of homeopathy
4.8.5. General knowledge questions

4.8.6. Summary and conclusions

The section will be concluded by examining the results of this section (4.8) in relation to the research Objectives 3 and 4 (i.e. To determine the level of understanding of homeopathy amongst health shop staff, and to determine which factors, related to the health shop staff well as the health shop profile, influenced the level of understanding of homeopathy amongst health shop staff respectively.)

Table 29: Statistics for knowledge score (%) (n=38)

Mean	72.8070
Median	77.7778
Std. deviation	19.11931
Minimum	17.78
Maximum	97.78

There was generally a high level of knowledge regarding homeopathy in the sample. The mean score was 72.8% and the median was 77.8%. The lowest score was 17.8% and the highest was 97.8%. This is shown in Table 29 for the entire sample. The sample was split at a score of 78%. All scores below this score were considered as relatively poor level of knowledge while scores above this were considered as good. There were 22 participants (57.9%) with poor scores and 16 participants (42.1%) with good scores.

4.8.1. Administration of homeopathic medicines

4.8.1.1. Responses to reasons why one should not touch most homeopathic medicines with one's fingers

Table 30: Responses to reasons why one should not touch most homeopathic medicines with one's fingers

		Count	Column %
1.) Its unhygienic	Yes	19	50.0%
	No	19	50.0%
2.) Substances transferred from the fingers can interfere with medicinal action	Yes	27	71.1%
	No	11	28.9%
3.) Pills coated with medicine	Yes	16	42.1%
	No	22	57.9%
4.) Should wear latex gloves	Yes	5	13.2%
	No	33	86.8%
5.) Wash and disinfect hands	Yes	2	5.3%
	No	36	94.7%
6.) I don't know	Yes	1	2.6%
	No	37	97.4%

Most of the participants scored highly in this section. Only one participant did not know about touching homeopathic medicines with fingers. Most participants possessed the basic knowledge that substances on the fingers, the wearing of latex gloves and washing with disinfectant can interfere with medicinal action. In addition, 42.1% of participants understood that many homeopathic medicines are coated with the homeopath medicine, and hence should not be touched, indicating an applied rather than a practical knowledge. This 42.1% coincidentally was the exact percentage of participants who had overall good level of knowledge scores for the study.

4.8.1.2. Responses to how homeopathic medicines should be taken orally

Table 31: Responses to how homeopathic medicines should be taken orally

		Count	Column %
1.) Using sterilized metal utensils	Yes	2	5.3%
	No	35	92.1%
2.) Away from food	Yes	28	73.7%
	No	9	23.7%
3.) Using distilled water	Yes	6	15.8%
	No	31	81.6%
4.) Teeth need to be brushed	Yes	1	2.6%
	No	36	94.7%
5.) Swallow immediately	Yes	1	2.6%
	No	36	94.7%
6.) Dissolved in mouth	Yes	35	92.1%
	No	2	5.3%
7.) I don't know	Yes	0	0%
	No	37	97.4%
8.) Homeopathic medicines can be added to foods or juices	True	5	13.1%
	False	30	78.9%
	Don't Know	0	0%
9.) Homeopathic preparations are available in suppositories	True	29	76.3%
	False	1	2.6%
	Don't Know	6	15.8%
10.) A plastic spoon can be used to dispense homeopathic meds	True	26	68.4%
	False	7	18.4%
	Don't Know	4	10.5%
11.) Homeopathic medicines are absorbed through the mucous membranes of the body.	True	34	89.5%
	false	1	2.6%
	don't know	1	2.6%

Once again a majority of participants had high scores in this area. Over 89% of

participants were aware that homeopathic medicines are absorbed through the mucous membranes of the mouth, that the medicines need to be dissolved in the mouth, that toothpaste can interfere with their absorption, and that metal can have an adverse effect on homeopathic medicines, all factors which are important for the successful administration of homeopathic medicines.

Most participants, 76.3%, knew that homeopathic preparations are available in suppository form. This is not a common form of homeopathic preparation, but it is available on the South African over-the-counter (OTC) market, and hence most participants having knowledge of it.

The question concerning the use of metal utensils was answered correctly by 92.1% of participants, yet the related question concerning the use of plastic utensils was only answered correctly by 68.4% of participants. The mentioning of ‘sterilized’ may have biased the question and therefore skewed the result. In the above section (Table 30, no 5), 94.7% of participants knew that washing and disinfecting the hands was unnecessary, and may have applied this knowledge to question concerning the use of metal / plastic utensils.

One of the reasons why Question 10 (Table 31) concerning the use of plastic spoons to dispense homeopathic medicines was only answered correctly by 68.4% of participants could have been because there was less familiarity with the concept. A majority of OTC preparations are complex preparations supplied in liquid form and placed straight into the mouth or are supplied as coated tablets, hence not necessitating the need for a spoon. This knowledge would be more applicable to the participants who are dispensing homeopathic medicines or selling the more traditional homeopathic preparations in a globule or granule form.

The participants were less familiar with the concept of avoiding food when taking homeopathic medicines. Twenty three point seven percent of participants did not know that homeopathic medicines should be taken away from food, and 13.1% thought that

homeopathic medicines could be taken with foods and fruit juice. This result could be due to the views of the suppliers involved. According to the Natura Laboratory web site (2006), “Although it is advocated that remedies are taken separately and not in conjunction with meals, as well as avoiding the use of strong tasting or smelling substances, many practitioners (and members of the public) find that the remedies work just as well if these guidelines are not adhered to.” The Dr Reckeweg American Inc, (2006) website however, instructs the user to take the medicines away from food, and avoid, “the consumption of coffee, tea, alcohol, tobacco, and mint (toothpaste, chewing gum, cough drops, etc.”

With Natura Laboratory products being stocked by 86% of health shops worked in by participants, and Dr Reckeweg being stocked by 56% of health shops (Figure 9), it is surprising that there was not more confusion regarding this subject.

The issue of contradictory information concerning the administration of homeopathy was visited again in Question 3 (Table 31). However, in the light of Natura Laboratory guidelines above it is not surprising to find that only 16.2% of the participants knew that distilled water should be used to dissolve homeopathic medicines (Hahnemann, 1982).

4.8.1.3. Discussion: Administration of Homeopathic medicines

Of the participants who had received training, 35% said they had received training in the administration of homeopathic medicines (Figure 6). Administration of homeopathic medicines, though controversial, is an area which is considered by many homeopaths to be important to the beneficial usage of homeopathic medicines, because the effectiveness of the medicines can be negated by incorrect administration.

When the questions examining this knowledge category were analyzed, it was found that vast majority of the participants had high levels of knowledge and thus it can be said that training in this particular area had been effective. However, only 35% of the sample had had formal training on this topic, yet in most cases over 89% of participants

answered the questions correctly. This means many participants must be assimilating knowledge informally through experience and interaction within the health shop environment.

4.8.2. Storage of homeopathic medicines

Table 32: Responses to how homeopathic medicine should be stored

		Count	Column %
1.) Away from direct sunlight	Yes	35	92.1%
	No	3	7.9%
2.) In a warm dark place	Yes	3	7.9%
	No	35	92.1%
3.) Away from electrical outlet points	Yes	19	51.4%
	No	18	48.6%
4.) Away from cellular phones	Yes	18	47.4%
	No	20	52.6%
5.) In moist conditions	Yes	1	2.6%
	No	37	97.4%
6.) In the refrigerator	Yes	0	0%
	No	38	100.0%
7.) I don't know	Yes	0	0%
	No	38	100.0%

Knowledge of the storage of homeopathic medicines is another area of importance, particularly in the OTC environment. If medicines are stored incorrectly they can be rendered ineffective (Ullman, 1995).

Over 90% of participants knew that homeopathic medicines should be stored away from sunlight, in a cool place, in dry conditions and not in the refrigerator.

Fewer participants, 51.4% knew that electrical outlet points and 47.4% knew cellular phones can negatively affect homeopathic medicines. To maximize the beneficial effects of homeopathic medicines, health shop staff and customers alike should be aware of the impact of these two factors on homeopathic medicines.

Overall the basic level of knowledge of the storage of homeopathic medicines was high, with the exception of the awareness of the potential effects of cellular phones and electrical outpoints.

Of participants who received training in homeopathy 51% had had formal training in the storage of homeopathic medicines (Figure 6), more than had had training in the administration of homeopathic medicines. However, over 90% of participants had answered most questions correctly, and hence the assimilation of knowledge had occurred informally.

4.8.3. Manufacture of homeopathic medicines

4.8.3.1. Simplexes and complexes

The two most widely available forms of OTC homeopathic medicines are complexes and simplexes (Kayne, Beattie and Reeves, 1999).

4.8.3.1.1. Complexes

Table 33: Responses to knowledge questions concerning complexes

1.) Which of the following statements indicates your understanding of the term 'complex' in relation to homeopathy?	heard of the term, don't know anything about it	2	5.3%
	the complexity of the medicines and their application	2	5.3%
	more than one homeopathic remedy that has been combined into one medicine	32	84.2%
2.) "Complex" refers to an untreatable condition.	true	0	0%
	false	30	78.9%
	don't know	5	13.1%

A vast majority of participants who answered the above questions answered correctly, indicating an understanding of the concept of complex homeopathic medicines. When these figures are compared, 78.9% of participants worked in health shops that stocked homeopathic medicines (Table 16), which coincides with the number of participants who correctly answered the question in the true and false section above (Table 33). This indicates that 78.9% of participants understood the meaning of a complex homeopathic medicine.

4.8.3.1.1.2. Cross-tabulation of knowledge score category and stock homeopathic complexes

Table 34: Cross-tabulation of knowledge score category and stock homeopathic complexes

Stock homeopathic complexes		Knowledge score category		Total
		Poor	Good	
Yes	count	15	15	30
	% within stock homeopathic complexes	50.0%	50.0%	100.0%
No	count	2	0	2
	% within stock homeopathic complexes	100.0%	.0%	100.0%
Don't Know	count	4	1	5
	% within stock homeopathic complexes	80.0%	20.0%	100.0%
Total	count	21	16	37
	% within stock homeopathic complexes	56.8%	43.2%	100.0%

P=0.204

There was no statistically significant relationship between knowledge and the stocking of complexes. The only anomaly that is obvious in this table (Table 34) is that one participant who has a good level of knowledge score, did not know if homeopathic complexes are stocked in the health shop in which they work.

4.8.3.1.2. Simplexes

Almost as many health shops stocking complexes (78.9%), stocked simplex medicines (76.3%). (n=29) (Table 17).

Table 35: Responses to knowledge questions concerning simplexes

1.) Which of the following statements indicates your understanding of the term 'simplex' in relation to homeopathy?	heard of the term, don't know anything about it	2	5.3%
	the simplicity of the medicines and their application	1	2.6%
	a single remedy	33	86.8%

A vast majority of participants (86.8%) knew that a simplex refers to a single homeopathic medicine.

4.8.3.1.2.2. Cross-tabulation of knowledge score category and stock homeopathic simplexes

Table 36: Cross-tabulation of knowledge score category and stock homeopathic simplexes

Stock homeopathic simplexes?		Knowledge score category		Total
		Poor	Good	
Yes	count	16	13	29
	% within stock homeopathic simplexes?	55.2%	44.8%	100.0%
No	count	4	2	6
	% within stock homeopathic simplexes?	66.7%	33.3%	100.0%
Don't Know	count	2	1	3
	% within stock homeopathic simplexes?	66.7%	33.3%	100.0%
Total	count	22	16	38
	% within stock homeopathic simplexes?	57.9%	42.1%	100.0%

P=0.830

There was no statistically significant relationship between knowledge and the stocking of homeopathic simplexes. However, as in Table 34 above, one participant who has a good level of knowledge score did not know if homeopathic simplexes are stocked in the health shop in which they work.

4.8.3.1.3. Discussion: Simplexes and complexes

The terms simplex and complex are terms that would often be used in describing homeopathic medicines within a health shop environment and hence most health shop staff would be familiar with these concepts.

The term simplex was understood by more participants than the term complex, and this could be due to the term simplex more often appearing on stock sheets, order forms and such like. The term complex is less common because the term is interchangeable with composition or combination medicines (Cason, 2006).

4.8.3.2. Potentization

Potentization is the means by which **ultra-high dilutions** are manufactured and is defined by Cummings &Ullman (1997) as - "the pharmaceutical process of repeated **dilution** with **succussion** (vigorous shaking) by which homeopathic medicines are prepared."

Because the concepts of succussion and dilution are so closely related to potentization they have been grouped together for the purpose of analysis.

4.8.3.2.1. Potentization: Dilution

Table 37: Responses to knowledge questions concerning potentization

1.) Which of the following statements indicates your understanding of the term potentization in homeopathy?	Never heard of it	1	2.6%
	Heard of term but don't know anything about it	3	7.9%
	A specific method to study a patient's case	1	2.6%
	A specific method used to prepare homeopathic medicines	31	81.6%
2.) Homeopathic medicines are always diluted and shaken in a specific manner when being manufactured.	True	29	76.3%
	False	3	7.9%
	Don't know	5	13.2%
3.)Do you think homeopathic medicines are effective because a very small dose is used?	Yes	10	26.3%
	No	27	71.1%

When the topic of potentization was examined it was found that most (86.1%) of the participants indicated that the term meant the method by which homeopathic medicines are manufactured (Table 22, Question 1). In the question included to confirm that the

participants understood that the concept of potentization included succussion and dilution, less participants (76.3%), indicated the correct option (Table 37, Question 2.).

However, when the same concept was tested a different manner, and the participants were asked if they thought that homeopathic medicines were effective because a very small dose was used, only 26.3% of participants agreed with the statement (Table 37, Question 3.

This result indicates that the participants who answered the questions about potentization, dilution and succussion correctly, had a semantic appreciation of the words used, but did not necessarily understand the full implication of the concepts concerned. A familiarity with the concept of potentization, and in this particular part of the question, dilution, means that a very small dose is produced, and those participants who have an in-depth appreciation of homeopathic principles would have understood what was being asked. Hence it would appear that only 26.3% of participants actually understand the meaning of dilution in relation to potentization.

4.8.3.2.2. Potentization: Succussion

Table 38: Responses to knowledge questions concerning succussion

1.) Which of the following statements indicates your understanding of the term succussion in relation to homeopathy?	Never heard of it	9	23.7%
	Heard of term but don't know anything about it	5	13.1%
	A method of shaking the medicine between dilutions	17	44.7%
	Homeopathic treatment for head injury	2	5.3%
	Increase in intensity of symptoms	1	2.6%
2.) Succussion used to treat concussion.	True	3	7.9%
	False	21	55.3%
	Don't Know	13	34.2%
3.) Do you think homeopathic medicines are effective because they are vigorously shaken in preparation?	Yes	5	13.1%
	No	32	84.2%

The concept of succussion was not well understood by many participants, with 23.7% of participants having never heard of the term, while 34.2% did not know that it was not used to treat concussion. However, although the concept was not familiar, 44.7% of participants correctly identified the answer to question 1 (Table 38).

Once again when the understanding of the concept of succussion is tested in a different manner, only 13.1% of participants agreed with the statement in Question 3 (Table 38) indicating that the concept was not entirely understood. Comparing the results in Table 37 to these in Table 38, a similar pattern emerges.

The concept of succussion is identified, but the appreciation that it is part of the potentization procedure and therefore what makes homeopathic medicines effective is only present in 13.1% of participants.

4.8.3.2.3. Dilution

Table 39: Responses to knowledge questions concerning dilutions

1.) Which of the following statements indicates your understanding of the 'C' in relation to homeopathic medicines? e.g. 30cH	never heard of it	3	7.9%
	heard of the term, don't know anything about it	6	15.8%
	a category of homeopathic medicines	3	7.9%
	the medicine has been diluted in the ratio of 1:99	24	63.2%
2.) Which of the following statements indicates your understanding of the 'D' in relation to homeopathic medicines? e.g. 6D	never heard of it	5	13.1%
	heard of the term, don't know anything about it	7	18.4%
	the substance 'Delinium' which is used as a preservative in homeopathic medicines	2	5.3%
	the medicine has been diluted in the ratio 1:9	22	57.9%

Even though the terminology used in naming dilutions (or potencies) on different scales can be confusing (Vithoulkas, 1980), a majority of participants (63.2%) correctly identified that the cH indicated that the medication had been diluted in the ratio of 1:100. A similar percentage of participants, 57.9%, correctly indicated that the D meant that medicine had been diluted in the ratio of 1: 10.

4.8.3.3. Constituents of homeopathic medicines

Table 40 Responses to knowledge questions concerning constituents of homeopathic medicines.

1.) Poisonous substances used.	True	30	78.9%
	False	4	10.5%
	Don't Know	3	7.9%
2.) Never made in a milk sugar base.	True	10	26.3%
	False	17	44.7%
	Don't Know	9	23.7%

Two general questions were asked in this category. Seventy eight point nine percent of participants knew that homeopathic medicines can be made from poisonous substances, and 44.7% knew that a milk sugar base can be used in the manufacture of some homeopathic medicines.

Less than half the participants were aware that a milk sugar base can be used in the manufacture of some homeopathic medicines. This was concerning because people suffering from lactose intolerance can react adversely to this milk sugar base, and it is something that the health shop staff should be aware of before recommending homeopathic medicines to customers.

4.8.3.4. Discussion of levels of knowledge of participants regarding the manufacture of homeopathic medicines

The patterns that emerged from this section of results indicates that the levels of knowledge of participants were high in most areas analyzed, however, the knowledge was of a superficial nature and appeared to be related to a working knowledge of the subject rather than an understanding of the concepts involved.

4.8.4. Knowledge levels of the principles of homeopathy

This section looks at the knowledge levels of the participants in relation to some of the main principles of homeopathy.

4.8.4.1. The law of similars

Table 41 Responses to knowledge questions concerning the "Law of Similars"

1.) Which of the following statements indicates your understanding of the term Law of Similars?	never heard of it	1	2.6%
	heard of the term, don't know anything about it	4	10.5%
	many people have similar symptoms	2	5.2%
	because there are so many medicines there are many similarities	2	5.2%
	like cures like	26	68.4%
2.) Do you think homeopathic medicines are effective because of the principle of 'like cures like'?	yes	26	68.4%
	no	11	28.9%

There was a high degree of correlation between the two questions asked about the 'Law of Similars" in this section (Question 1. and 2.Table 41), with 68.4% of participants selecting the correct answers in both questions.

The Law of Similars /'like cures like' is the central tenet of homeopathy (Cummings and Ullman, 1997) and only 68.4% of participants thought homeopathy was effective because of this principle. Furthermore, participants had higher scores in other sections where the principles of homeopathy that are dependant on this central principle were examined. Over 75% of participants knew that succussion and dilution were part of the

manufacturing process (Table 37), and 89% of participants knew that homeopathy treats mental, emotional and physical symptoms, as will be shown shortly (Table 45).

This result indicates that just under a third of participants are recommending homeopathic medicines on a disease-based system that is more consistent with conventional medicine than the principles of homeopathy.

4.8.4.1.1. Cross-tabulation of knowledge score category and “like cures like”

Table 42: Cross-tabulation of knowledge score category and “like cures like”

Because of the principle of 'like cures like'		Knowledge score category		Total
		Poor	Good	
Yes	count	12	14	26
	% within because of the principle of 'like cures like'	46.2%	53.8%	100.0%
No	count	9	2	11
	% within because of the principle of 'like cures like'	81.8%	18.2%	100.0%
Total	count	21	16	37
	% within because of the principle of 'like cures like'	56.8%	43.2%	100.0%

P=0.045

There was a statistically significant association between those participants who were familiar with the central principle of homeopathy, ‘like cures like’ and their levels of knowledge of homeopathy.

Only 53.8% of participants who knew that homeopathy was effective because of the principle of ‘like cures like’ had good levels of knowledge scores, indicating that knowing about the principle of ‘like cures like, did not necessarily mean that participants would have a good level of knowledge, but not knowing about this principle meant that they would probably have a poor level of knowledge score. This is illustrated by the vast

majority, 81.8%, of participants who did not know that homeopathy is effective because of the principle of 'like cures like' having poor levels of knowledge, which was expected.

What was not expected however, was the 18.2% of participants who had high levels of knowledge even though they did not know about the principle of 'like cures like', indicating that either these participants knew of the principle of 'like cures like' by another term, or that they had a good working knowledge of homeopathy that did not necessarily include an in-depth understanding of the principles involved.

4.8.4.2. The homeopathic aggravation

Table 43 Responses to knowledge questions concerning the "homeopathic aggravation"

1.) Which of the following statements indicates your understanding of the term homeopathic Aggravation?	Never heard of it	8	21.1%
	Heard of term but don't know anything about it	3	7.9%
	A sign that the condition is worsening	5	13.1%
	Increase in intensity of symptoms already present	17	44.7%
2.) Can cause symptoms to get worse before they get better?	True	33	86.8%
	False	2	5.2%
	Don't know	2	5.2%

There is a large discrepancy in the results of the two questions covering the concept of the homeopathic aggravation. Only 44.7% of participants thought that term homeopathic aggravation was synonymous with an increase in the intensity of symptoms already present, however, 86.8% of participants knew that homeopathic treatment can cause

symptoms to get worse before they get better.

Most participants knew that under homeopathic treatment, symptoms can get worse before they get better, indicating that the basic knowledge required for advising customers was present. The discrepancy arose because of the way that Question 1 (Table27) was phrased, with many participants being unfamiliar with the homeopathic terminology –'the homeopathic aggravation', but understanding the principle concerned.

4.8.4.3. Homeopathic provings

Table 44 Responses to knowledge questions concerning the "homeopathic proving"

1.) Which of the following statements indicates your understanding of the term 'proving' in relation to homeopathy?	never heard of it	9	23.7%
	heard of the term, don't know anything about it	4	10.5%
	substances given to healthy individuals to find out what symptoms are curable by that particular substance	11	28.9%
	a person receiving a homeopathic medicine who has a dramatic improvement, proves the effectiveness of that particular medicine	3	7.9%
	a placebo-based clinical trial that scientifically proves the effectiveness of homeopathy	8	21.1%

The concept of the homeopathic proving was not familiar to the participants, with only 28.9% selecting the correct option. There are two possible explanations for this result.

Firstly, there may be a problem with the way in which the question was phrased, and the participants were unfamiliar with the terminology used. There was no confirmatory question for this concept, to check the result against. And secondly, although homeopathic provings are central to homeopathy an understanding of this particular concept would not necessarily be required to advise purchasers regarding the use of OTC homeopathic medicines.

4.8.4.4. Whole person aspect of homeopathic treatment

Table 45 Responses to knowledge questions concerning the whole-person aspect of homeopathic treatment

1.) In treating patients homeopaths consider the following types of symptoms.	Don't know	1	2.6%
	Mental	1	2.6%
	Physical, mental and emotional	34	89.5%
2.) Homeopathic medicines work on mental and emotional feelings	True	34	89.5%
	False	2	5.2%
	Don't know	1	2.6%

A vast majority of participants, 89.5%, were aware that homeopathic treatment covers physical symptoms as well as mental and emotional ones. A possible explanation for this surprisingly high result could again be a linguistic one, with participants knowing that homeopathic medicines are available for each of these aspects of disease, but not necessarily grasping the concept that one medicine treats all these aspects simultaneously.

However, with 63.2% of participants having had a homeopathic consultation (Table 22), and 94.7% of participants having taken homeopathic medicines (Table 24), the understanding by many of these participants that one homeopathic medicine treats all

these aspects simultaneously is feasible.

4.8.4.5. Discussion of levels of knowledge of participants regarding the principles of homeopathy.

This section of the study showed that there was a high level of knowledge by participants of some of the principles of homeopathy. These included: the whole-person treatment aspect of homeopathy, 'the homeopathic aggravation', and 'like cures like'. In examining the section 4.8.3 above (The manufacture of homeopathic medicines) it was apparent that the areas where many participants scored highly coincided with the areas made familiar by their working environment. In this section covering the principles of homeopathy this trend is again apparent. The practical knowledge required to deal with customers is present, but the more theoretical knowledge of homeopathy itself is lacking.

4.8.5. General knowledge questions

Table 46 Responses to "where homeopathy was founded"

Where was homeopathy founded?	Don't know	8	21.1%
	In Germany by Dr Samuel Hahnemann	27	71.1%

Table 47 Responses to whether homeopathy, phytotherapy, and vitamin therapy are synonymous or not

Herbal teas are homeopathic medicines.	True	4	10.5%
	False	33	86.8%
	Don't know	0	0%
Vitamin B12 is a homeopathic medicine.	True	1	2.6%
	False	34	89.5%
	Don't know	1	2.6%
	Don't know	4	10.5%
Do you think homeopathic medicines are effective because they contain herbal ingredients?	Yes	8	21.1%
	No	29	76.3%

Table 48: Responses to "homeopathy is unscientific because there are no clinical trials"

Unscientific-no clinical trials	True	3	7.9%
	False	29	76.3%

Table 49: Response to "A Homeopath is given the title of doctor on completion of the Masters Degree in Homeopathy?"

Homeopath given title of doctor	True	23	60.5%
	False	2	5.2%
	Don't know	10	26.3%

This section was generally answered well with 71.1% of participants knowing that Dr

Hahnemann was the founder of homeopathy (Table 46), 76.3% knowing that homeopathic clinical trials are conducted (Table 48), over 85% knowing that herbal teas and B12 homeopathy are not homeopathic (Table 47), and 60.5% knowing that qualified homeopaths are awarded the title of doctor (Table 49).

This section was included to examine some of the misconceptions associated with homeopathy. Many consumers of homeopathic medicines are under the misconception that homeopathy and phytotherapy are synonymous (Furham, 1999; Borneman, 2001).The questions referring to herbal teas and vitamin B12 were included to ascertain whether or not participants could distinguish between homeopathy, phytotherapy and vitamin therapy. Fortunately most participants could distinguish between the different therapies and therefore are not responsible for perpetuating these misconceptions.

Homeopathy is often associated with Eastern philosophy and it was interesting to note that in the region of 71% of participants knew that Dr Hahnemann was the founder of homeopathy in Germany.

A surprising result was that 97.4% of participants referred customers to homeopaths (Figure 13), 63.2 % had seen a homeopath as a patient (Table 22), but only 60.5% of respondents knew that qualified homeopaths are given the tile of doctor (Table 49). A possible explanation for this result could be that the participants are interacting with lay homeopaths.

4.9. Summary and conclusions

4.9.1. Research Objective Three

Objective three

The third objective was to determine the level of understanding of homeopathy amongst health-shop staff.

There was generally a high level of knowledge concerning homeopathy in the sample group. The median score for knowledge was 78%, with the participants scoring above 78% being categorized as having a good level of knowledge, and those scoring below 78% having a poor level of knowledge.

However, when it comes to analyzing the results in relation to the level of understanding of homeopathy amongst the participants, it was found that although the participants had high scores their understanding of homeopathy was limited to a more superficial level of knowledge. This is highlighted by the following examples:

1 They were able to identify terms, and for example 81.6% (Table 37) of participants were able to match the term potentization to its meaning: - 'a specific method of preparation of homeopathic medicines', however, far fewer, 26.3% (Table 37) of participants were able to assimilate and apply the knowledge to appreciate that the outcome of potentization was a small dose, and this being one of the fundamentals of homeopathy, made it a reason for the effectiveness of homeopathic treatment.

2 Seventy one point one percent of participants knew that homeopathic medicines could not be touched with the fingers because the substances present would interfere with the action of the medicines, however, only 42.1% knew the reason that fingers can have this effect, is because homeopathic

preparations are often coated with the medicine (Table 30).

In addition, the knowledge gained was related to the health shop environment, and as a result the areas of knowledge that were better understood were those which impacted on the participants daily interactions with homeopathy in the work place. This was especially so when it came to an assessment of the understanding of the principle of 'like cures like'. There were 68% of participants who had knowledge of this principle. This principle is the central tenet of homeopathy, and the one that defines the homeopathic method (Cummings and Ullman, 1997). More participants had knowledge of other, less central, areas confirming that approximately 30% of participants were unaware of how homeopathy works.

The following examples of where the participants scored highly are areas that are related to a daily interaction with homeopathy in the work place:

1. Eighty six point eight percent (Table 35) of participants knew the meaning of simplex.
2. over 78.9% (Table 33) of participants knew the meaning of complex.
3. Ninety two point one percent (Table 31) of participants knew that homeopathic medicines need to be dissolved in the mouth.
4. Seventy one point one percent of participants knew that substance on the fingers can interfere with the action of homeopathic medicines.
5. Seventy three point seven percent of participants knew that homeopathic medicines should be taken away from food.
6. Over 92.1% of participants knew that homeopathic medicines should be stored away from sunlight and heat (Table 32).

The type of knowledge displayed by the participants indicates that in many instances homeopathy, although perceived as effective, is being recommended on a disease-based system more applicable to conventional medicine, with the result that the principles of homeopathy and the reasons for its effectiveness are not necessarily being communicated to the purchasers of OTC homeopathic medicines.

Hypothesis three

There would be a poor understanding of homeopathy amongst health shop staff

As is illustrated above, most participants exhibited high levels of knowledge scores, however, on closer analysis this was not an indication of an in-depth understanding of homeopathy and therefore ***Hypothesis three was accepted*.**

4.9.2. Research objective four

Objective four

The fourth objective was to determine which factors related to the health-shop staff profile as well as the health-shop profile, influenced the level of understanding of homeopathy amongst health-shop staff.

Since the design of this study was cross-sectional, any factors found to be associated with category of knowledge score (except for demographics) could not be taken as a causal factor or a factor affecting knowledge score because of the possibility of reverse causality. Thus coexisting associations were examined.

None of the demographic variables were significantly associated with knowledge score. The only factors which were statistically significantly associated with knowledge score were position held (p=0.044, Table 9); dispensing homeopathic medicines as per script (p=0.036, Table 19); having recommended homeopathy for dental treatments (p=0.021, Table 21); having consulted with a homeopath as a patient (p=0.049, Table 23); belief in the principle of like cures like (p=0.045, Table 42). It is also noted that more associations may have been statistically significant with a higher sample size.

There were however, some non-significant factors that contributed to the to the knowledge levels of participants, and particularly to the types of knowledge acquired, notably the superficial nature of the knowledge displayed by a majority of participants, as well as the types of areas where knowledge was concentrated. These included:

1 **The health shop environment**.

- Historically, health shops have been closely associated with homeopathy, and this has lead to a high degree of interaction between the health shop staff and homeopathy, with all but one of the health shops surveyed, stocking homeopathic medicines. 63.2% of participants had seen a homeopathic practitioner, 94.7% of participants had used homeopathic medicines, and 97.4% of staff agreeing that homeopathic medicines are effective. This high degree of interaction has lead to a familiarity with homeopathy, and this is reflected in the type of knowledge acquired, which is generally a superficial form of knowledge displayed by a majority of participants, as opposed to a more in-depth form of knowledge displayed by a minority.
- Because of the retail nature of the health shop the training is largely being done by the product representatives and product seminars, and hence the pattern of knowledge acquisition that has emerged.

2 CAM

The health shops are recognized CAM distributors and this has had an influence on the profile of health staff in general and in particular on the profile of the health shop staff who displayed good levels of knowledge. This means that health shop staff who had good level of knowledge scores, were more likely to be female, fall within the age category of 56 to 65 years of age, have English as a first language, be white, have a degree qualification and have worked in a health shop for more than 5 years, very similar to the internationally recognized CAM user profile. (Härtela, et al. 2004; National Centre for Complementary and Alternative Medicine, 2004; Menniti-Ippolito, et al. 2002; Reid, 2002; Kayne, Beattie and Reeves, 1999; Austin, 1998; MacLennan and Wilson, 1996).

Hypothesis four

There would be no association between the staff profile and health shop profile with respect to the level of understanding of homeopathy.

Because the above factors have had an effect on the levels of understanding of homeopathy, ***Hypothesis four has been rejected*****.**

Chapter 5
Conclusions and recommendations

5.1. Conclusions

Most people who come into contact with homeopathy do so through the use of over-the-counter (OTC) homeopathic medicines Thus, in conducting this pilot study, it was hoped that an initial probe could be made in order to investigate the level of knowledge of homeopathy by front-shop staff and to interrogate the contextualization of homeopathy in health shops in the Gauteng area.

The results of this study show that health shop staff in the Greater Gauteng area display a high level of knowledge regarding homeopathy. However, the type of knowledge displayed by most participants is factual (operational) and superficial in nature. There were far fewer members of staff who possessed an in-depth inferential level of knowledge of the principles of homeopathy.

None of the demographic variables were significantly associated with the knowledge score. The only factors which were statistically significantly associated with this knowledge score were position held; dispensing homeopathic medicines as per script; having recommended homeopathy for dental treatments; having consulted with a homeopath as a patient; and having the belief in the principle of ‘like cures like’. More associations may have been statistically significant with a higher sample size.

A majority of staff members showed high levels of knowledge in specific areas that are related to their daily interaction with homeopathy in the work place. This type of knowledge is further reinforced by the nature of training available, which is predominately accessed through the suppliers of homeopathic medicines.

There is a high degree of interaction between the health shop staff and homeopathy,

with homeopathy and homeopathic medicines being accessed by most participants, and being perceived as highly effective.

The demographic profile exhibited by the health shop staff, and particularly those who were knowledgeable is very similar to that of CAM users internationally, indicating that CAM users and suppliers are subject to similar dynamics.

5.2. Recommendations

1 The health shop environment is conducive to the furthering of homeopathy, however, there are many influences that affect the manner in which homeopathy is portrayed in terms of the central principles, particularly of 'like cures like'. The complex homeopathic medicines are sold on "a disease- based-orientation", as are the simplex homeopathic medicines that are available on the shelves. This type of marketing is in essence perpetuating the disease-based methods of treatment advocated by conventional medicine. This in turn is perpetuating the misconception of homeopathy as a therapy, which can be equated with conventional medicine and therefore subject to the same narrow methods, which it is clearly not. The fundamental principles of homeopathy are being diluted and its essence lost by a retail driven influence. In order to measure the effects these dynamics are having on the greater perception of homeopathy, research needs to be done on South African users of both OTC, and practitioner-based homeopathy. This will establish what is understood about homeopathy, and its principles, and the extent of the influence of this retail method of distribution.

2 Areas of concern that have been noted in terms of OTC include that fact that self-care users indicate that they have been using the same medicines for lengthy periods. This has lead to recommendations that labelling be revised to correct this form of usage, and that containers are reduced in size and dosage.

3 Other areas of concern revolve around the issues of safety, including:

- Homeopathy and other drug interactions including pharmaceuticals, phytotherapeutics and the like, of which there is no research.
- Most OTC homeopathic users are not informing their primary health care practitioners of their self care CAM and homeopathic usage, and one of the purported dangers is that conventional medication is discontinued and the resulting dangers visited on the reputation of CAM.

4 The more training available in CAM and homeopathy in the medically based subjects, the higher the levels of acceptance. There needs to be a concerted effort to ensure that homeopathy becomes part of the training curricula of as many medically-orientated courses as possible; especially medicine, pharmacy, nursing and veterinary.

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APPENDIX A

LETTER OF INFORMATION (FOCUS GROUP)

Dear Participant,

Welcome to the focus group and thank you for your interest.

Name of Research Student: Janet Tatalias.

Name of Institution: Durban Institute of Technology

The purpose of this focus group is to validate the use of the attached questionnaire in the assessment of the attitude and understanding towards homoeopathy and homoeopathic medicines of people who work in health shops in the Gauteng area.

Most, if not all, health shops sell some form of homoeopathic medicine, and it is important to test the level of understanding and attitude of those who are giving advice and selling these products to the public.
The target group I will be aiming the study at consists of people who work in health shops, who are able to read and write English and who are involved with advising customers on the various products available.
The questionnaire has been divided into 5 sections.

Section A relates to the participant and is there to establish who they are and their overall educational standing.

Section B relates to the particular health shop and is there to establish what type of shop it is and whether they stock homoeopathic products, and what ranges they stock.

Section C establishes the position held by the participant, the type of training received in health shops, and specifically to see whether training in homoeopathy is undertaken. (The effectiveness of the training if given is examined in section D.)

Section D is there to establish the level of understanding of homoeopathy; is the participant fully conversant with the main principles of homoeopathy, or are there gaps in their knowledge and understanding.

Section E is there to establish what type of attitude participants have towards homoeopathy, positive or negative, and to see whether there is any correlation between attitude and levels of understanding of the principles of homoeopathy.

You have been asked to participate in this focus group because you represent an area of knowledge. Please provide input and the reasons behind the input as this will assist in the research process. The results of this focus group will only be used for research purposes, and your comments and contributions will remain confidential.

Thank you for your participation,

Yours sincerely,
Janet Tatalias
(Student of Homoeopathy)

APPENDIX B

Confidentiality Statement

Declaration

1. All information contained in the research documents and any information discussed during the focus group meeting will be kept private and confidential. This is especially binding to any information that may identify any of the participants in the research process.

2. The patient files have already been coded and will be kept anonymous, no identification of isolated patient cases will be allowed in the focus group.

3. None of the information shall be communicated to any other individual or organisation outside of this specific focus group as to the decisions of this focus group.

4. The information from this focus group will be made public in terms of a journal publication, which will in no way identify any participants of this research.

Once this form has been read and agreed to, please fill in the appropriate information on the attached sheet and sign to acknowledge agreement

Important note:

This form is to be read and filled in by every member participating in the focus group, before the focus group meeting convenes.

APPENDIX C
INFORMED CONSENT FORM

(To be completed by patient / participant)

Date

Title of research project: **A prospective, epidemiological pilot study to investigate the level of knowledge of homeopathy and its contextualization in health shops in the Gauteng area.**

Name of supervisor	**Dr C. Korporaal**	**Dr R. Steele**
Tel	**0312042611**	**0313326060**

Name of research student	**Janet Anne Tatalias**
Tel	**0117894660 0832338347**

Please circle the appropriate answer	**YES /NO**	
1. Have you read the research information sheet?	Yes	No
2. Have you had an opportunity to ask questions regarding this study?	Yes	No
3. Have you received satisfactory answers to your questions?	Yes	No
4. Have you had an opportunity to discuss this study?	Yes	No
5. Have you received enough information about this study?	Yes	No
6. Do you understand the implications of your involvement in this study?	Yes	No
7. Do you understand that you are free to withdraw from this study at any time without having to give any a reason for withdrawing, and without affecting your future health care?	Yes	No
8. Do you agree to voluntarily participate in this study	Yes	No
9. Who have you spoken to? _____		

Please ensure that the researcher completes each section with you.
If you have answered NO to any of the above, please obtain the necessary information before signing

Please Print in block letters:

Patient /Subject Name:_____ Signature: _____

Parent/ Guardian:_____ Signature: _____

Witness Name:_____ Signature: _____

Research Student Name:

APPENDIX D

Code of Conduct:

This form needs to be completed by every member of the Focus Group prior to the commencement of the focus group meeting.

As a member of this committee I agree to abide by the following conditions:

1. All information contained in the research documents and any information discussed during the focus group meeting will be kept private and confidential. This is especially binding to any information that may identify any of the participants in the research process.
2. None of the information shall be communicated to any other individual or organisation outside of this specific focus group as to the decisions of this focus group.
3. The information from this focus group will be made public in terms of a journal publication, which will in no way identify any participants of this research.

	Member Represents	Member's name	Signature	Contact details
1				
2				
3				
4				
5				
6				
7				
8				

APPENDIX E
Focus Group Questionnaire

Thank you for completing the following questionnaire. Please note that no names are used and that your identity is kept strictly confidential.

Section A.

Demographic Questions Related to you the Participant:

1. Are you: Male ☐ Female ☐

2. Which age bracket are you in?

<25	26-35	36-45	46-55	56-65	>65
☐	☐	☐	☐	☐	☐

3. What is your home language?

English ☐ Afrikaans ☐ Zulu ☐ Tswana ☐
Xhosa ☐ Venda ☐ Ndebele ☐

Other (please specify). _____

4. To which group do you belong?

Black	Chinese	Coloured	Indian	White
☐	☐	☐	☐	☐

Other (please specify) _____

5. What qualifications do you have?

Standard (please specify)	Matric	Diploma(please specify)	Degree(please Specify)

Other (please specify) _____

1

Section B.
Demographic Questions Related to your Health Shop:

6. Which type of a health shop do you work in?

Private	Part of a group 2 health shops	Part of a group 3-5 health shops	Part of a group. more than 5 shops
☐	☐	☐	☐

7. Where is the shop situated?

On its own, no other associated shops.	On a street, associated with a shopping area.	Inside a shopping Complex, less than 40 other businesses
☐	☐	☐

Inside a shopping Complex, more than 40 other businesses.

☐

8. Does the health shop you work in stock any homoeopathic medicines?

No ☐ Yes ☐

Please indicate the homoeopathic ranges stocked.

Homoeoforce 6c Remedies ☐
Homeoforce 30c Remedies ☐
Weleda ☐
Natura ☐
Any others. (please specify) ☐

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Section C.

Demographic Questions Related to your position in a Health Shop.

9. Please indicate your position.

Owner	Manager	Employee
☐	☐	☐

10. Do you hold a full time or part time position?

Full time	Part time
☐	☐

11. How long have you worked in health shops?

1year or less	1-2	2-5	6-10	over 10years
☐	☐	☐	☐	☐

12. Please indicate any of the following that apply to your job description.

Stock taking.	☐	Shelf filling.	☐
Marking stock.	☐	Placing orders.	☐
Cashier work.	☐	Handling money.	☐
Supervision of other staff.	☐	Staff Training.	☐
Customer sales.	☐	Advising customers	☐
Taking Blood Pressures.	☐	Cleaning the shop.	☐
Doing Glucometer readings	☐		

Other (please specify) ☐

13. Have you been given any training while working in a health shop in areas other than homoeopathy?

No ☐ Yes ☐

Please indicate below the type of training you have received.

Product seminars	☐
In house training by staff	☐
In house training by product representatives	☐

Institutionally registered courses

(Please specify)

Others (Please specify)

14. Are you presently registered at any learning institution?

Yes ☐ No ☐

If yes please specify

Institution/s and course/s

15. Have you been given any training relating to homoeopathy and homoeopathic medicines while working in a health shop ?

No ☐ Yes ☐

Please indicate the type of training you have attended below.

Product seminars ☐

In house training by staff ☐

In house training by product representatives ☐

Institutionally registered courses

(Please specify)

Other (Please specify)

Section D.

Questions Related to your understanding of Homoeopathy.

16. How would you describe your knowledge of Homoeopathy?
    - ☐ never heard of it
    - ☐ heard of it only
    - ☐ know something about it
    - ☐ quite familiar with it

17. Do you advise customers about homoeopathic medicines?
    Yes ☐ No ☐

18. Do homoeopathic medicines have any side effects?
    No ☐ Yes ☐ Don't know ☐

19. Have you ever heard Dr Samuel Hahnemann?
    - ☐ never heard of him
    - ☐ heard of him, don't know anything about him.
    - ☐ know something about Dr Hahnemann
    - ☐ quite familiar with Dr Hahnemann

20. Which of the options below closest matches your understanding of the term Homoeopathic Aggravation?
    - ☐ never heard of it
    - ☐ heard of the term, don't know anything about it.
    - ☐ increase in intensity of symptoms already present.
    - ☐ increased mental irritability caused by the medicine.
    - ☐ a sign that the condition is worsening.

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21. Which of the options below closest matches your understanding of the term sucussion in relation to homoeopathy?

- ☐ never heard of it
- ☐ heard of the term, don't know anything about it.
- ☐ increase in intensity of symptoms.
- ☐ a method shaking the medicine between dilutions.
- ☐ a form of homoeopathic treatment for head injury.

22. Where was homeopathy founded?

- ☐ don't know
- ☐ in the East and is based on Eastern Philosophy.
- ☐ in the USA by Dr Kent.
- ☐ in Europe by a medical Doctor.
- ☐ in India by a Buddist Monk.

23. Which of the options below closest matches your understanding of the term Law of Similars?

- ☐ never heard of it
- ☐ heard of the term, don't know anything about it.
- ☐ many people have similar symptoms
- ☐ like cures like.
- ☐ because there are so many medicines there are many similarities.

24. Which of the options below closest matches your understanding of the term 'proving' in relation to homoeopathy?

- ☐ never heard of it
- ☐ heard of the term, don't know anything about it.
- ☐ substances given to a healthy individual to find out what symptoms are associated with that particular substance.
- ☐ a placebo based clinical trail, which scientifically proves the effectiveness of homoeopathy.

☐ a person receiving a homoeopathic medicine who has a dramatic improvement proves the effectiveness that particular medicine.

25. Which of the options below closest matches your understanding of the term 'simplex' in relation to homoeopathy?

☐ never heard of it
☐ heard of the term, don't know anything about it.
☐ the simplicity of the medicines and their application
☐ an uncomplicated case.
☐ a single remedy.

26. Which of the options below closest matches your understanding of the term 'complex' in relation to homoeopathy?

☐ never heard of it
☐ heard of the term, don't know anything about it.
☐ the complexity of the medicines and their application.
☐ a complicated case.
☐ more than one homoeopathic remedy that has been combined into one medicine.

27. Which of the options below closest matches your understanding of the 'C' in relation to homoeopathic medicines?

☐ never heard of it.
☐ heard of the term, don't know anything about it.
☐ a category of homoeopathic medicines.
☐ the medicine has been diluted in the ratio of 1:99.
☐ Carbon

28. Which of the options below closest matches your understanding of the 'D' in relation to homoeopathic medicines?

- ☐ never heard of it.
- ☐ heard of the term, don't know anything about it.
- ☐ a category of homoeopathic medicines.
- ☐ the medicine has been diluted in the ratio 1:9.
- ☐ Delinium

29. When taking homoeopathic medicines one should?

- ☐ don't know
- ☐ never take homoeoapthic medicine on a empty stomach.
- ☐ not have any food or drink 10 minutes before or after taking the medication, and wait for half an hour after brushing ones teeth.
- ☐ there is no specific way to take homoeopathic medicines.
- ☐ not take homoeoapthic medicines before 6am and after 8pm.

Section E.

Questions Relating to your attitude towards Homoeopathy.

32. Would you ever go and see a Homoeopath as a patient?
Yes ☐ No ☐

33. Have you ever been to see a Homoeopath as a patient?
No ☐ Yes ☐

34. If you answered yes in the question above, would you go back and see a homoeopath again?
Yes ☐ No ☐

35. Would you ever use homoeopathic medicine?
No Yes ☐

36. Have you ever used homoeopathic medication?
No ☐ Yes ☐

37. If you answered yes in the above question, would you use homoeopathic medicine again?
No ☐ Yes ☐

38. Has anyone you know ever been to see a Homoeopath as a patient?
No ☐ Yes ☐ don't know ☐

39. Has anyone you know ever used homoeopathic medicines?
No ☐ Yes ☐ don't know ☐

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40. Do you think homoeopathy and homoeopathic medicines work?

No ☐ Yes ☐ Don't know ☐

41. Is homoeopathy is a safe complimentary medicine?

No ☐ Yes ☐ Don't know ☐

42. Does homoeopathy only work because people believe it does? ☐

No ☐ Yes ☐ Don't know ☐

43. Does homoeopathy go against your religious beliefs.

No ☐ Yes ☐ Not applicable. ☐

APPENDIX F
Focus group recommendations

Focus Group

11th November 2003

Summary of suggestions made.

There were ten participants in the focus group.

- Two pharmacy front shop assistants.
- Two health shop assistants
- One pharmacist.
- One statistician
- One homoeopath
- Two researchers (Lecia deVilliers and Janet Anne Tatalias)

A supervisor / scribe and transcript recorder

The participants were specifically selected by the researchers as representative of areas of expertise that would be required to validate the questionnaire content.

Prior to commencement, the members of the group were asked to read the documentation including;

- Focus Group information letter. (Appendix A)
- Focus Group confidentiality statement. (Appendix B)
- Informed consent form. (Appendix C)
- Focus Group Code of Conduct form. (Appendix D)
- Focus Group proposed questionnaire (Appendix E)

The members of the group were then asked to sign the informed consent form, confidentiality and code of conduct forms.

The questions were then read individually by the researchers and discussed by the group.

A summary of the discussion and comments follows.

Section A. Demographic questions relating to the participant

Question 1. (Please indicate your sex.)

All members of the group agreed that the question was relevant.

Question 2.(Which age bracket are you in?)

Statistician: - The last age brackets were 56 to 65, and 65 and over respectively. Need to be changed i.e. 56 to 65 and 66 and over.

All members of the group agreed.

Question 3. (What is your home language?)

Statistician: - Only give options for English and Afrikaans and then other, and specify other. If there are enough others specified, then another group can be formed.

All members of the group agreed.

Question 4. (To which group do you belong?)

Statistician: - Asking people about their race may prevent them from answering the question and even the questionnaire.

Pharmacist: - agreed.

Researchers: - Commented that the question there to see if race was one of the factors affecting the understanding of homeopathy.

Rest of group agreed question should be there.

Statistician: - Commented that there was no objection to the question as such, but asked what relevance it had to the study, and that this factor should be considered when deciding to include or exclude the question.

Question 5. (What qualification do you have?)

Statistician: -Rephrase the question to read 'what is your highest qualification'. This will prevent all the choices from being checked.

All members of the group agreed.

Section B. Demographic questions related to your health shop

Question 6.. (What type of health shop do you work in?)

Pharmacies

Pharmacist: - All pharmacies are the same; the distinction should be where the pharmacies are located and whether they are retail or in a hospital, or belong to specific groups ie Medicine chest or Medicross.

Statistician: - Agreed and added that if there were a wide range of different types of pharmacies, that the researcher investigate what they were before finalizing the question.

All members of the group agreed.

Health shops

Homeopath: - There are different types of health shops for e.g. there are gym supply shops; however, the distinction is something that needs to be considered, when defining what health shops will be part of the survey. In addition perhaps the shops should be referred to as health food stores as opposed to health shops through out the document.

Pharmacist: - Did not agree. Health shops are health shops, whether they supply predominately gym supplements or health foods.

Question 7. (Where is the shop situated?)

Pharmacist: -The question is relevant if you are comparing a pharmacy in a rural setting to one in an urban setting, and whether that has any bearing on the understanding of homeopathy. The requirements of the study need to be considered before finalizing this question.

Statistician: - Agreed. Question is relevant because you want to know where the shop is located. In addition, you cannot ask what your customers are like, therefore, an indication of the type of customer can be gained by knowing the shop location. Again it depends on the relevance to your study.
Pharmacist: - Agreed that where the shop was located did have relevance to the study.
Statistician: - The question needs to be rephrased to be more relevant. I.e. where is the shop located not whether it is in complex or not.
The rest of the members of the group agreed.

Question 8. (Does the shop you work in stock any homeopathic medicines?)
Statistician: - Pointed to the need to include a question about whether there are any homeopathic medicines being bought on script or not. In addition, there is no distinction between complex medicines and simplex medicines.
The rest of the members of the group agreed.

Section C. Demographic Questions Related to position in the shop.

Question 10. (Do you hold a full time or part time position?)
All agreed the question was fine for the pharmacy front shop assistants.
With-in the health shop there will be more than one type of employee participating in the research, including owners and managers.
Statistician: - The question should be reworded to ask for category of employee, and as a sub question ask about fulltime or part time position.

Question 11. (How long have you worked in the pharmacy/ health shop?)
All members of the group agreed that it was a relevant question.

Question 12. (Please indicate if any of the following apply to your job description.)
Statistician; - The question is too complicated. It may or may not be relevant, but needs to be simplified. The questionnaire is lengthy and asking questions that may

not be necessary could prevent the questionnaire from being completed. A questionnaire should be completed by a health shop and pharmacy to investigate the staff reaction to the contents. Are all the questions completed, which ones are left out, and what specific information is gained from each of the questions.
Pharmacist: -What does 'interacting with the pharmacist mean'. The interaction with the pharmacist will depend on many factors including the size of the shop and the educational level of the participant. There are a number of different types of positions with in the pharmacy, apart from pharmacist. Included in this are front shop assistants and pharmacist assistants. The pharmacist assistants assist the pharmacist, where as the front shop assistants do not.
All agreed question need to be carefully assessed and reworded for relevance.

Question 13. (Have you been given any training while working in a pharmacy/health shops in areas other than homeopathy?)
All members of the group agreed that the question was relevant.

Question 14. (Are you presently registered at any learning institution?)
All members of the group agreed that the question was relevant.

Question 15. (Have you been given any training related to homeopathy and homeopathic medicines while working in a health shop/pharmacy?)
Statistician: - This question should be asked before question 13.
All members of the group agreed.

Section D
Questions related to your understanding of homeopathy.

Question 16. (How would you describe your knowledge of homeopathy?)
All members of the group agreed that the question was relevant.

Question 17. (Do you advise customers about homeopathic medicines?)
All members of the group agreed that the question was relevant.

Question 18. (Do homeopathic medicines have any side effects?)
Question was included in error.

Question 19. (Have you ever heard of Dr Samuel Hahnemann?)
Statistician and Pharmacist both questioned the relevance of this question.
It was agreed that the question was relevant because in relation to other similar questions it would be used to assess different levels of knowledge.

Question 20. (Which of the options below closest matches your understanding of the term 'homeopathic aggravation'?)
All members of the group agreed that the question was relevant
However, it was noted that different questions had different numbers of answer options and it was agreed, that for continuity, that the number of options should be the same.

Question 21. (Which of the options below closest matches your understanding of the term 'sucussion' in relation to homeopathy?)
All members of the group agreed that the question was relevant.

Question 22. (Where was homeopathy founded?)
All members of the group agreed that the question was relevant.

Question 23. (Which of the options below closest matches your understanding of the term 'Law of Similars'?)
All members of the group agreed that the question was relevant.
Statistician: - Commented that there was a discernable pattern in the placement of the correct answers and that this should be altered.

Question 24. (Which of the options below closest matches your understanding of the term 'proving' in relation to homeopathy?)
All members of the group agreed that the question was relevant.
Statistician: - All the options for one question need to be on the same page.

Question 25. (Which of the options below closest matches your understanding of the term 'simplex' in relation to homeopathy?
All members of the group agreed that the question was relevant.

Question 26. (Which of the options below closest matches your understanding of the term 'complex' in relation to homeopathy?)
All members of the group agreed that the question was relevant.

Question 27. (Which of the options below closest matches your understanding of the 'C' in relation to homeopathic medicines?)
All members of the group agreed that the question was relevant
Pharmacist: - Brought up the issue of participants guessing the answer to the questions rather than selecting the 'don't know' option, because they would feel like they were in a test situation. It was suggested that the participants be told that it was not a test and to answer as truthfully as possible.
A discussion of how to ensure that the participants were not guessing occurred.
Statistician: - Suggested that the questions be filled in with the researcher present, and that by the participants answering the questions as opposed to ticking an option, that a more accurate assessment of understanding could be gained.
Scribe: - suggested asking the same questions in different ways to test the reliability of the answers.

Question 28. (Which of the options below closest matches your understanding of the 'D' in relation to homeopathic medicines?)
All members of the group agreed that the question was relevant.

Question 29. (When taking homeopathic medicines one should:)
All members of the group agreed that the question was relevant

Section E.

Questions relating to your attitude towards homeopathy.

Question 32..(Would you go and see a Homeopath as a patient?)
All members of the group agreed that the question was relevant.

Question 33.. (Have you ever been to see a Homeopath as a patient?)
All members of the group agreed that the question was relevant.

Question 34. (If you answered yes in the question above, would you go back and see a Homeopath again?)
All members of the group agreed that the question was relevant.

Question 35. (Would you ever use homeopathic medicine?)
Scribe: - This question needs to be placed earlier. If they had never used homeopathic medicines then they would not have seen a homeopath.
All members of the group agreed.

Question 36. (Have you ever used homeopathic medicine?)
All members of the group agreed that the question was relevant.

Question 37. (If you answered yes in the question above, would you use homeopathic medicine again?)
All members of the group agreed that the question was relevant.

Question 38. (Has anyone you know ever been to see a Homeopath as a patient?)
All members of the group agreed that the question was relevant.

Question 39. (Has anyone you know ever used homeopathic medicines?)
All members of the group agreed that the question was relevant.

Question 40. (Do you think homeopathic medicines work?)
All members of the group agreed that the question was relevant.

Question 41. (Is homeopathy a safe complimentary medicine?)
Pharmacist: - Why not ask if homeopathy is safe. Leave out the word complimentary, not relevant.
All members of the group agreed.

Question 42. (Does homeopathy only work because people believe it does?)
All members of the group agreed that the question was relevant.

Question 43. (Does homeopathy go against your religious beliefs?)
All members of the group agreed that the question was relevant.

Overall Comments.
Statistician: -

- Need to thank participants at the end of the questionnaire not at the beginning.
- In addition, there is a need to have an explanation at the beginning, explaining the need for the questionnaire and that it is not a test and so on.
- Also ask the personal questions at the end. People will mind less about giving their race and personal details.
- Do a pretest questionnaire on a health shop and pharmacy. See what is left out, see what is or is not understood. See what information comes out of the exercise and see if it is relevant.

Everyone was thanked for their time and participation.

APPENDIX G
LETTER OF INFORMATION PRE-TEST QUESTIONNAIRE EVALUATION

Title of the research: A prospective, epidemiological pilot study to investigate the level of understanding of homeopathy and factors affecting the understanding amongst health shops assistants in the Gauteng area.

NAME OF RESEARCH STUDENT: Janet Tatalias
CONTACT NUMBERS 011 789 4660 or 0832338347
NAME OF SUPERVISOR Dr C. Korporaal
CONTACT NUMBERS 0312042611
NAME OF CO-SUPERVISOR Dr B. Harris
CONTACT NUMBERS 011672 2612 or 0828010111
NAME OF INSTITUTION: Durban Institute of Technology

Dear Participant,

Thank you for your cooperation in taking part in this evaluation.

The reason for this evaluation is the assessment of the operational parameters of the attached questionnaire that will be utilized to gather the information required for the above named research dissertation. Please note that your identity and the information supplied are to be treated as confidential during and after the research process.

Please feel free to ask any questions that you may have about your role in this evaluation, so that you clearly understand what is entailed in the research and what is expected of you. Once you are completely satisfied please complete the informed consent form and then the questionnaire.

Please complete the questionnaire, taking note of the following:

- There is to be no collaboration with anyone else in the answering any of the questions.
- The time taken to complete the questionnaire.
- Any thing that was ambiguous or difficult to understand.
- Unclear instructions
- Layout
- Anything that made you feel uncomfortable or may have offended you.

Once the questionnaire has been completed a discussion regarding your feedback on the above will take place at a convenient time and place for both of us.

Thank you once again.
Yours sincerely,

J.A. Tatalias	Dr. B. Harris	Dr. C. Korporaal
(Researcher)	(Supervisor)	(Supervisor)

APPENDIX H
Pre-test Questionnaire

SECTION A

Please place a cross to indicate your answer in questions where a box is provided, otherwise give written answer in the space provided.

1.Sex Male ☐ Female ☐

2. Which age bracket do you fall into?

Under 25	26-35	36-45	46-55	56-65	over 65

3. What is your home language?

English	Afrikaans	Xhosa	Venda	Zulu	Ndebele	Tswana

Other (please specify). _____

4. Which group do you belong to?

Black	Coloured	Indian	White	Chinese

Other (please specify) _____

5. Please indicate qualifications achieved?

Standard/Grade (please specify) _____

Matric _____

Degree (please specify) _____

Diploma (please specify) _____

Other (please specify) _____

Section B.

1. Please indicate your position.

Owner	Manager	Full time	Part time

2. How long have you worked in health shops?

1year or less	1-3 years	3 - 5 years	5 - 10 years	more than 10 years

3. Have you been given any training relating to homoeopathy and homoeopathic medicines while working in a health shop?

Yes ☐ No ☐

4. If yes in no 4.please indicate the type of training you have attended below.

Product seminars		
Training by staff		
Training by product representatives		
Institutionally registered courses (Please specify)		
Other (Please specify)		

5. Are you presently registered at any learning institution?

Yes ☐ No ☐

If yes please specify Institution/s and course/s

If yes please specify Institution/s and course/s _____

_____

6. Have you been given any training while working in a health shop in areas other than homoeopathy?

Yes ☐ No ☐

7. If yes in 7 please indicate below the type of training you have received.

Product seminars		
Training by staff		
Training by product representatives		
Institutionally registered courses (Please specify)		
Other (Please specify)		

Section C.

1. Does the health shop you work in stock any homoeopathic medicines?

Yes ☐ No ☐

2. Is there a qualified or student homoeopath available in your shop?

Yes ☐ No ☐

3. Have you ever consulted a homoeopath as a patient?

Yes ☐ No ☐

.

SECTION D.

Please place a cross in the box containing your answer

QUESTIONS	ANSWERS				
	A	**B**	**C**	**D**	**E**
Describe your knowledge of Homoeopathy?	never heard of it.	heard of it only.	know something about it.	quite familiar with it.	
Have you heard of Dr Samuel Hahnemann?	never heard of him.	heard of him, don't know anything about him.	know something about Dr Hahnemann.	quite familiar with Dr Hahnemann.	
Which option closest matches your understanding of the term Homoeopathic Aggravation?	never heard of it.	heard of the term, don't know anything about it.	a sign that the condition is worsening.	increased mental irritability caused by the medicine.	increase in intensity of symptoms already present.
Which option closest matches your understanding of the term Succussion in relation to homoeopathy?	never heard of it.	heard of the term, don't know anything about it.	a method shaking the medicine between dilutions.	a form of homoeopathic treatment for head injury.	increase in intensity of symptoms.
Where was homoeopathy founded?	don't know.	in the East and is based on Eastern Philosophy.	in the USA by Dr Kent.	in Europe by a medical Doctor.	in India by a Buddhist Monk.
Which option closest matches your understanding of the term Law of Similars?	never heard of it.	heard of the term, don't know anything about it.	many people have similar symptoms.	because there are so many medicines there are many similarities.	like cures like.
Which option closest matches your understanding of the term 'proving' in relation to homoeopathy?	never heard of it.	heard of the term, don't know anything about it.	substances given to a healthy individuals to find out what symptoms are associated with those particular substances.	a person receiving a homoeopathic medicine who has a dramatic improvement, proves the effectiveness that particular medicine.	a placebo based clinical trail that scientifically proves the effectiveness of homoeopathy .

Which option closest matches your understanding of the term 'simplex' in relation to homoeopathy?	never heard of it.	heard of the term, don't know anything about it.	the simplicity of the medicines and their application.	a single remedy.	an uncomplicated case.
Which option closest matches your understanding of the term 'complex' in relation to homoeopathy?	never heard of it.	heard of the term, don't know anything about it.	the complexity of the medicines and their application.	a complicated case.	more than one homoeopathic remedy that has been combined into one medicine.
Which option closest matches your understanding of the 'C' in relation to homoeopathic medicines?	never heard of it.	heard of the term, don't know anything about it.	a category of homoeopathic medicines.	the medicine has been diluted in the ratio of 1:99.	Carbon
Which option closest matches your understanding of the 'D' in relation to homoeopathic medicines?	never heard of it.	heard of the term, don't know anything about it.	Delinium	a category of homoeopathic medicines.	the medicine has been diluted in the ratio 1:9.
When taking homoeopathic medicines one should?	don't know	never take homoeopathic medicine on a empty stomach.	not have any food or drink 10 minutes before or after taking the medication.	there is no specific way to take homoeopathic medicines.	do not take homoeopathic medicines before 6am and after 8pm.

Section E

True or false, please indicate answers in box provided.

		TRUE	FALSE
1	Chamomile tea is homoeopathic.		
2	Vitamin B12 is homoeopathic.		
3	Homoeopathic medicines can be added to foods or juices.		
4	Certain homoeopathic preparations are available in suppository form		
5	Toothpaste will not interfere with the action of homoeopathic medicines.		
6	Homoeopathic medicines are absorbed through the mucous membranes of the body.		
7	Homoeopathic medicines work because of the placebo effect.		
8	Homoeopathy is unscientific because there are no clinical trials.		
9	A Homoeopath is given the title of Doctor on completion of the Masters Degree in Homoeopathy.		
10	Poisonous substances are never used in the preparation of homoeopathic medicines.		
11	Homoeopathic tablets are never made in a milk sugar base.		
12	Storing of homeopathic medicines in direct sunlight is acceptable.		
13	Homoeopathic treatment can cause symptoms to get worse before they get better.		
14	Succussion is a method in Homoeopathy used to treat concussion.		
15	The term 'complex' in relation to homoeopathic medicines refers to a condition which is untreatable by means of Homoeopathy		

Appendix I

LETTER OF INFORMATION (Owner/Manager)

Title of the research: **A prospective, epidemiological pilot study to investigate the level of knowledge of homeopathy and its contextualization in health shops in the Gauteng area.**

NAME OF RESEARCH STUDENT: Janet Tatalias

CONTACT NUMBER: 011 789 4660 or 0832338347

NAME OF SUPERVISOR: Dr C. Korporaal
CONTACT NUMBERS: 0312042611

NAME OF CO-SUPERVISOR: Dr R. Steele
CONTACT NUMBERS: 031 332 6060 or 0829286208

NAME OF INSTITUTION: Durban Institute of Technology

Dear Sir/Madam,

Thank you for taking part in the above-named research.

Purpose of this study: **The purpose of this study is to investigate the level of understanding of homeopathy and factors affecting this understanding amongst health shops assistants in the Gauteng area.**

Procedures: A questionnaire has been developed that aims to assess an understanding of homoeopathy. The questionnaire takes a multiple choice format and can be completed in approximately 15 to 25 minutes. You may include yourself as a participant.

- Please could you select two members of your staff to complete the questionnaire? The participants selected will need to be:
  (1.) Fluent in written and spoken English.
  (2.) Have direct contact with the public, giving advice and selling health products.
  (3.) Not be student or qualified homoeopaths.

- Please note the questionnaire needs to be completed without the presence of the researcher, and without collaboration on behalf of the participant.

- Please arrange times with the researcher that are convenient for the questionnaire to be delivered and collected.

- Please could you supply proof that the health shop concerned is a legitimate business enterprise, by providing a vat registration number or such like?

- Once you have read this letter, are completely satisfied that you understand what is expected of you and the participants and are happy to take part in the research, please complete the signed consent form attached.

- Please retain this letter of information for your records.

- The letter of consent will be retained by the researcher as proof of agreed participation in the research.

Confidentiality: Please note that your identity, that of the health shop and the participants selected, are treated as confidential. The results from this study are used for research purposes only. The only people, who have access to the completed questionnaires during and after the research process, are those who are directly involved, my supervisors Dr Korporaal, Dr Steele and myself.

The candidates are not asked for their name or that of the health shop on the questionnaires itself.

Problems or queries: Please feel free to ask any questions that you may have about your role in this study, so that you clearly understand what is entailed in the research and what is expected of you.

Should you have any questions that you would prefer answered by an independent individual, please free to contact my supervisor Dr Korporaal, or co-supervisor Dr Steele, their contact details can be found above. Should you have any queries or complaints regarding anything to do with the research, you may contact a representative from the Health Sciences Research and Ethics Committee Durban Institute of Technology– Mr Vikesh Singh on 031 2042701

Thank you once again.
Yours sincerely,

J.A. Tatalias
(Researcher)

Dr. C. Korporaal
(Supervisor)

Appendix J
LETTER OF INFORMATION (Participant)

Title of the research: A prospective, epidemiological pilot study to investigate the level of knowledge of homeopathy and its contextualization in health shops in the Gauteng area.

NAME OF RESEARCH STUDENT:	**Janet Tatalias**
CONTACT NUMBERS:	011 789 4660 or 0832338347
NAME OF SUPERVISOR:	Dr C. Korporaal
CONTACT NUMBERS:	0312042611
NAME OF CO-SUPERVISOR:	Dr R. Steele
CONTACT NUMBERS:	031 332 6060 or 0829286208
NAME OF INSTITUTION:	Durban Institute of Technology

Dear Sir/Madam,

Thank you for taking part in the above-named research.

Purpose of this study: The purpose of this study is to investigate the level of understanding of homeopathy and factors affecting this understanding amongst health shops assistants in the Gauteng area.

Procedures: Please complete the attached questionnaire, taking note of the following:

- The researcher will not be present while the questionnaire is being completed.
- There is to be **no collaboration** with anyone else in the answering of any of the questions.
- **Please answer every question.**
- This letter is to be retained by yourself for your information; the signed consent form will be retained by the researcher as proof of participation.

Confidentiality: Please note that your identity and that of the health shop are treated as confidential. The results from this study are used for research purposes only. The only people, who have access to the information supplied during and after the research process, are those who are directly involved my supervisors Dr Korporaal, Dr Steele and myself.

Neither your name nor that of the health shop is to be recorded on the questionnaire.

Problems or queries: Please feel free to ask any questions that you may have about your role in this evaluation, so that you clearly understand what is entailed in the research and what is expected of you. Once you are completely satisfied please complete the informed consent form.

Should you have any questions that you would prefer answered by an independent individual, please free to contact my supervisor Dr Korporaal, or co-supervisor Dr Steele, their contact details can be found above. Should you have any queries or complaints regarding anything to do with the research, you may contact a representative from the Health Sciences Research and Ethics Committee Durban Institute of Technology– Mr Vikesh Singh on 031 2042701

Thank you once again.
Yours sincerely,

J.A. Tatalias	Dr. C. Korporaal
(Researcher)	(Supervisor)

Appendix K

Finalized Questionnaire

SECTION A

Please place a cross in the box (where appropriate), otherwise give a written answer

1. Sex Male ☐ Female ☐

2. Which age bracket do you fall into?

Under 25	26-35	36-45	46-55	56-65	over 65

3. What is your home language?

English	Afrikaans	Xhosa	Venda	Zulu	Ndebele	Tswana

Other (please specify). _____

4. Which group do you belong to?

Black	Coloured	Indian	White	Chinese

Other (please specify) _____

5. Please indicate your highest qualifications achieved?

Standard/Grade (please specify)	
Matric	
Degree (please specify)	
Diploma (please specify)	
Other (please specify)	

Section B.

1. Please indicate your position:

Owner	Manager	Full time	Part time

2. How long have you worked in health shops?

1year or less	1-3 years	3 - 5 years	5 - 10 years	more than 10 years

3. Have you been given any training relating to homoeopathy whilst employed in the health shop?

Yes ☐ No ☐

1

4. If yes in number 3 above please indicate by placing an 'X' in the appropriate boxes the subjects

Storage of Homoeopathic medicines	
Administration of Homoeopathic medicines	
Principles of Homoeopathy	
Specific information regarding Homoeopathic medicines. E.g. when and how to use arnica	

5. If yes in number 3 above please indicate below the type of training you have attended.

Product seminars		
In-house training by staff		
In-house training by product representatives		
Institutionally registered courses (Please specify)		
Other (Please specify)		

6. Have you been given any training while working in a health shop on subjects other than homoeopathy?

Yes ☐ No ☐

7. If yes in number 6. above please indicate below the type of training you have received.

Product seminars		
In-house training by staff		
In-house training by product representatives		
Institutionally registered courses (Please specify)		
Other (Please specify)		

Section C.

1. Does the health shop you work in stock any homoeopathic medicines for sale over the counter?

Yes ☐ No ☐ I don't know ☐

2. Does the health shop you work in you stock homoeopathic simplexes?

Yes ☐ No ☐ I don't know ☐

3. If yes to question 2 above, please indicate which potencies are stocked?

I don't know ☐

6cH ☐ 12cH ☐ 30cH ☐ 200cH ☐ 1M ☐

Please list other potencies stocked (a maximum of 5 is sufficient).

2

4. Does the health shop you work in stock homoeopathic complexes?

Yes ☐ No ☐ I don't know ☐

5. Please list the homoeopathic ranges stocked by the health shop you work in, (a maximum of 5 is sufficient).

6. Do you have a qualified or student homoeopath working in your health shop?

Yes ☐ No ☐

7. Does the health shop you work in dispense homoeopathic medicines as per script?

Yes ☐ No ☐

8. If yes in number 7. above please indicate who dispenses the medicines to the public.

Self	
Other	
If other please specify their qualification	

Section D.

1. How do you go about selecting a homoeopathic remedy for your customer?

	Place an 'X' in the appropriate
I never select homoeopathic remedies as a recommendation for my customers.	
I supply the customer with the specific homoeopathic remedy which they have requested.	
I ask the customer questions relating to their ailment and try to find the most relevant homoeopathic remedy.	
If the customer is wanting a homoepathic remedy, I generally recommend a different form of medication.	
I use the information provided on the labels of the remedies as a guideline for remedy recommendation.	
If you use any other means of selecting homoeopathic remedies for your customers, please	

3

2. Please indicate by placing crosses into the appropriate boxes below, the ailments for which you have recommended homoeopathic remedies.

Abdominal pain or discomfort			Colic			Hay fever			Stings and bites	
Acne			Constipation			Herpes			Surgery	
Anaemia			Coughs			Incontinence			Teething	
Arthritis			Cramps			Influenza			Tonsillitis	
Asthma			Dental treatment			Insomnia			Travel sickness	
Back pain			Diabetes			Menopause			Vomiting	
Boils			Diarrhea			Menstrual problems			Warts	
Bruises			Ear infections			Nausea			Wounds	
Burns			Eczema			Piles			Others	
Chicken pox			Fever			Scars and keloids				
Circulation problems			Fractures			Sinusitis				
Colds and nasal congestion			Gout			Sprains				

If others please specify	

3. Do you refer customers to any of the following?

Acupuncturist	
Aromatherapist	
Chiropractor	
Herbalist	
Homoeopath	
Hypnotherapist	
General Practitioner (Doctor)	
Osteopath	
Reflexologist	
Reiki practitioner	
Others (please specify)	

4

SECTION E

1. Have you ever consulted a homoeopath as a patient?

Yes ☐ No ☐

2. Have you ever taken any homoeopathic medicines?

Yes ☐ No ☐

3. Do you think homoeopathic medicines are effective?

Yes ☐ No ☐

4. Do you think you need more comprehensive training in homoeopathy and homoeopathic

Yes ☐ No ☐

SECTION F

1. One should not touch most homeopathic medicines with one's fingers because?

	Place an 'X' in the appropriate
It is unhygienic	
The substances transferred from your fingers can interfere with the action of the medicines	
The pillules/granules are generally coated with medicine.	
You should be wearing latex gloves	
It's alright to use your fingers if you have washed with disinfectant before and after	
I don't know	

2. How should homoeopathic medicines be taken orally?

	Place an 'X' in the appropriate
Using sterilized metal utensils	
Away from food	
Using distilled water	
Teeth need to be brushed just before taking the medicine	
Swallowed immediately	
Dissolved in the mouth	
I don't know	

5

3. How should homoeopathic medicines be stored?

	Place an 'X' in the appropriate
Away from direct sunlight	
In a warm dark place	
Away from electrical outlet points	
Away from cellular telephones	
In moist conditions	
In the refrigerator	
I don't know	

4. Why do you think homoeopathic medicines are effective?

	Place an 'X' in the appropriate
They contain herbal ingredients	
Because of the principle of 'like cures like'	
People have faith in the medicines	
A very small dose is used	
They are vigorously shaken in preparation	
Other reasons	
They are ineffective	

6

SECTION G.

Please place a cross (X) in the box containing your answer.

	QUESTIONS	ANSWERS				
		A	B	C	D	E
1	**Describe your knowledge of Homoeopathy?**	never heard of it	heard of it only	poor	satisfactory	excellent
2	**Which of the following statements indicates your understanding of the term Potentization in Homoeopathy?**	never heard of it	heard of the term but don't know anything about it	a specific method used by homoeopaths to study a patients case	a specific method used by homoeopaths to prepare homeopathic medicines	a specific method used by homoeopaths to treat male patients
3	**Which of the following statements indicates your understanding of the term Homoeopathic Aggravation?**	never heard of it	heard of the term, don't know anything about it	a sign that the condition is worsening	increased mental irritability caused by the medicine	increase in intensity of symptoms already present
4	**Which of the following statements indicates your understanding of the term Succussion in relation to homoeopathy?**	never heard of it	heard of the term, don't know anything about it	a method shaking the medicine between dilutions	a form of homoeopathic treatment for head injury	increase in intensity of symptoms
5	**Where was homoeopathy <u>founded</u>?**	don't know	in the East and is based on Eastern Philosophy	in the USA by Dr Kent	in Germany by Dr Samuel Hahnemann	in India by a Buddhist Monk
6	**Which of the following statements indicates your understanding of the term Law of Similars?**	never heard of it	heard of the term, don't know anything about it	many people have similar symptoms	because there are so many medicines there are many similarities	like cures like
7	**Which of the following statements indicates your understanding of the term 'proving' in relation to homoeopathy?**	never heard of it	heard of the term, don't know anything about it	substances given to healthy individuals to find out what symptoms are curable by that particular substance	a person receiving a homoeopathic medicine who has a dramatic improvement, proves the effectiveness of that particular medicine	a placebo-based clinical trial that scientifically proves the effectiveness of homoeopathy
						7

8	**Which of the following statements indicates your understanding of the term 'simplex' in relation to homoeopathy?**	never heard of it	heard of the term, don't know anything about it	the simplicity of the medicines and their application	a single remedy	an uncomplicated case
9	**Which of the following statements indicates your understanding of the term 'complex' in relation to homoeopathy?**	never heard of it	heard of the term, don't know anything about it	the complexity of the medicines and their application	a complicated case	more than one homoeopathic remedy that has been combined into one medicine
10	**Which of the following statements indicates your understanding of the 'C' in relation to homoeopathic medicines? e.g 30cH**	never heard of it	heard of the term, don't know anything about it	a category of homoeopathic medicines	the medicine has been diluted in the ratio of 1:99	Carbon
11	**Which of the following statements indicates your understanding of the 'D' in relation to homoeopathic medicines? e.g. 6D**	never heard of it	heard of the term, don't know anything about it	The substance 'Delinium' which is used as a preservative in homoeopathic medicines	a category of homoeopathic medicines	the medicine has been diluted in the ratio 1:9
12	**In treating patients homoeopaths consider the following types of symptoms**	don't know	physical	mental	emotional	physical, mental and emotional
						8

Section H

True or false, please indicate answers by placing an 'X' in the appropriate box.

		TRUE	FALSE	DON'T KNOW
1	Herbal teas are homoeopathic medicines.			
2	Vitamin B12 is a homoeopathic medicine.			
3	Homoeopathic medicines can be added to foods or juices.			
4	Certain homoeopathic preparations are available in suppository form.			
5	A plastic spoon can be used to dispense homoeopathic medicines.			
6	Homoeopathic medicines are absorbed through the mucous membranes of the body.			
7	Homoeopathic medicines work because of the placebo effect.			
8	Homoeopathy is unscientific because there are no clinical trials.			
9	A Homoeopath is given the title of Doctor on completion of the Masters Degree in Homoeopathy.			
10	Poisonous substances can be used to make homoeopathic medicines.			
11	Homoeopathic tablets are never made in a milk sugar base.			
12	Homoeopathic treatment can cause symptoms to get worse before they get better.			
13	Succussion is a method in Homoeopathy used to treat concussion.			
14	Homoeopathic medicines are always diluted and shaken in a specific manner when being manufactured.			
15	The term 'complex' in relation to homoeopathic medicines refers to a condition which is untreatable by means of Homoeopathy.			
16	Homoeopathic medicines work on the way you are feeling mentally and emotionally as well on your physical symptoms.			

APPENDIX L

Tables not used in the results Chapter

Table 20: Cross-tabulation of knowledge score category and race

Race		knowledge score category		Total
		poor	good	
Black	Count	2	0	2
	% within Race	100.0%	.0%	100.0%
Indian	Count	1	1	2
	% within Race	50.0%	50.0%	100.0%
White	Count	19	15	34
	% within Race	55.9%	44.1%	100.0%
Total	Count	22	16	38
	% within Race	57.9%	42.1%	100.0%

P=0.458

Table 32: Cross-tabulation of knowledge score category and recommended homeopathy remedies for diabetes

Diabetes			knowledge score category		Total
			poor	good	
	yes	Count	3	7	10
		% within Diabetes	30.0%	70.0%	100.0%
	no	Count	19	9	28
		% within Diabetes	67.9%	32.1%	100.0%
Total		Count	22	16	38
		% within Diabetes	57.9%	42.1%	100.0%

P=0.062

Table 36: Cross-tabulation of knowledge score category and need more training in homeopathy

Do you need more training in homeopathy		knowledge score category		Total
		poor	good	
Yes	Count	19	13	32
	% within Do you need more training in homeopathy	59.4%	40.6%	100.0%
No	Count	3	3	6
	% within Do you need more training in homeopathy	50.0%	50.0%	100.0%
Total	Count	22	16	38
	% within Do you need more training in homeopathy	57.9%	42.1%	100.0%

P=0.682

Table 37: Cross-tabulation of knowledge score category and homeopathy effective because it contains herbs

They contain herbs		knowledge score category		Total
		poor	good	
Yes	Count	7	1	8
	% within They contain herbs	87.5%	12.5%	100.0%
No	Count	14	15	29
	% within They contain herbs	48.3%	51.7%	100.0%
Total	Count	21	16	37
	% within They contain herbs	56.8%	43.2%	100.0%

P=0.104

Table 39: Cross-tabulation of knowledge score category and faith in medicines

People have faith in the medicines		knowledge score category		Total
		poor	good	
Yes	Count	4	1	5
	% within People have faith in the medicines	80.0%	20.0%	100.0%
No	Count	17	15	32
	% within People have faith in the medicines	53.1%	46.9%	100.0%
Total	Count	21	16	37
	% within People have faith in the medicines	56.8%	43.2%	100.0%

P=0.364

Table 40: Cross-tabulation of knowledge score category and small dose is used

A very small dose is used		knowledge score category		Total
		poor	good	
Yes	Count	5	5	10
	% within A very small dose is used	50.0%	50.0%	100.0%
No	Count	16	11	27
	% within A very small dose is used	59.3%	40.7%	100.0%
Total	Count	21	16	37
	% within A very small dose is used	56.8%	43.2%	100.0%

P=0.716

Table 41: Cross-tabulation of knowledge score category and vigorously shaken

They are vigorously shaken in preparation		knowledge score category		Total
		poor	good	
yes	Count	1	4	5
	% within They are vigorously shaken in preparation	20.0%	80.0%	100.0%
no	Count	20	12	32
	% within They are vigorously shaken in preparation	62.5%	37.5%	100.0%
Total	Count	21	16	37
	% within They are vigorously shaken in preparation	56.8%	43.2%	100.0%

P=0.114

Table 42: Cross-tabulation of knowledge score category and they are ineffective

They are ineffective		knowledge score category		Total
		poor	good	
Yes	Count	1	0	1
	% within They are ineffective	100.0%	.0%	100.0%
No	Count	20	16	36
	% within They are ineffective	55.6%	44.4%	100.0%
Total	Count	21	16	37
	% within They are ineffective	56.8%	43.2%	100.0%

P=1.000

Table 43: Cross-tabulation of knowledge score category and self reported knowledge of homeopathy

Describe your knowledge of Homoeopathy?		knowledge score category		Total
		poor	good	
poor	Count	9	3	12
	% within Describe your knowledge of Homoeopathy?	75.0%	25.0%	100.0%
satisfactory	Count	11	10	21
	% within Describe your knowledge of Homoeopathy?	52.4%	47.6%	100.0%
excellent	Count	0	3	3
	% within Describe your knowledge of Homoeopathy?	.0%	100.0%	100.0%
Total	Count	20	16	36
	% within Describe your knowledge of Homoeopathy?	55.6%	44.4%	100.0%

P=0.059